

DELIVERABLE N°3.1.

Sharing valuable practices for boosting the Green Deal through MSP



ACKNOWLEDGEMENT

The work described in this report was supported by the European Climate, Infrastructure and Environment Executive Agency (CINEA) of the European Union- through the Grant Agreement number 101081314- MSP-GREEN - EMFAF-2021-PIA-MSP, corresponding to the Call for proposal Call EMFAF-2021-PIA-MSP Topic: EMFAF-2021-PIA-MSP Type of action: EMFAF Project Grants.

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Project Full Title	Maritime Spatial Planning as enabler of the European Green Deal
Project Acronym	MSP-GREEN
Gant Agreement Nr.	101081314
Project Website	https://mospgreen.eu/

Deliverable Nr.	3.1.
Status (Final/Draft/Revised)	Final
Work Package	WP 3
Task Number	3.1
Responsible Institute	IEO(CSIC)
Author/s	Cristina Cervera-Núñez (ed.), María del Rosario Martín-Hervás (ed.), Mónica Campillos-Llanos (ed.), María Gómez-Ballesteros (all IEO, CSIC), Vesa Arki, Mari Pohja-Mykrä (all FI RCSW), Alexandre Cornet (all Cerema), Katia Frangoudes, Eider Graner (all UBO), Adeline Bas (Ifremer), , Margarita Stancheva, Hristo Stanchev (all CCMS), , Annija Danenberga, Anete Bērziņa, Marta Štuba (all MoEPRD) Fabio Carella, Daniele Brigolin, Folco Soffietti (all IUAV), Martina Bocci (Corila), Emiliano Ramieri (CNR)

Infographics	n/a
Recommended Citation	MSP-GREEN. Cervera-Núñez, C., Martín-Hervás., M.R., Campillos-Llanos, M., et al., <i>Sharing valuable practices for boosting the Green Deal through MSP – Deliverable report D3.1.</i> , 2023.

Dissemination Level (Public/Partnership)	Public
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Document History			
Version	Date	Modification Introduced	
		Modification Reason	Modified by
Draft outline	November 2023	Drafting outline & content	IEO(CSIC) & revised by partners
Draft deliverable	1st - 12th Dec 2023	Drafting of content	IEO(CSIC) + all partners
Draft deliverable	12th - 15th Dec 2023	Content review	IEO(CSIC) + all partners
Final draft	18th -20th	Final revision	All partners

Table of content

List of Abbreviations	4
List of Tables	4
List of Figures	4
1. Introduction	5
1.1. Project overview	5
1.2. Objectives.....	6
1.3. Methodology.....	8
1.4. Reader instructions	8
2. Valuable practices in MSP processes that contribute to EGD topics.....	9
2.1. Valuable practices in climate change mitigation	9
2.1.1. Contribution of selected valuable practices to this EGD element	9
2.1.2. Complementarity & transferability	12
2.1.3. Challenges & pending issues	13
2.2. Valuable practices in climate change adaptation	14
2.2.1. Contribution of selected valuable practices to this EGD element	14
2.2.2. Complementarity & transferability	15
2.2.3. Challenges & pending issues	16
2.3. Valuable practices in sustainable sea-food production.....	16
2.3.1. Contribution of selected valuable practices to this EGD element	16
2.3.2. Complementarity & transferability	19
2.3.3. Challenges & pending issues	20
Box 1. Multifunctional zones and multi-use of the sea space (Bulgaria).....	21
2.4. Valuable practices in biodiversity and ecosystem protection and restoration	22
2.4.1. Contribution of selected valuable practices to this EGD element	22
2.4.2. Complementarity & transferability	24
2.4.3. Challenges & pending issues	25
2.5. Valuable practices in fair and just transition	26
2.5.1. Contribution of selected valuable practices to this EGD element	26
2.5.2. Complementarity & transferability	28
2.5.3. Challenges & pending issues	29
3. Valuable practices addressing other EGD topics	30
3.1. Valuable practices in zero pollution and blue circular economy	30
3.1.1. Zero pollution.....	30
3.1.2. Blue circular economy.....	31
3.1.3. Reflexion on circular economy and zero pollution practices in MSP.....	32
3.2. Cross-cutting valuable practices	32



- 4. Concluding remarks 33
- 5. Annexes..... 35
 - 5.1. Annex I. Template for valuable practices..... 35
 - 5.2. Annex II. Valuable practices- Factsheets..... 41
 - 5.3. Annex III. Report of the workshop on the exchange of valuable practises87

List of Abbreviations

ADEME	Agency for Ecological Transition (France)
AZA	Allocated Zones for Aquaculture
CIA	Cumulative Impact Assessment
EBM	Ecosystem-based management
EEZ	Exclusive Economic Zone
EGD	European Green Deal
EIA	Environmental Impact Assessment
EMMAs	Ecologically significant marine underwater areas
GES	Good Environmental Status
HPA	High Potential Areas
MGI	Marine Green Infrastructures
MPAs	Marine Protected Areas
MSFD	Marine Strategy Framework Directive
MSP	Maritime/Marine Spatial Planning
N2K	Natura 2000
NGOs	Non-Governmental Organisations
NM	Nautical Miles
LSI	Land-sea interactions
OECMs	Other Effective area-based Conservation Measures
ORE	Offshore Renewable Energy
OWF	Offshore Wind Farms
POEM	Maritime Spatial Planning Plans (Spain)
PUs	Planning Units
PUA	Priority Use Areas
SECA	Sulphur Emission Control Area
TEN-E	Trans-European Networks for Energy
TEN-T	Trans-European Transport Network
VP	Valuable Practice
WFD	Water Framework Directive
WP	Work Package
WWTP	Wastewater Treatment Plants

List of Tables

Table 1. List of identified valuable practices and the main EGD elements that they address. EGD elements are based on the methodology used for D2.1.	6
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List of Figures

Figure 1. MSP GREEN partners and affiliated entities.	5
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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 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 and affiliated entities.

The specific objectives of the project are:

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

Based on Task 2.2. results, that evaluated if and how the partner countries MSP Plans have referred to EGD, Task 3.1. has identified valuable and capitalizable experiences of EGD integration into MSP (hereafter called valuable practices). Task 3.1. looked at the operational level of the MSP Plans of the countries of the consortium members, focusing on spatial planning measures as well as on process related practices.

In the framework of Work Package (WP) 3, partners aim to address the way of fostering the role of national MSP Plans and processes in contributing to EGD objectives. Task 3.1. focuses on the identification, description and sharing of Valuable Practices (VPs) about EGD integration within MSP. This task examines both, practices targeting singular EGD objectives and examples of integrated uses, where synergic efforts are made to boost Blue Economy while targeting EGD objectives (e.g. multi-use of sea space, activities coupling mitigation and adaptation to climate change, etc.). Additionally, the task tries to identify elements that could be replicable in other countries. In this regard, analysis of this task is also expected to raise key elements for contribution to Task 2.3. regarding the role of other policies in the Green Deal component of the MSP plans. At the same time, this task and the WP assess the transferability of valuable experiences and of lessons learned in fostering EGD implementation through MSP. Equally this task aims to identify commonalities among the different country processes and provide input to WP4 on the formulation of recommendations.

The ambition was to exchange valuable practices at different stages of the MSP process. However, due to the phases in which most of the countries are and the information available, most of them are related to the planning phase. The project was expected to identify a range of valuable practices covering the different aspects of the EGD defined for Task 2.1. A preliminary list of valuable practices was provided with the proposal of the project and the final list of considered valuable practices is presented in Table 1.

It is worth noting that, in the case of Italy the three MSP draft plans (hereafter referred to as the plans), made available for public consultation on 15 September 2022 were considered for the analysis of Valuable Practices. The plans are presently under revision based on the outcomes from the Strategic Impact Assessment that became available in November 2023.

Table 1. List of identified valuable practices and the main EGD elements that they address. EGD elements are based on the methodology used for D2.1.

Country	Title of the VP	Main EGD topic(s) addressed
Italy	Zoning areas for environmental and natural resources protection	D. Biodiversity and ecosystem protection and restoration
	Coordinating zoning for aquaculture areas and MSP	C. Sustainable sea-food production

	Zoning sources and sinks of sands in MSP: a need for climate change adaptation	B. Climate change adaptation
Finland	Delineation of ecologically significant marine underwater areas (EMMA) in the Finnish MSP plan	D. Biodiversity and ecosystem protection and restoration
	Delineation of potential areas for offshore wind farm development in the Finnish MSP plan (Offshore wind farm location optimisation)	A. Climate change mitigation
	Co-creation of scenarios for the future of maritime areas (together with stakeholders)	G. Fair and just transition
Latvia	ELWIND offshore wind park development - experience about off-shore wind energy project implementation in cooperation with Estonia	A. Climate change mitigation
	Coastal assessment for evaluation of tourism and recreation pressure on ecosystem and public infrastructure	Crosscutting: A. Climate change adaptation, D. Biodiversity and ecosystem protection and restoration, F. Zero pollution
	Balancing social, economic and environment interests in offshore wind park development	G. Fair and just transition
Spain	Definition of High Potential Areas for Offshore Wind Farms in Spanish MSP	A. Climate change mitigation
	Definition of elements that conform the Marine Green Infrastructure in the POEM	B. Climate change adaptation
	High Potential Areas for aquaculture	C. Sustainable sea-food production
	Zoning for biodiversity conservation	D. Biodiversity and ecosystem protection and restoration
Bulgaria	Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	C. Sustainable sea-food production
	Multifunctional zones and multi-use of the sea space	Multi-use of the sea space (A.1.4., C.1.6., D.1.5.)
	Pollution prevention from land-based activities and sources	F. Zero pollution
France	From energy transition to spatial reconfiguration into ports	A. Climate change mitigation

	Development of Marines cultures (shellfish and algae)	C. Sustainable sea-food production
	Public debates on offshore wind farms planning and MSP	G. Fair and just transition
	An example of a marine MPA (Natura 2000 site) in a cross-border area	D. Biodiversity and ecosystem protection and restoration
	MPA and fisheries activity	C. Sustainable sea-food production

Although there was no intention of conducting an exhaustive screening of all existing valuable practices, Table 1 shows that a fair number of them have been identified, covering almost all EGD elements identified by the methodology and some cross-cutting topics.

In the framework of the MSP-GREEN project, a **VP is defined as an action (measure, zoning, process-related approach) that deals with contents and/or processes elements aiming at strengthening the integration of EGD components in MSP, and that partners considered relevant to showcase from their national experiences. VPs are concrete examples which might be a source of inspiration for others (capitalization) but they can also showcase unsuccessful experiences to learn from.** It should be noted that many of the plans were released before or right after the launch of the EGD, which means that they were not specifically developed with the aim to address certain EGD topics *per se*.

The aim was not to do an exhaustive screening of VPs but to showcase some examples of practices in MSP processes that contribute to different EGD elements. Final selection of VPs (Table 1) was based on available information and partners' expertise regarding MSP processes in the project member countries. Therefore, the number of VPs regarding one EGD topic in particular does not imply more or less contribution of MSP to the EGD specific element. VPs just illustrate examples that worked in the MSP processes of MSP-GREEN countries to show commonalities, differences and potential for transferability or complementarity.

1.3. Methodology

In order to have comprehensive but concrete and comparable information from the different VPs, a template was designed as a factsheet to gather this information in a structured manner, answering specific questions regarding the practice (e.g. practice typology, sectors involved, challenges and gaps, replicability elements). In order to maintain the coherence throughout all analysis of the project, the list of EGD elements identified for task 2.1. has been considered. This list and the template can be found in Annex I.

Later on, partners were asked to identify to which phase their VPs refer to, as well as, to detail its relation with the MSP process. Most of the VPs referred to the planning phases which in fact limited the possibility to assess its success in implementation.

1.4. Reader instructions

The content of this report has been elaborated based primarily on two information sources: (1) the analysis of the factsheets developed by partners regarding the selected VPs (Annex II), (2) the results obtained from the Workshop on Exchange of Valuable Practices, celebrated in Malaga the 23rd of November 2023 and whose report can be found in Annex III and (3) contribution from Associated

Partners of the MSP-GREEN project regarding other countries and processes.

As already highlighted, there was no intention of doing an exhaustive screening of valuable practices regarding the operational integration of EGD elements in MSP. This means that the set of valuable practices presented here are just examples of this integration in the different MSP processes of the countries of the consortium.

It should be noted that the intention was not to identify only “good” practices but also to point out unsuccessful stories to produce some lessons learnt. From VPs, challenges, gaps and pending issues are also highlighted in order to have a basis for the formulation of new actions in Task 3.2.

Due to the transdisciplinary nature of the EGD and the MSP processes, many VPs addressed one EGD element directly but also interacted with some other EGD elements in different ways (contributing to them or identifying them as challenges). The list of EGD elements and its categorization is included as part of Annex I and it is used in this report to refer to the different categories and subcategories of EGD elements addressed by each VP. For the reason of the analysis, the different VPs have been classified in this report regarding the main EGD elements that they address (and, if relevant, the subcategories), acknowledging that they may be related to others too. Therefore, this report is structured in (1) one section with 5 subsections (2.1. to 2.5) which describe how VPs from the different countries of the consortium address 5 specific EGD elements (*A. Climate change mitigation, B. Climate change adaptation, C. Sustainable sea-food production, D. Biodiversity and ecosystem protection and restoration and G. Fair and just transition*) in a comparative and narrative way; and (2) another section addressing one VP regarding *F. Zero pollution* some insights from the workshop on exchange on valuable practices regarding the *E. Blue circular economy element* as well as a reflection on a cross-cutting VP that may contribute to the overall objective of the EGD. Although multi-use is part of different VPs, one specific VP regarding multi-use was identified by Bulgarian partners and it is presented in Box 1.

By the time this report is written, a repository has been designed (Deliverable 3.3.) to accommodate the information from the valuable practices and the new actions designed in Task 3.2. in a simple and workable catalogue that can be updated and integrated with other practices over time.

2. Valuable practices in MSP processes that contribute to EGD topics

2.1. Valuable practices in climate change mitigation

2.1.1. Contribution of selected valuable practices to this EGD element

Four VPs identified in the Latvian, Finnish, Spanish and French MSP plans have been selected to illustrate the “Climate Change Mitigation” EGD element. In summary, the rationale behind the selection of the VPs is related to the urgent need for the transition to offshore renewable energy (ORE) across EU sea basins, (normally operationalized through the deployment of Offshore Wind Farms (OFW)), while avoiding potential conflicts with other sectors and minimizing impacts on the marine environment and biodiversity protection, thus supporting *A. climate change mitigation*. Short descriptions of the valuable practices are presented below and the factsheet presenting them in more detail can be found in Annex II.

The Latvian VP focuses on the ELWIND offshore wind farm (OWF) development - a joint Estonian-Latvian state-run cross-border offshore wind project aiming to increase the production of green energy (a total of 700-1000 MW of offshore wind capacity) and improve interstate electricity connectivity (<https://elwindoffshore.eu/>). The process is still in its early phase and this project gives the opportunity to test in practice the MSP predefined zones OWF development and how the conflicts (climate mitigation versus coastal community values and perceptions) can be solved in real life situations, learning from experiences of the ongoing ELWIND project. This OWF project resulted from a Memorandum of Understanding between two ministries of economics, establishing a non-binding framework for joint management and financing, supported by separate national Environmental Impact Assessment (EIA) processes. This is the first significant attempt to develop an OWF in Latvia since 2010 that has reached the stage of EIA.

The Maritime spatial plan of Latvia 2030 was approved by the Government on May 21st in 2019. So far, the first cycle of MSP in Latvia consists of the elaboration process of the first MSP (2014–2019) and interim assessment (1st MSP evaluation in 2023, 2nd evaluation planned in 2029). This VP is in the implementation phase and follows the frame set in Latvian MSP in 2019, since pre-defined zones for OWF were already included in MSP before ELWIND started, so it is a part of the overall implementation of Latvian MSP.

Similarly, although not targeting the transboundary dimension, the Finnish VP is focused on offshore wind farm location optimization. The Finnish MSP plan identifies potential areas for OWF development in order to define locations where energy production is both viable and the impacts of the development on the marine environment and the possible conflicts with other sea uses are minimized. Experts at the Finnish Environment Institute evaluated the suitability of the whole Finnish sea area for OWF development on a 100 m resolution using a geospatial zoning analysis. The analysis was done within the SmartSea project and the other project partners also contributed to the work. It was based on approximately 150 indicators. The indicators consider conditions related to biodiversity and multiple other topics, such as social impacts and landscape scenery, and a few economic variables such as profitability. These analysis results were used in the planning process to delimit the final areas that are shown in the MSP plan. All the identified areas are located at least 10 kilometres from the coast in a depth of 10–50 metres. The VP was a part of the planning phase during the first MSP cycle in Finland. The second cycle of planning has started and currently information is being gained on the impact of the VP on OWF development through the strategic MSP plan.

Another VP example is from Spain: the MSP plans (POEM for its initials in Spanish) establish and delimit High Potential Areas (HPA) for OWF in order to identify areas where there is commercially exploitable resource while minimizing environmental impacts, and maximize synergies and coexistence between the different uses. These areas are identified as highly suitable for deployment of commercial offshore wind energy infrastructure, and may also include hybridisation with other offshore renewable technologies. To enhance the management of wind energy uses and activities within the HPA, several measures are proposed in order (1) to address the assessment and modelling of the landscape effects caused by OWF in Spanish waters; (2) to carry out the analysis regarding potential impact on the fishing sector and (3) the develop a specific guide for EIA on OWF projects. The areas' zoning is based on the analysis of oceanographic, geological, wind resource and biodiversity conditions and consultations to key stakeholders in order to consider the spatial overlapping with other economic sectors. The VP is in the planning phase of the MSP process.

The VP from France presents an example of how the energy transition is supported by spatial

reconfiguration in ports. Ports need more space to support the ORE sector's growth. In La Rochelle, the "Port Horizon 2025" planning document strongly reflects the spatial prioritization given to ORE as an emerging sector. The Grand Maritime Port planning strategy anticipates shifts in future energy trades by moving out from oil related activities to ORE. In fact, the port played a key role in ensuring the creation of the association «Aquitania Ports Links», which originated from the objective of jointly applying for a call for expressions of interest launched by the French Agency for Ecological Transition (ADEME) on port infrastructures for offshore floating wind farms. The four associated ports aim to create synergies and leverage complementarities in their existing and planned infrastructures. The cooperation strategy is already proving successful, since in 2023, all four ports were successfully included in the winners of the ADEME call. The VP is in the planning phase and part of the MSP process.

With regards to how these VPs contribute specifically to the EGD element A. *Climate change mitigation*, some considerations are presented below.

The Latvian VP shows that neighboring countries can establish a joint project supporting the climate change mitigation efforts and improving energy security through implementing interstate electricity connectivity. As the project intends to create two new OWF and an interconnection between Estonia and Latvia, considering the zoning prescribed by both country's MSPs, it will directly support the implementation of the EGD objectives (A.1 *Renewable energy production, storage and transportation*; A.1.1. *Development of marine renewable energy installations* and A.1.7 *Coordinated, transboundary initiatives*).

In the French VP the port's proactive transformation directly supports the EGD targets both on ORE development and phasing out from fossil fuels (A.1. *Renewable energy production, storage and transportation* [A.1.1. *Development of marine renewable energy installations* and A.1.7. *Coordinated, transboundary initiatives*]; A.2. *Clean energy transition in maritime sectors* and A.3. *Transformations in ports*). It is estimated that the port generates about 16.400 jobs supporting other sectors in its hinterland. By turning comparative advantages into articulated complementarities, associated ports not only distribute spatial pressure from ORE growth but also create integrated logistical chains at a sea basin level. This provides concrete support to the EGD by ensuring that future offshore wind farms projects in the South Atlantic basin will benefit from competitive and adequate logistical support infrastructures. This VP also highlights that ports can serve as hubs for storage and pre-assembly of wind turbine components, or as a base for construction and maintenance ships, thus addressing also the multi-use opportunities in terms of economic activities related to the sea (sea shipping, marine renewable energy, etc.).

The Finnish VP of identifying suitable areas for offshore wind energy production aims to guide the planning of OWF development placement and aims to minimize the impacts on nature and environment, and potential conflicts to other sea uses, such as fisheries and maritime transport. Thus, it supports the objectives of A.1 *renewable energy production* and, more specifically, A.1.1 *the development of marine renewable energy installations*. It aims to guide the planning of OWF development placement and aims to minimize the impacts on nature and environment, and potential conflicts to other sea uses, such as fisheries and maritime transport. This VPs also showcases that spatial information on the most suitable areas for OWF can promote the multi-use of sea space by identifying areas where the synergies of wind energy production with certain uses could be possible (such as OWF and aquaculture).

In the Spanish VP the climate change mitigation EGD element (A.1 and A.1.1) is supported by the definition of areas where the OWF are technically and economically viable according to a zoning

assessment that minimize conflicts with other sectors and avoid impacts on valuable marine ecosystems. Within the Spanish MSP plans implementation, a methodological guide will be developed in order to guide promoters in the development of the EIA for OWF projects, mandatory even inside HPA for OWF. In summary, the definition of HPA for OWF makes the investment in OWF projects in the marine environment more secure, which in turn, is expected to increase the production of renewable energy in Spain, and thus contributing to *climate change mitigation* (A).

The general commonalities between the Latvian, Finnish and Spanish VPs are related to “zoning” of the sea space or to identifying potential areas for OWF development in order to define most suitable locations where energy production is both viable and the impacts on marine environment and the possible conflicts with other sea uses are minimized (in particular for the fishery sector and maritime transport but also local communities and landscape impacts). Similar approaches (although the level of detail of any prior site investigation and the methods applied may vary) can also be found in other countries such as Germany or Latvia that also developed zoning for OWF identifying five distinct areas of potential offshore wind energy development, what indicates a strategic focus for energy-related developments within the maritime space. On the other hand, the French VP focuses on the role of ports in facilitating the energy transition and illustrates how the EGD’s offshore energy targets can lead to reorganization of space not only at sea but at the land-sea interface with ports and their hinterland. This shows the added value of a sea basin level approach when planning for ORE and port transformations.

Regarding the near future, the French MSP process will involve a joint public debate focusing on OWF at a sea basin level, emphasizing the integration of OWF considerations within the broader MSP framework. On the other hand, Italian MSP plans, consider measures to enhance energy efficiency in ports, maritime transport, and fishing. However, in the current draft of these plans, OWF has not yet been addressed, with ongoing processes to incorporate them.

In Germany Economic Exclusive Zone (EEZ), there is a high level of integration between MSP and sector planning for OWF development. The authority responsible for drafting the MSP plan is also responsible for drawing up the sector plan for OWF which specifies which areas are to be developed for offshore wind in what order. The same authority also carries out site investigations to determine site suitability for offshore wind and gives planning approval to OWF projects. Especially the MSP plan and the sector development plan for offshore wind therefore directly feed into and complement each other. Investment potential for OWF is therefore not only secured spatially, but also by means of dedicated targets for offshore wind area development and an associated timeline, giving a high degree of planning security to potential investors.

2.1.2. Complementarity & transferability

The identified practices display a level of complementarity and replicability, hinting at the potential for establishing common criteria for the development of zoning for OWF.

In the perspective of transferability, the Latvian co-creation approach, including formal and informal cross-border cooperation (ELWIND project) and stakeholder involvement (in the definition of OWF areas and during the EIA procedure) may be replicated in other countries without any significant challenges. This VP highlights that stakeholder involvement is essential and regular consultations with local stakeholders are crucial for acceptability of the OWF project.

The process and analysis from the Finnish VP can be replicated in other countries. However, it is

important to underline that the analysis can only consider factors from which suitable data is available. Therefore, for a comprehensive analysis, a large variety of high-quality data is needed and the practice implementation might require considerable investments in data production and collection.

The French VP cooperation between ports at sea basin level to propose an integrated logistical chain can be replicated elsewhere.

The Spanish co-design process at the inter-administrative level can be replicated itself, as well as the list of criteria that was used to define the HPA. This list can be used as preliminary criteria to start a similar process in another country, obviously adapting it to its particular characteristics: wind conditions, depth, protected areas, navigation safety criteria, etc.

2.1.3. Challenges & pending issues

Several common challenges are identified among the four VPs addressing *A. Climate change mitigation*: lack of clear distribution of governance responsibilities (overlapping of mandates) and what is the role/mandate of MSP (in many cases the MSP authority does not have power to actually manage sectors); private stakeholders and local communities usually are not involved at an early stage of the OWF development projects; cumulative impact effects are not or not sufficiently considered in the phase of planning; and there is a need of high-quality (high resolution) data, in-depth analysis of preconditions, trade-offs with other sectors and possible impacts on marine ecosystems.

In Latvian MSP the land-sea interaction between OWF and coastal landscapes has to be managed more coherently. The technological progress has impacted the effectiveness of certain criteria, particularly in wind farming expansion, raising questions about how large offshore energy extraction territories are we ready to reserve, in retrospect of how much energy these territories are expected to produce (aligned with national energy targets).

Space limitations within ports pose challenges for supporting OWF development in France, primarily due to surrounding urban areas and environmental considerations. Another important challenge is that OWF operations may interfere with military areas, leading to signal disturbances, but defence issues fall outside the MSP scope in France.

The Finnish MSP process emphasizes the importance of the assessment of cumulative impacts of OWF that includes a cross-border dimension. In addition, it is important to consider the land-sea interaction aspects of OWF development involving ports and grids and to explore the role of MSP in solutions related to hydrogen production and transport. Another question revolves around whether ports hinder the development of OWF and if they possess the capacity to address energy and transportation demands comprehensively according to EU policies Trans-European Networks for Energy (TEN-E) and Trans-European Transport Network (TEN-T). Showing the whole of energy production including development areas, grids, ports, hydrogen, and other related aspects in an easy to understand and interpret way in MSP plans is a central question to consider.

In Bulgaria the needed legislation is still in preparation and the infrastructure for future wind farms is not developed yet. There is no specific zoning planned in the MSP plan for upcoming wind farms, leading to considerations regarding competition for space, but also for the potential for multi-use opportunities.

In Italy, institutional dialogue on MSP could be improved, making exchanges among different national

authorities more efficient (e.g. data exchange, discussion on sector priorities, identification of a common strategy).

As for Spanish MSP plans they have a deficit in assessing trade-offs and compensation methods. The absence of criteria and legal frameworks for multi-use management also presents significant obstacles. The Spanish VP addresses indirectly other EGD elements mostly in terms of challenges as. For example, regarding *biodiversity and ecosystem protection and restoration (D)*, in the defined HPA for offshore wind energy development, interactions are detected with some Priority Use Areas (PUA) or HPA for biodiversity protection, or with other uses of space. The MSP plan states that this must be considered in detail at the project level but real knowledge about the potential impact of this development is not available. There are also some challenges regarding *G. fair and just transition* – some private stakeholders were involved only when the process of area definition had already started. This is, the fisheries sector at the level of the practitioners (the national representatives were present before) were only involved when the first version of the HPA was already drawn, but not in the initial co-design process.

2.2. Valuable practices in climate change adaptation

2.2.1. Contribution of selected valuable practices to this EGD element

Two VPs were identified as contributing to this EGD element, one from the Spanish MSP plans and another one from the Italian MSP plans. Both VPs contribute to the EGD element *B. climate change adaptation* in different ways. In the case of Spain, MSP plans incorporate Marine Green Infrastructures (MGI) as a way of *B.1 enhancing coastal-resilience*. Italian MSP plans identify sand deposit resources in order to address the *B.2.1 impacts of climate change*. Summary descriptions of each practice are presented below and the complete factsheet with all the information can be found in Annex II.

The MSP plans in Spain include a topic that normally other MSP plans do not, the identification (spatially and qualitatively) of MGI in alignment with the National Strategy for Green Infrastructure and ecological connectivity and restoration. For the Spanish MSP process, MGI was considered as one of the uses and activities that must be contemplated in the MSP plans. The selection of MGI elements involved the identification and mapping of a list of selected elements for the marine environment identified in the National Strategy (natural and semi natural habitats, such as: habitats of common interest from the habitats directive, artificial reefs, submarine canyons, etc), these elements have been selected because they can contribute to deliver ecosystem services, enhance biodiversity, promote connectivity and restoration (all aspects contributing to *climate change adaptation (B)* and *mitigation (A)*). The MGI selected elements in each marine demarcation were included in an annex of the MSP plan incorporating a factsheet of each element with the description of the element, a map, the policy framework of the element and the ecosystem services that this element provides. The implementation and updating of MGI elements will be conducted with the support of scientific institutions during the first cycle of the Spanish MSP process. Furthermore, the establishment of working groups is proposed to address management issues, engaging administrative stakeholders at the national, regional, and local levels.

The Italian plans developed zoning of sand sources and sinks in order to offer a nature-based solution for climate adaptation measures. These non-renewable resources play a vital role in dynamically responding to coastal changes and pressures like erosion and rising sea levels, enabling actions such as beach nourishment and potential climate adaptation measures like dune systems. Designated as planning units (PUs) within the MSP drafts, they receive priority for protection against human impact by seeking to establish national-level measures aimed at preserving and enhancing the value of these

resources.

These practices can manage environmental concerns within MSP frameworks, showcasing proactive approaches to climate resilience and ecosystem protection. Likewise, the VPs chosen highlight efforts to protect natural elements and manage climate challenges effectively. On the one hand, incorporating MGI fosters the consideration of ecological connectivity, integrating elements that *improve marine connectivity and climate resilience (D.1.4) by addressing green Infrastructures to enhance coastal-resilience (B.1)* in Spanish MSP plans.

On the other hand, zoning underwater sand deposits in the Adriatic and Tyrrhenian Seas prioritizes the management of these resources, addressing coastal erosion and sea-level rise, showcasing innovative climate adaptation strategies within Italian MSP draft plans and targeting green infrastructures (B1.1): *creation and maintenance of nature-based solutions and identification of spatial and non-spatial measures (B.2.1)* with the aim of addressing the impacts from climate change. The MSP Italian draft plans have established two strategic measures at the national level between ministerial and regional entities, supported by scientific teams, aiming to improve the value and management of sand deposits and promote climate adaptation actions.

Additionally, both VPs within MSP support other EGD objectives. MGI elements aim to foster connectivity and climate change resilience, not only conserving high biodiversity areas but also improving species and habitat connections, ultimately enhancing ecosystem services, thus contributing to the A.4. *Blue carbon sinks* element. Likewise, the strategic planning and management of sand deposits in Italy, addressing potential spatial conflicts and ensuring better governance and cooperation, contribute to emission reduction, climate neutrality (A. *Climate change mitigation*), and biodiversity protection objectives outlined in the EGD (D. *Biodiversity and ecosystem protection and restoration*).

In both cases the process is or aims to be structured involving ministerial and regional entities as well as technical/scientific support. This multi-scale, multidisciplinary process seems to be valuable.

Regarding other practices available in other countries, issues regarding the protection of climate-sensitive marine and coastal biodiversity, ecosystems, and landscapes, such as coastal erosion, are partially addressed in Latvian MSP plans. They include certain measures aimed at coastal protection when faced with high erosion risk scenarios. Extensive efforts are made also in coastline management and erosion mitigation in France.

In Finland several efforts are made to establish ecological connections to show land-sea interactions and support the connectivity of green infrastructures. The EMMAs¹ (Ecologically significant marine underwater areas defined in the MSP plans) also contribute to this objective.

2.2.2. Complementarity & transferability

The identification and integration of the MGI in MSP plans is something to be considered in order to properly apply the ecosystem-based management (EBM) approach beyond the identification of marine protected areas (MPAs). The case of Spain, can be replicated in other European countries as it is based on already available information and well-established categories of elements (i.e. habitats of community interest or areas protected by regional and sub-regional planning and management instruments).

¹ EMMAs are described as a VP in section 2.4.

Regarding complementarity, MSP plans in Spain, as in Italy, also identified Priority Use Areas which host strategic sand deposits with the purpose of beach nourishment (in fact for other uses, as for instance, construction, is forbidden by law). PUA are identified for those uses considered of general interest for the country. The areas identified with this category are not located within PUA for the conservation of biodiversity, nor do they host habitats of community interest within them. In addition, HPA were also identified for aggregate extraction containing sand deposits that have not been considered as PUA but could be needed in the future for the protection of the coast.

2.2.3. Challenges & pending issues

The Spanish VP identifies two primary challenges: the shortage of comprehensive data and constraints in integrating MGI elements into MSP. Inconsistent data arise from projects focused from different marine zones within a marine demarcation, resulting in lack of homogeneity of data and different working scales for all marine demarcations. Uncertainties persist regarding the suitability of certain elements for inclusion in the MGI list, requiring a specific analysis of the criteria for inclusion of these elements during the first MSP cycle. Furthermore, it is important to note that including MGI elements in MSP currently does not guarantee their protected status unless they are already protected through other means, such as being part of protected marine areas.

In the case of the Italian VP, MSP draft plans that serve as strategic national tools, are not yet legally binding as they are still undergoing finalisation. Coastal erosion in Italy, affecting vast areas, requires implementation of adaptation measures involving various governmental bodies, as well as, the availability of economic and financial resources, relevant at regional and local scales for its implementation. Additionally, ensuring constant monitoring and mapping of relict sands is essential to prevent conflicts and for its preservation. Temporary strategies like beach nourishment are used to prevent shoreline retreat but necessitate frequent interventions in contrast to the limited availability of resources. However, activities involving sand extractions can adversely impact marine ecosystems due to increased water turbidity, changes in nutrient availability and underwater noise pollution. MSP plans acknowledge the importance of managing this nonrenewable resource, requiring continuous geognostic control data updates, monitoring of interventions and its inclusion in regional strategies for exploiting submerged sand resources. Lack of meetings with stakeholders, such as fishermen and transportation-related entities in areas identified as priority "Sand deposits," hinders participatory awareness.

In the case of Latvia, climate change adaptation needs to be considered more specifically, yet additional knowledge and more research is needed regarding the elements to be included within this context. Similarly, during the first planning cycle of the Finnish MSP, climate change adaptation was only considered to a limited extent.

A common challenge regarding climate change adaptation can be also the identification of areas for future uses considering effects of climate change.

2.3. Valuable practices in sustainable sea-food production

2.3.1. Contribution of selected valuable practices to this EGD element

This section presents five valuable practices under the EGD theme *C. sustainable sea-food production*. These are *Coordinating zoning for aquaculture areas and MSP* from Italy, *Exploring potential for allocation of offshore aquaculture areas and their integration in MSP* from Bulgaria, *High Potential*

Areas for aquaculture from Spain and two practices from France: Development of Marine cultures (shellfish and algae) and MPA (Marine Protected Area) and Fisheries activity. Short descriptions of the valuable practices are presented below and the factsheet describing them in more detail can be found in Annex II.

The Italian case presents the integration of Allocated Zones for Aquaculture (AZA) and their promotion in MSP as a valuable approach for supporting sustainable aquaculture. The identification of AZA is the responsibility of the coastal regions. Currently the definition of these areas is at different stages depending on the region. Due to the Italian MSP governance framework, MSP was able to take these areas into account in the zoning phase of territorial waters. Strategic objectives and measures are set in the plan to support this work in promoting sustainable aquaculture. In addition, the Italian MSP plan promotes the energy transition in aquaculture and the integration of the AZA and Natura 2000 networks to support *biodiversity and ecosystem protection and restoration* (D).

Currently the Bulgarian MSP plan considers the existing zones for aquaculture within 1 nautical mile (NM) of the coast but does not envisage suitable areas allocated for new onshore or offshore aquaculture development. In addition, general recommendations for sustainable aquaculture development are included in the objectives of the plan. The practice carefully considers criteria related to marine nature protection, other sea uses, multi-use of sea space, technology and infrastructure among other issues to provide valuable insight on the issues that need to be considered when promoting sustainable offshore aquaculture in MSP. In this context, the VP from Bulgaria sets the basis for the new action developed under task 3.2. The new action will explore the potential for defining suitable areas and allocating space for offshore shellfish farming development and how to integrate it into MSP, thus helping to support the revision and implementation of the plan.

Similarly, the valuable practice for Spain presents HPA for aquaculture as an approach for planning and management of the sustainable development of aquaculture. The areas are identified based on criteria that support the sustainable development of the sector. These areas aim to homogenize the zoning of aquaculture, which is the responsibility of the Autonomous Communities, at the national level. Through the definition of the most suitable areas, the practice directly supports sustainable aquaculture and shellfish production and indirectly the conservation and protection of marine ecosystems and climate change adaptation. In addition, the MSP plan aims to foster a multi-use approach where sea-food production is co-located with other marine activities such as renewable energy production or seaweed farming.

The French case looks at the legislative process (including spatial planning) and the reasons that have hindered the development of new aquaculture projects during the past decade. Despite a common legal frame that regulates the use of the public maritime domain for all aquaculture, shellfish and algae farming, very few new projects have been successfully realized. The existing and suitable areas are identified by the state regional authorities and currently these documents are only briefly referred to in the French MSP plans. The Bretagne region is looked at as an example, where the lack of social acceptability of development projects at the local scale was considered a key reason for the failure of projects despite the existence of a good planning legal framework. The valuable practice highlights the potential of MSP to support sustainable development of marine aquaculture and algae production and stakeholder engagement and diversity.

The other valuable practice from France focused on the conflicting interest of nature protection and commercial fishing related to the designation of MPAs. France has set a target to declare 10% of its EEZ as strictly protected MPAs. The transformation of current MPAs - or a part of them - already identified in MSP documents to strict protection is currently the subject of a national public debate for the next MSP cycle. Maps of these strictly protected areas have been produced and shared with the public to contribute to the ongoing public discussion on this matter. As these areas are also

important fishing locations for fleets from multiple countries, the fisheries industry demands the right to participate in the related decision making and the management of the MPAs. Therefore, the valuable practice supports the following EGD themes: *C. Sustainable seafood production*, *D. Biodiversity and ecosystem protection* through the establishment of strictly protected MPAs, the multi-use of sea space from the perspective of these themes and *G. Fair and just transition* through the involvement of the impacted stakeholders.

In the analysis framework (Annex I) the category *C. Sustainable sea-food production* consists of three main categories: *C.1. Fisheries management* (including area and time-based measures), *C.2. Aquaculture and shellfish production* and *C.3. Algae production*. Four out of the five presented valuable practices are focused on aquaculture production and only one on sustainable fisheries. Depending on the practice, aquaculture can include fish, shellfish and/or algae farming. The valuable practices on aquaculture production highlight that MSP could be a good tool for promoting sustainable practices in the sector. Some methods MSP could apply are: delineating suitable areas for development (including the definition of the criteria for suitability), supporting and integrating existing practices and governance structures on sea-food production and facilitating interaction between all relevant actors at multiple scales.

Although sustainable fishery is a central marine activity to consider in MSP, observations on the topic in this report are limited to the one practice from France and the experiences shared in the Malaga workshop. Due to this, the observations from the valuable practices presented are mainly from the perspective of aquaculture. Observations from the France fisheries and MPA practice are included where suitable.

One of the central topics to consider for sustainable aquaculture farming in MSP is the delimitation of areas where development is to happen in the future. The presented valuable practices have somewhat different approaches to this challenge. For example, the Spanish example defines these areas as HPA which are composed from zoning categories defined by regional authorities in some cases applying different criteria, while in the Bulgarian practice the plan currently presents the existing areas for aquaculture and explores the opportunity to allocate areas in offshore areas. Nevertheless, the delimitation of the areas is presented by the practices as a central tool for supporting the sustainable sea-food production in MSP.

Permitting and management of aquaculture production is rarely, if ever, the responsibility of the MSP authorities at least when reflecting on the presented valuable practices. Instead, the practices showed different ways in which MSP can support sustainable sea-food production through the existing governance structures. Although these structures differ from country to country, there are important lessons to be learned: for example, what kind of objectives and measures are set in the MSP plan, as presented by the Italian case. The valuable practices also support the idea of MSP as a tool which could integrate the work done at different scales, remove inconsistencies and different orientations at the subnational scale and guide the overall development of aquaculture in a sustainable way. For example, the Spanish practice highlights the challenge related to the integration of the aquaculture areas defined at the regional level into a common framework and categories at the national level, which may imply the loss of detail in the zoning. On the other hand, the French practice shows that the aquaculture schemes development at the regional scale are not yet fully considered in the first cycle of national MSP documents.

All the valuable practices highlight the importance of involvement of the relevant stakeholders including local actors and citizens, private sector, and authorities from different levels. The French example highlights that identifying the suitable areas for aquaculture development commonly between all stakeholders at the beginning of the process increases the chances of more successful implementation and development. Within this process MSP can work as a platform for facilitating

discussions and to support projects' social acceptability. Another example is from the Bulgarian practice, which highlights the importance of commonly identifying opportunities for sharing infrastructure on land and at sea to support flexible co-development and co-location. From an international perspective, the French valuable practice focused on fisheries and MPAs shows the importance of considering transnational aspects so that all users of the areas comply with the measures implemented by one Member State.

Potential for multi-use of sea space and the consideration of interactions between sea uses and the environment are cross-cutting topics considered in various ways in the presented valuable practices. The practices for example present the potential of multi-use of sea space to support sustainable sea-food production while simultaneously promoting other EGD objectives such as renewable energy production. For example, the valuable practice from Spain describes the criteria about how these principles are considered in the zoning of aquaculture.

Regarding other experiences addressing this EGD element, some inputs were developed during the workshop on Exchange of Valuable Practices.

For example, regarding sea food production in terms of fisheries (C.1.), the Latvian MSP considered data on significant fishing areas to design the zoning for other sea uses. Nonetheless, while no specific zoning has been allocated for aquaculture, there exists a set of conditions and recommendations outlined for this particular area. In fact, in the second cycle of Latvian MSP plan after 2030, suggestions for aquaculture zoning could be proposed in it.

In the case of France, the governance structure operates across multiple levels, providing a scale for action and serving as an entry point for planning initiatives. There is a discussion surrounding fishing or aquaculture within Natura 2000 (N2K) areas, exploring potential synergies and assessing the compatibility between various uses. There are valuable insights to be gathered regarding the interconnection of different themes and the integration of technology.

In Germany, the 2021 EEZ plan designates a reservation area for Nephrops fishery. The main purpose of the reservation area is to keep this area free from competing uses and therefore keep it accessible to fishers. Access is becoming a crucial issue for German small-scale fishers given the expected displacement effects resulting from OWF expansion (no fishing is currently allowed in OWF areas) and MPAs; this is compounded by the likely northwards shifts of commercial fish stocks in response to climate change.

2.3.2. Complementarity & transferability

The valuable practices analyzed show that each country has their own governance structures for the management of sustainable sea-food production. Regardless, the general principles are quite similar and certain elements from the practices can be capitalized in other contexts or at least provide ideas that could be adapted to fit other national settings. It is also important to consider that the practices provide examples of challenges and that gaining information on challenges can be valuable. For example, the French practice of fisheries and MSP describes well the difficulties related to the implementation of strictly protected Natura 2000 areas and compliance of other Member States fleets operating in the area.

The valuable practices show that for MSP to be a tool for supporting the sustainable development of aquaculture, it would need to have real power to influence the sector's planning and management. As mentioned in the examined valuable practices, MSP was not the responsible authority for the authorization or management. Instead, the practices highlighted that MSP can, among other actions, set strategic objectives for the national and regional scale development and support the integration

and homogenization of regional actions. For example, the French practice on aquaculture describes that a single aquaculture planning document, integrated in the MSP plan, to guide the development could avoid confusions and inconsistencies. Another example is from the Italian practice which promotes the value of identifying a dedicated strategic objective in the plan, which in this case is *“promoting high quality aquaculture and sustaining the process of AZA identification”*. This objective is then supported by specific measures for promoting at the national level the integration of the sectoral planning (AZA selection and management) within the MSP plans. From another perspective, the examples from Spain and Bulgaria consider the importance of multi-use of sea space and how it could be considered in MSP from the perspective of sustainable sea-food production.

All practices touched upon the definition of the criteria and methods for identifying priority areas for sustainable development of aquaculture. As the Italian practice highlights, information is needed on the current areas of aquaculture development and its interactions (including both synergies and conflicts) with other key marine activities. Although the criteria are to some extent context-dependent, for example the other key activities are likely to differ between areas, some principles and methods can be transferred to other countries. Developing a common recommendation for the criteria and methods could benefit all MSP processes. The same applies to the criteria to address interaction of aquaculture with other sea uses and the marine environment, which were presented by the Spanish valuable practice.

Stakeholder engagement into the planning process is included in all the valuable practices. Identifying who to involve, in which part of the planning process and how to do it in practice are all elements that can be transferred to other contexts and modified to fit the national network of actors. For example, the Bulgarian practice exploring the potential for offshore aquaculture highlights the need of allocating space with the needs of the sector’s interest and the existing or potential production and markets in mind. Another good example is from the French practice focused on aquaculture development, which shares a way of organizing and working with arenas for interactions that aid in making decisions that are accepted by all parties.

2.3.3. Challenges & pending issues

In terms of aquaculture, the intention to develop this sector in Latvia must face the challenge of preventing associated pollution. A major obstacle arises when the most suitable area for aquaculture coincides with one of the most sensitive regions to potential pollution risks.

France presents a complex multi-level governance structure specifically concerning aquaculture.

Finland has a national goal to increase fish farming and MSP supports this by identifying potential areas for the activities. However, regional-level permitting hinders the development. Sector-specific development goals that deal with willingness, quantity, zoning and shared responsibilities, are needed. There is a recognized need to foster start-ups and establish a robust value chain for aquaculture diversification, focusing on mussels, seaweed, and multi-use practices. In addition, it is crucial to establish a "nutrient compensation" system, an essential element absent from current legislation.

To allocate new zones for aquaculture within maritime space in MSP plans from Bulgaria, an extensive assessment of preconditions is required. This entails adopting a modelling approach employing new technologies and ensuring early engagement with all relevant stakeholders, notably the fishing sector. In addition, it is necessary to establish shared governance competencies, consider the overlap of aquaculture with Marine Protected Areas and integrate climate change projections in the analyses. Finally, it is also crucial to manage conflicts arising from new uses, meeting the objectives outlined in

the EU Biodiversity Strategy 2030 while addressing marine litter issues to achieve Good Environmental Status (GES) according to the Water Framework Directive (WFD).

Spanish MSP plans present complexities as the integration of regional zoning categories for aquaculture into a unified framework may result in a loss of detail at the national scale (as the different regional categories may use different criteria to define the areas and, in the MSP, plans they are all grouped into one), however, in the other hand, they provide the full spatial integration of the sector in the MSP plans. There are also concerns about the impacts of aquaculture activities and the need for a better involvement of all stakeholders at local levels.

In the Italian MSP plans there is a lack of knowledge concerning the spatial distribution of small-scale and recreational fisheries. This has limited the way the plans have addressed these sectors, in terms of compatibility with other ones. Particularly, more specific guidance to enhance compatibility between fisheries and nature protection (N2K) is needed and should be addressed during the plan implementation phase. Moreover, MSP plans encounter limitations in effectively addressing sustainable fisheries due to a scarcity of good practices.

Box 1. Multifunctional zones and multi-use of the sea space (Bulgaria)

Short description

Bulgarian MSP Plan includes zoning of the sea space into four types of zones: i) restricted zones for use; ii) zones with a specific conservation regime; iii) multifunctional zones; and iv) areas for future use.

Multi-functional zones have been defined in the MSP Plan *aimed at minimizing conflicts, supporting the efficient use of sea space and better coordinating sectoral maritime policies*. The Plan states that currently any combinations are possible except those with specific legally regulated restrictions or bans. The Plan highlights some examples of (soft) multi-use combinations:

- Maritime transport and fishing;
- Maritime transport, fishing and tourism;
- Tourism and underwater cultural heritage;
- Scientific research, underwater cultural heritage and MPAs.

Sectors/Activity involved

Aquaculture and fisheries, maritime transport, coastal and maritime tourism; maritime defense, nature protection, landscape protection, scientific research, underwater cultural heritage, marine industry, etc.

Stakeholders involved

Competent MSP Authority, all ministries, executive sectoral agencies, relevant administrative stakeholders, etc.

Governance context

Currently the Bulgarian sea space combines several functions/uses among sectors, except for zones with restricted access, mainly related to military exercises. Many combinations are possible except those with specific legal regulations and restrictions, including those mentioned above. For multifunctional zones and its regulation, the Plan refers to the shared different competences of EU

and national legal frameworks.

How this MSP practice can support the Green Deal

The Plan does promote synergies between economic sectors through the foreseen multifunctional zones, based on the Multi-Use (MU) concept. The main goal is combination of compatible functions for more efficient use of maritime spaces; achieving synergy and economy of space and scale; and improved coordination of maritime sectoral policies. MSP can directly support MU by indicating preference for joint uses as opposed to single uses and through the imposition of certain conditions for the developers during the permitting process.

Challenges/gaps/inconsistencies still to be addressed

No methodological justification/rationale was performed and (i.e., just spatial delimitation). The Plan does not include in-depth analysis of the potential of multi-use combinations and the evaluation of overall MU effects/added values or multiple barriers for transfer of the MU from concept to practical implementation. Also, no consultations with private stakeholders on their perception were conducted in the Plan.

Despite a number of good international examples of successfully applied multi-uses, the MU concept is still novel for Bulgaria, its decision-makers, spatial planners and stakeholders.

Further steps:

- MSP is still the main process providing the policy framework needed to overcome the multiple barriers to MU;
- MSP can act as a transparent tool for communication with stakeholders in the early stages, which can then result in more sustainable solutions on MUs;
- Advancing the development of multifunctional zones implies a radical change from single use to co-existence;
- Specific capacity needs (training, finance and public awareness) are provided for actors to boost and advance MU development.

Bulgarian MSP Plan includes multifunctional zoning; however, its operationalisation is not clear yet: there is a need of comprehensive legal framework and to adapt the MU methodology tested under the EMFF MARSPLAN-BS II project, with focus on the environmental impacts (EU Biodiversity Strategy 2030 targets for MPAs) and socio-economic benefits.

2.4. Valuable practices in biodiversity and ecosystem protection and restoration

2.4.1. Contribution of selected valuable practices to this EGD element

Cases from Finland, Italy, Spain and France have been selected as valuable practices for the EGD element *D. Biodiversity and ecosystem protection and restoration*. All of these VPs describe the procedure of zoning nature's valuable and/or protected areas and how this is reflected and considered in the MSP. It is crucial to find solutions for a balanced and well-thought future vision of the MSP as to enhance the environmental compatibility of economic sectors, in order to ensure coexistence with nature conservation objectives.

Shortly introducing each of the VP's, the Finnish MSP identifies areas with significant underwater natural values (EMMAs). The areas are not considered protection areas per se but might be reconsidered in the future while thinking about the extension of marine protected areas. Access to data on marine species and ecosystems forms the basis for this VP. Considered as an added value – the Finnish case represents the provision of easily understandable spatial datasets with descriptions of valuable underwater nature areas, which is useful information for planners to comprehend the topic better in geographical and environmental terms. This activity was done during the first cycle of Finnish MSP, and it is expected that EMMAs will be updated and included in the second MSP cycle as well.

The Italian draft MSP identifies PUs where specific uses are prioritised. The aim of this approach is to minimize conflicts between various sea uses. PUs are classified in: generic use (G), priority use (P), limited use (L) or reserved use, where generic consists in current activities and uses that coexist without conflict, priority considers one or more uses prioritized over others, although permitted and finally reserved and limited when a predominant use is indicated, with other uses that may be allowed, if compatible with the predominant use. By identifying areas with priority use (P) for nature conservation, the plans provide indications on key areas relevant for marine protection. In these areas new MPAs or N2K areas could be identified and or enlarged, paving the way for extension of marine protection in Italian marine waters. In addition, the MSP Plans recognized the existing spatial perimeters of MPAs as PUs of Type L, in line with the measures in the management plans that define what activities are allowed, in order to enhance biodiversity and ecosystem protection.

Spanish MSP identifies and designates (1) priority use areas, which are defined to integrate all the existing MPAs, and (2) high potential areas – areas considered to be of high value for the protection of biodiversity but currently not included as MPAs. Such action is taken in order to protect biodiversity considering already protected areas and future areas of high biodiversity value to meet international commitments (30%) respectively. A specific ad hoc group was created in order to discuss how to integrate the biodiversity management plans of these sites (if they exist, or when will be available in the future) in the MSP. This ad hoc group was formed by national and regional administration, including the regional authorities (Autonomous Communities) and research centres that support MPA designations and the MSP process.

The French case study concerns two marine Natura 2000 sites located in a bay on the Atlantic border between France and Spain. Although the bay has similar environmental characteristics across the border, only France has established these Natura 2000 sites, which are managed by the French administration. In the bay, different maritime activities take place, making a complex governance structure due to the presence of many stakeholders and administrative and institutional differences in each country. Despite a local cross-border cooperation for environmental matters and the willingness of the local state's agency to collaborate with all stakeholders, the bilateral management of the Natura 2000 sites remains difficult. This is probably resulting from a lack of inter-states cooperation in Natura 2000 policy and administrative and jurisdictional differences. This example shows well the difficulty of concrete cross-border cooperation for the protection of marine biodiversity between two EU Member States.

Moreover, it is important to acknowledge complementary activities that result from actions related to biodiversity and ecosystem protection. Namely, *climate change adaptation* initiatives and *sustainable seafood production* (categories B and C of the EGD identified elements) are indirectly showcased in these valuable practices that acclaim activities initiated towards biodiversity protection.

For example, by supporting the protection of the marine environment, the Finnish valuable practice of EMMAs also indirectly supports the protection of important fish spawning sites, which are crucial for the sustainability of the fishing sector (category C.1.1. *Improving the state of fish stocks*).

Underwater nature identification can also provide information that aids in the planning of coastal protection (for example from wind surges) (*B2. Protection of climate-sensitive coastal biodiversity*) and carbon sequestration into the marine ecosystems (*A.4. Blue Carbon sinks*) - therefore contributing to climate change mitigation and adaptation in the future.

Also, the Spanish approach contributes to climate change adaptation measures as an indirect EGD element in this practice. By designating specific areas in relation to biodiversity protection (including *B.2. Protection of climate-sensitive marine ecosystems*), this VP represents enhancing green infrastructure as means for increased coastal resilience. In addition, the identification of climate refugia for marine species and habitats is noted.

The identification of priority areas for marine conservation in the Italian MSP plans is a smart practice to help reaching the EGD objective of achieving a coherent network of marine protected areas. The practice can facilitate the establishment of new or enlargement of strictly MPAs (10% target) as well as of N2K and the establishment of other effective area-based conservation measures (OECMs) (30% target). Italian MSP contributes to organise the sea uses in the area in order to be compatible with marine conservation, prioritising those with lower environmental impact and addressing practices to enhance environmental sustainability. Without prejudicing any marine use (if not explicitly stated by the plan), priority for marine conservation on planning units provide a strategic orientation on the intended use of the area that sectors need to take into consideration in their plans and strategies. In particular the Italian case outlines (1) multi-use of the sea space (combination including biodiversity and ecosystem protection) and (2) coordinated, transboundary initiatives, as secondary EGD topics addressed.

Regarding other practices, the approach of this EGD topic in France is addressed by the existence of a *Carte des enjeux écologiques* (map of ecological stakes) that identifies environmental important areas integrated into MSP, based on the Marine Strategy Framework Directive (MSFD) work, as well as all Marine MPAs reflected within the MSP plans.

It is noticeable that the theme of multi-use curves through challenging biodiversity protection objectives in stereotypical planning where protected does not always mean denied. This is, sometimes MPAs are understood only as restricted non-use areas by the general knowledge, whereas there are possibilities for the development of certain activities under specific conditions and multi-use concepts might provide a good approach.

Thinking about differences, there are some governance specificities that can be mentioned. For example, in Italy, priority for marine conservation within 12 NM have been identified by the competent coastal regions, and the ones identified in the offshore areas have been designed at national level. In Spain, regarding MPAs in the marine and coastal domains, there is a general distinction (with exceptions) between internal waters (competency of the Autonomous Communities) and external waters (normally competency of the central government, with some exceptions). Similar situation/approach applies for Germany.

All in all, MSP plans serve as a platform for collaborative planning. In terms of the Green Deal, the previously described practices act as a tool to help reaching the EGD objective of achieving a coherent network of MPAs and 30% marine protected areas target.

2.4.2. Complementarity & transferability

The highlighted practices might be complementary tools, significantly contributing to the reinforcement of natural conservation efforts. The criteria used for the zoning analysis in Finland, and

Spain might be compatible as to improve the integration of conservation values and how they are considered within MSP plans. The Italian VP may complement by offering the frame for discussion on where to locate the new protected areas in the larger context of MSP. The French VP goes beyond jurisdictional borders and proposes MSP as a platform for the development of cross-border MPAs. There is a potential to establish common criteria for identifying "areas of attention" specifically dedicated to nature protection within the MSP framework, adapting to geographical characteristics by sea basins.

The delineation of EMMA areas from the Finnish MSP can be replicated in other countries. To perform this activity, thus, also transfer, it is important to have a significant data collection, since mapping of EMMAs is highly dependent on wide field and other spatial datasets (geological data, endangered species data etc.). If similar data is not available, the implementation of the process would require substantial investments into data collection. Although databases for applied research is crucial, for transferability can be capitalized (1) the concept of areas with significant nature values, which are not protected areas, can be beneficial for bringing nature values into the discussion outside of protected areas. Replicating this way of thinking can be a successful approach to raising awareness and discussion on the importance of supporting marine biodiversity and ecosystems in all maritime activities. Also, (2) a spatial prioritisation analysis in open-source software *Zonation* can be used for modelling processes.

In the Italian zonation approach, transferability potential relies on well-studied territory since identification of priority areas for marine conservation should be based on the (1) collection of the best available knowledge on habitats and species in the planning area. In addition, when working on zoning, (2) considerations about the economic activities in place in the area and identification of opportunities for co-existence, for addressing their sustainability and eventually to promote creation of synergies should be drawn too. To outline the climate change perspective, priority areas for nature conservation represent a tool to identify climate refugia or areas not yet protected but which are particularly vulnerable to climate change.

Zoning established in the Spanish POEM for the protection of biodiversity can be replicated in other contexts by the identification of the PUA and HPA. Criteria for identification of PUA for biodiversity includes marine protected areas (Natura 2000 Network sites too), both managed by the national administration or the regional authorities. For different marine uses and activities, there are elements to consider prevailing over the POEM, for example, areas important for seabirds. To continue, criteria applied for the identification of HPA for biodiversity conservation highlights territories that have been identified as high value areas for benthic habitats, high value areas for birds and cetaceans, high value areas for species of Community interest, also areas that have been identified in the framework of a process for the determination of Natura 2000 network gaps as areas of interest for species (seabirds, cetaceans and marine turtles) or marine habitats for possible designation as a protected area and other specifically defined by international instruments. More information in detail about criteria for PUA and HPA identification can be found in Annex II.

2.4.3. Challenges & pending issues

General commonalities between Finnish, Italian, Spanish and French VPs are related to the scope and mandate of MSP, none of the MSP authorities have the power to set up new protected areas or manage existing ones, normally a competence of another policy, a fact which also applies to many other countries. In general terms, the existing protected areas are shown as informative background information of the MSP plans. But MSPs plans also provide indications of where some extensions of MPAs or new protected areas might be considered. Germany (EEZ) for example has designated priority areas for nature conservation that go beyond existing MPA boundaries for the specific purpose of

species protection.

Finland faces another governance challenge, as MPA designation uses a more hierarchical approach while MSP follows a bottom-up process, which may imply complexities in the integration of MPAs in the MSP process. When it comes to stakeholder engagement, obstacles are faced in defining the role of MSP regarding the protection and restoration goals. Currently, the role of MSP is to provide information of underwater nature values that complement the marine green infrastructure, and to provide a collaborative platform to discuss these values. This supports the systemic approach where marine stakeholders understand their role in socio-ecological systems.

Research hurdles encompass the establishment of five nature investigation zones on PUA in Latvia as the basis for potential MPAs extensions, implying a limitation on activities until thorough studies are conducted in these zones.

Prioritization of marine conservation as done in the Italian plans poses issues of compatibility with other marine uses already in place or with future ones. In many cases in the Italian plans, priority for marine conservation has been associated with one or two other priority uses, generally maritime traffic, in large offshore areas, and tourism in coastal areas. In this case there is the need to identify a number of measures to enhance the environmental compatibility of economic sectors, in order to ensure co-existence with nature conservation objectives.

As in other countries, Spain lacks permanent research programmes to support the designation of MPAs. This data is normally elaborated and produced by single projects and/or initiatives (with national or international funds), which can lead to problems of discontinuity, incompatibility and heterogeneity of the data obtained.

In French MSP plans, the management challenge lies in recognizing that MPAs encompass more than just identifying sensitive areas; they serve as management tools for human activities. Addressing this challenge requires a comprehensive approach involving the combination of ecological and socio-economic data to effectively manage these areas.

As complementary challenges and limitations identified in the practice towards the achievement of EGD objectives, French case study outlines cross-border and transboundary initiatives, just and fair transition and multi-use of sea space. The main reasons - administrative (national level/autonomous communities coordination in Spain and local/regional level in France), jurisdictional differences and divergent approaches that prevent a common management are pointed out. It is concluded that the achievement of a common management of cross-border valuable ecological sites seems to request the definition of a shared mechanism (perhaps through the creation of a cross-border management committee) and the joint designation of valuable ecological sites based on shared environmental aspects.

The MSP plan in Bulgaria lacks clarity on compensating mechanisms for existing and newly emerging sectors from new MPA designations.

2.5. Valuable practices in fair and just transition

2.5.1. Contribution of selected valuable practices to this EGD element

Three valuable practices developed within the Latvian, French, and Finnish MSP national plan processes were selected for the "*Fair and Just Transition*" element of the EGD. The rationale behind

the choices fell mainly on three factors:

1. The scale on which these practices are developed (national, regional, and local);
2. The participatory process with stakeholders (inclusion and acceptance, potential land-based solutions, and building scenarios);
3. The topic on which stakeholders were involved (OWF and coastal solutions, joint OWF and MSP processes, and finally cross-cutting issues)

The Latvian practice focuses on land-sea interaction at a local scale in the Southwestern Kurzeme marine and coastal area (10 kilometres inland) and addresses the EGD element to balance social, economic, and environmental interests in offshore wind park development. In assessing and evaluating the existing OWF areas, local authorities, national and regional environmental authorities, tourism operators, and renewable energy production representatives were involved in the co-design process -of the future sustainable development strategy for the coastal area- to find potential territorial-use (both for sea and inland in this case) planning solutions. The outcome of the co-design process identified new spatial marine areas to be considered for zoning of potential OWF development which would be validated in the next national MSP cycle. The practice includes different sectors (coastal and maritime tourism; offshore renewable energy; landscape protection) and directly supports *climate change mitigation* (A) EGD element through the *development of marine renewable energy installations* (A.1.1), *climate change adaptation* (B) through the *protection of climate-sensitive marine and coastal biodiversity, ecosystems, and landscapes* (B.2), and finally *biodiversity and ecosystem protection and restoration* (D) in relation of the *sea space multi-use* (D.1.5).

The Fair and Just Transition EGD element is highlighted in the French valuable practice. It addresses public participation in offshore wind farms focusing on the establishment of a joint public debate of two processes (OWF and MSP), firstly separated, at a national scale. In the past, public participation processes were conducted in parallel for OWF planning and MSP and the result from renewable energy was partially included within the MSP plans. During the first public MSP debates (following the selection of OWF developers), the OWF projects were criticized by stakeholders and local citizens for their lack of long-term planning and pre-defined and already established projects. In response to these criticisms, three laws came out: The first law requires public consultation before selecting an OWF developer, and the other two laws enable local stakeholders and citizens to participate in the planning of OWF in MSP plans through a single, joint public debate at a regional scale. This underlined the important development of the national public consultation process, which gives representativeness and greater visibility to the diversity of stakeholders as well as decision-making power at different levels. In addition to Fair and Just Transition, the practice addresses *climate change mitigation* (A) EGD element through the *development of marine renewable energy installations* (A.1.1).

The Finnish valuable practice differs from the previous ones since it focuses on scenario building and addresses the Fair and Just transition element through the involvement and support of 350 stakeholders, legitimizing their knowledge and decision-making at the regional scale. This participatory process was developed during the first cycle of the MSP planning through a specific methodology composed of four main stages: 1) the alternative future scenarios were drafted based on information collected in expert interviews; 2) National and regional workshops were organized to identify what alternative futures mean for different marine sectors; 3) Two workshops were organized in each of the planning regions (1st on scenarios from the regional perspective and 2nd on impacts); 4) The scenarios were finalized and presented in the draft of the MSP plan. Three alternative scenarios were built, discussing the changes in the operating environment and the needs and views of interest groups regarding the future development of the Finnish maritime area. Drivers related to climate change, environmental protection, condition of the maritime area, security situation, international trade, urbanization, and development of maritime logistics, energy, fishing, aquaculture, and tourism

sectors were considered. The approach provided an opportunity to combine existing ecological data with information collected from the stakeholders to produce social acceptance. The work on scenarios as a valuable practice addresses multiple EGD elements such as *climate change mitigation* (A) and *biodiversity and ecosystem protection and restoration* (D), including the *multi-use of sea space* (D.1.5).

Besides the VPs presented collected by the template, other practices were discussed during the workshop on Exchange of Valuable Practices.

In the Latvian MSP process, the establishment of a Maritime and Coastal Spatial Planning Coordination Group aimed to engage different stakeholders from national, regional, and local levels from diverse sectors. Improvement opportunities lie in establishing a more structured and regular communication within this coordination group, ensuring effective collaboration and information exchange.

The public participation in France is an objective in the preparation of all MSP plans, promoting inclusion in decision-making processes. Additionally, a specific action within the South Atlantic MSP focuses on promoting diversity in maritime professions.

In Finland MSP is an important planning tool when it comes to ensuring wider public engagement. The involvement of the coastal Regional Councils into the MSP process is crucial for the representation of regional interests, highlighting the principle of leaving no place behind.

There is a need to evaluate the socio-economic impact of Italian MSP plans, which adopt one measure and additional studies in this respect. The approach to planning includes consistent detailing across all areas, facilitated by the involvement of regions supported by the governance system and legal provisions.

The Spanish MSP competent authority developed the information system InfoMAR, a public geoportal providing all available information used and generated in the Marine Strategies and POEM processes. Stakeholder engagement mainly involves formal consultation processes, yet one of the POEM measures includes the formulation of a stakeholder engagement strategy to enhance participation.

2.5.2. Complementarity & transferability

From the transferability point of view, the Latvian co-creation approach and the Finnish participatory methodology to building future scenarios might find an easy way to be replicated in other countries without any significant challenges even though sufficient allocation of time and financial resources needs to be covered.

The non-spatial approach adopted in French maritime planning allows broader societal issues such as gender equality to be addressed. Recognising the diversity of the maritime community, the planning includes considerations for various stakeholders such as fishermen and seafarers, indicating the importance of skills development and training in the planning phase.

Adopting approaches observed in the Finnish VP on scenarios could prove beneficial in Spain, despite limitations in human resources and budgetary considerations.

There is a focus on promoting a fair and equitable transition in Italy within the maritime industry, fostering a collaborative culture between citizens and state entities. An analysis of alternative scenarios for MSP (as the ones presented in the Finnish case) is suggested to enhance its utility in the formal planning process.

Although it is important to point out that the VPs analyzed on Fair and Just Transition focus mainly on the participatory theme, leaving out other declinations reported in Deliverable 2.1, relevant aspects potentially capitalizable in other European contexts do emerge.

The first is an online mapping platform, developed by CEREMA, that allows to feed discussions and promote the inclusion of all stakeholders in debates, public agencies, used in the French case for public debates in regards to the development of an OWF project. It is a dynamic tool that can be easily adapted to other sectors and is able, if supported by a strategy, to reach a broader audience.

The methodology promoted by the Finnish case on scenario building can be considered as an additional capitalizable element, although there are some aspects relevant to highlight:

- Sufficient allocation of time and financial resources needs to be covered. The availability of good quality data and information of relevant stakeholder groups facilitates the implementation. The absence of these factors will likely raise the requirements for financial commitments to produce them. Inclusion of multiple perspectives from different stakeholder groups into the process supports the formulation of well-founded scenarios relevant for the sea basin in question.
- The practice needs to be adequately located into the MSP development timeline, so that it best serves the whole planning process. Correctly timed allocation of coordination resources enables the incorporation of the practice and the execution of comprehensive stakeholder engagement.
- Institutional trust can play a significant role in stakeholder engagement making it another relevant factor to consider when replicating the practice.

2.5.3. Challenges & pending issues

A number of common challenges were identified in all three case studies, leading to the need to establish a constant and ongoing participatory programme of stakeholder involvement from the outset of the joint planning process. During the implementation of the process, potential problems related to the quality of the results and a possible extension of the timetable may arise.

Other common theme across the MSP initiatives that countries also have to face include gender and age considerations. Latvian MSP encounters insufficient attention given to gender diversity or age among engaged stakeholders, while French and Finish MSP aim to integrate gender equity but faces hurdles in implementation and involving the youth in planning processes. Additionally, within Bulgarian MSP, there is a lack of consideration for gender balance.

From the VPs' analyses, it seems there are limitations and a lack of effectiveness of results if the participatory process is developed at the national scale instead of at the regional/local one, which facilitates targeting key actors who can contribute to the proposition of tailored solutions. There is an insufficient recognition of MSP within the wider media in Finland, and comprehensive impact evaluations across all aspects are also required. Additionally, assessing the capacity to influence planning decisions systematically are crucial areas requiring focus.

The French and Finnish cases highlighted some difficulties in obtaining key representatives for each sector involved given the multidisciplinary nature of the MSP.

Latvian MSP planning requires effectively involving interested stakeholders and improving information exchange. The focus of the MSP working group primarily concentrates on different governance levels, sectors, and Non-Governmental Organisations (NGOs). In Bulgarian MSP plans, not all categories of

stakeholders are adequately represented and the role of MSP is not well articulated within the broader context.

Italian MSP plans primarily present limited stakeholder engagement, although a measure exists to fill these gaps. There is a lack of understanding about meeting stakeholders for a comprehensive mapping exercise. Furthermore, there seems to be an incomplete compliance between the established vision and strategic objectives with the actual measures implemented within the MSP plans.

In the POEM, stakeholder inclusion often occurs only in the advanced stages of the process. Questions persist regarding the frameworks and scales of gender balance within strategic provisions in Spain.

In Germany (EEZ), recognition of the small-scale fisheries sector in MSP remains an issue. Small-scale fishers are among the most disadvantaged stakeholders with respect to the distributive aspects of MSP, resulting from the expected displacement of fishers in the face of offshore wind farming expansion and MPAs becoming more restrictive. They are also one of the least powerful sectors involved in MSP. MSP can play an important role in mitigating the distributive “bads” experienced by small-scale fishers by encouraging multi-sector discussions surrounding the compatibility of OWF, nature conservation and fisheries. More targeted multi-use concepts can be developed for the next round of planning that also benefit small-scale fishers.

As a general reflection the plans of the involved countries may need to establish channels of information exchange with sectors to ensure that elements of *G. Fair and just transition* present in the vision and introductory parts have practical impacts in the work market (e.g. gender balance). Moreover, there may be the need to establish links with the presently developed EU recommendations regarding green claims and protection of consumers.² This last aspect intersects the topics of blue circular economy and may benefit from explicit connections with the socio-cultural concepts of ocean and ecological citizenship.

3. Valuable practices addressing other EGD topics

From the EGD elements identified in the methodology, some were just slightly represented by the selected VPs. The EGD element *Zero pollution* (F) was represented by one valuable practice from Bulgaria. The element *blue circular economy* (E) did not have any associated VP, although there are some insights from the Workshop on Exchange of Valuable Practices, regarding the way some MSP processes address it.

On the other hand, Latvia identified another VP that although it does not directly address any particular EGD element, it provides contribution to EGD overall objectives. A summary description has been included here, while the complete factsheet can be found in Annex II.

3.1. Valuable practices in zero pollution and blue circular economy

3.1.1. Zero pollution

The Bulgarian VP "Pollution prevention from land-based activities and sources" addresses the disposal of untreated domestic wastewater into the sea along the Bulgarian Black Sea coast, impacting

² Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substantiation and communication of explicit environmental claims (Green Claims Directive) COM/2023/166 final available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A0166%3AFIN>

adversely the seawater quality (*F.1. Pollution prevention - F.1.5. Measures related to other land-based activities*). The MSP Plan acknowledges and incorporates this issue, emphasizing the need to upgrade existing Wastewater Treatment Plants (WWTP) and sewage systems in coastal areas. Since the MSP plan indirectly addresses pollution by several measures, the coordination between the plan and this practice is limited, but the Plan conducts a general analysis on the pollution from the land-based sources through the integration of the MSFD and the WFD targets. Key challenges include unregulated discharges, overloaded sewage networks, and insufficient funding for wastewater treatment installation. Also, there is a funding limitation, especially concerning small coastal municipalities lacking resources to install WWTP.

Besides the practice collected through the template presented in Annex I, other experiences were shared in the Workshop on Exchange of Valuable practices.

For instance, in the Latvian MSP plan, there is a strong interest in reducing nitrogen and phosphorus loads in the Gulf of Riga, particularly, with strict recommendations outlined for aquaculture development in this specific area.

The focus in France largely centres around land-sea interactions, aiming to prevent pollution at its source. There are initiatives involving citizen science to remediate pollution, while governments have agreed to establish the Sulphur Emission Control Area (SECA) in the Mediterranean Sea by January 1st, 2025.

The Italian approach involves studying maritime transport impact hotspots and implementing spatial measures. Additionally, there are measures in place to reduce pollution from ports and maritime transport, to address waste collection in ports and to conduct beach clean-up initiatives. Also, MSP plans have strategies for marine litter pollution prevention.

Currently zero pollution is considered to a lesser extent in the Finnish MSP plan, mostly by contributing to the visibility of issues related to marine pollution. Integration of MSP with the MSFD process remains a prospect for the future, which could enhance the consideration of the topic within MSP. However, the MSP tools available for impacting zero pollution are limited in their effectiveness.

Despite this topic being considered in the POEM, the regulation of wastewater treatment lies outside the scope of the Spanish MSP plans, remaining more descriptive than regulatory.

Pollution reduction measures/recommendations (from urban wastewater treatment plants, industrial plants) although indirectly reflected in the Bulgarian Plan's objectives and its EIA Report could be replicated (through the implementation of the MSFD -Programme of Measures- and the WFD). Another insight is that even the MSP would probably do little to relieve impact of the dominating pressures, as they relate mostly to emissions from land (runoff, point source pollution and domestic), the Plan may still make an important guiding and enhanced coordination to improving ecological conditions by limiting the cumulative impact from additional pressures on sensitive species and habitats in particular areas. Land-Sea Interactions analysis, although just generally considered in the scenarios for future development of the MSP Plan, can also be replicated as a preliminary assessment to address the issues of land-based pollution.

3.1.2. Blue circular economy

As already mentioned, there was no VP collected through the template for the EGD *blue circular economy* (E), however, some exchange took place among partners regarding how MSP processes of the MSP-GREEN project countries were addressing this issue.

France implements measures tied to circular economy practices such as vessels dismantling and dredging sediment recycling. Similarly, Italy has several measures aligned with circular economy principles, especially concerning ship and boat repairs, as well as the recycling of fishing and aquaculture gears. In Finland, involvement of MSP in circular economy management remains at a general objective level. More detailed management and permitting responsibilities fall under other authorities, limiting MSPs direct regulatory impact. Also, this topic falls beyond the scope of MSP in Spain. The lack of substantial competencies in regulating sectors difficulties the ability of MSP to address this aspect effectively.

3.1.3. Reflexion on circular economy and zero pollution practices in MSP

The limited inclusion of practices related to zero pollution and circular economy could be attributed to a focus on other pressing environmental concerns or developmental priorities that are considered more immediate or critical. Additionally, the implementation of these practices is resource-intensive. Moreover, it has to be considered that some of the aspects of the circular economy, including green claims, have been addressed by EU regulations (and, consequently, national ones) only recently. Another contributing factor could be insufficient awareness or understanding among stakeholders regarding the importance or feasibility of these topics, leading to their exclusion from plans or initiatives. Complexities in establishing supportive policies and economic constraints or a lack of perceived economic benefits might limit their inclusion in policies or plans. Moreover, the absence of technological advancements or suitable technologies for implementing zero pollution or circular economy practices could restrict their adoption. Finally, the scope of MSP sometimes does not fully cover or have the power to plan and manage these aspects.

3.2. Cross-cutting valuable practices

In comparison with the practices presented till now, this VP presents a different typology, being related mostly to development of assessments and monitoring for better decision making in land-sea interaction development. Latvian MSP seeks to consider previous planning aspects for coastal development which includes coastal landscapes, tourism development, coastal infrastructure, etc., while working towards planning sea uses for MSP. A summary description of the VP can be found below, the complete factsheet is included in Annex II.

In 2016 Latvia adopted a Thematic Plan for Public Infrastructure Development in the Baltic Sea Coastal Area (hereinafter - Coastal plan) in the framework of which an assessment was performed to analyze the visitor flow to the Latvian part of the Baltic coast and its pressure on key habitats, to improve their preservation and possible governance solutions. This information supports coastal planning and decision-making (both on national and local level). The assessment on the flows of coastal visitors serves as base data to improve decision making regarding coastal ecosystem protection (e.g. dunes) and the analysis regarding marine litter, improve management in this issue. Thus, this VP supports the EGD elements climate change adaptation (B.), Biodiversity and ecosystem protection and restoration - (D.2.1. Remediation of contaminated marine and/or coastal sites).

Another aspect is that the coastal assessment draws attention to the incoming flow of tourists, identifying places where the development of the tourism industry is observed more clearly. Thereafter, in the Coastal plan the identified areas are designated as priority developable places. As such, in order to preserve the factors contributing to the development of tourism, for example, the scenic values as characteristic of the place, the types of land use of the Latvian MSP are outlined -

taking into account the developed areas identified on the coast. For example, the OWF development areas are planned at a certain distance from the coast with an intention to not significantly change the existing coastal landscape, specifically concerning the identified coastal development sites. At the moment, however, new challenges are to be faced, when technologies foresee drastic industry improvements and wind turbines are determined much larger than at the time of the development of the MSP. Therefore, the initial distance criteria set in the plan no longer serve their purpose.

Main approaches and concepts that might be replicable relate to the methodology, how to systematize structured information and represent it with geospatial data too, the integration of socio-economic drivers and coastal visitor impacts, the easiness of use and accessibility of the information and the use of surveys. Challenges are mostly related to the need of capacity and funding for planned activities onwards. To highlight, this process has been repeated three times in 2015, 2019 and now in 2023, and it provides valuable monitoring of how planning implementation progress influences coastal habitats and also, socio-economic processes.

4. Concluding remarks

In total, 21 valuable practices were identified from the six project partner's countries. These practices showcase how MSP processes in project partners countries aim to target *climate change mitigation* (A), *sustainable sea-food production* (C), *biodiversity and ecosystem protection and restoration* (D); *climate change adaptation* (B), *fair and just transition* (G) and *zero pollution* (F). The firsts EGD elements (A, C and D) were more commonly looked at in the VPs than the others (B, G and F).

No valuable practices were identified for *blue circular economy* (E), although the topic was addressed in the workshop on Exchange of Valuable Practices where partners highlighted that some MSP plans present measures addressing this topic. It has to be noticed that the topic presents a good level of complexity in terms of evaluation that may have prevented the knowledge exchange, moreover, the current development of EU recommendations on several of its aspects (i.e. Proposal for a Green Claims Directive) suggests that this is a topic that may be better addressed in future updates of the plans.

The sample of valuable practices analysed was not representative as there was no intention to do an exhaustive search. However, from this task something in principle obvious can be highlighted. MSP processes tend most of the time to operationalize EGD objectives at the spatial domain by zoning (allocating space for existing or potential MPAs, for OWF or aquaculture development, etc.). Having in mind that zoning is a common approach in the different MSP plans, the added value of the different practice relies on the criteria used for the analysis (the different range of indicators used, in some cases including social indicators), the methods for the identification of these areas, as well as, the cross-border collaboration and stakeholder integration in the process.

All in all, MSP plays an important supporting role both, in terms of area designation and offering a platform for discussion in the achievement of specific EGD targets (i.e. *A.1.1. Development of marine renewable energy installations*, *C.2.1. Development of marine aquaculture installations*, *D.1. A coherent network of marine protected areas*).

Measures within MSP plans were also identified as a type of action used to work towards the achievement of EGD targets while, both, measures and zoning are designed using as a platform, interdisciplinary working groups in order to achieve consensus.

Not everything is zoning or management measures. There are also VPs that go beyond, including cooperation between countries or even sectors. This can be the case of ports cooperating among them to adapt their infrastructures in order to give support to the deployment of OWF in the future.

The analysis of some valuable practices highlights also the importance of the consideration of land-sea interactions (LSI). Not only for the elements of *zero pollution* (F) and *climate change adaptation* (B), but also for *climate change mitigation* (A), as a way to consider the full chain of development and deployment of OWF, for instance.

It is important to highlight also that *biodiversity conservation and restoration* activities (D) have significant contributions in other EGD elements, such as, *climate change mitigation and adaptation* (A and B) and *sustainable seafood production* (C). Healthy oceans are the foundation for many EGD elements through the provision of ecosystem services. These VPs can be also important in relation to the anticipation of future ecological impacts of climate change and the identification of climate refugia for marine species and habitats.

The main challenge identified was that MSP has neither the mandate nor the power to execute some sectoral actions governed by other policies (or at other scales), which limits the impact of the integrated planning. This happens with MPAs designation, approval and management, or aquaculture planning and management. Permitting and management of these sectors is normally not the responsibility of the MSP authority.

Other challenges identified in the VPs were actually related to the sometimes-contradictory directions of EGD objectives. That means, whenever we are talking about OWF development (A. *Climate change mitigation*), the potential impacts to the marine environment (D. *Biodiversity and ecosystem protection and restoration*), or to other activities (C. *Sustainable sea-food production*) need to be considered. Furthermore, there is also the need for a proper integration of the social aspect of these potential impacts (G. *Fair and Just transition*).

Some limitations were identified also regarding the assessment of the VPs. Most of them were related to the planning phase of the MSP process. This means that it is impossible to assess how the practice will be implemented and whether its implementation will lead to the expected results and/or if it will produce some unplanned side effects. This highlights the importance of monitoring and evaluation of planning measures, in order to measure plan performance but also to assess its real contribution to EGD targets.

Task 3.2. may address some of the challenges identified in specific valuable practices. In this task, the project will also try to address the complementarity of some of these practices, aiming to depict the elements needed for the definition of a common approach in some of the aspects that the VP addresses.

5. Annexes

5.1. Annex I. Template for valuable practices

Task 3.1. Sharing valuable practises about MSP-EGD integration

Fact sheet instructions

In order to have comprehensive information of the valuable practice, 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 practice and its eventual transferability**.

Valuable practice factsheet

Title		Country	
		Partner	
Practice typology (Refer to Table 1)			
Topic(s) addressed (Refer to Table 2)			
Short description			
Geographical scope Please provide a map if possible			
Sectors/Activity involved (Refer to table 3)			
Stakeholders involved Type: private/administrative/ general public, NGOs Scale: subnational, national, regional, international) Purpose: i.e. co-definition of the practice, consultation, implementation, monitoring etc			
Governance context (i.e. institutional arrangements particular of the practice and that influence it)			
How this MSP practice can support the Green Deal Explain it in a narrative way, if possible, referring to the topic(s) addressed above. Describe if the practice 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.	
Challenges/gaps/inconsistencies still to be addressed (indicate to which phase of the process they relate). This will feed the work on task 3.2.	
Replicability/Elements which can be capitalised To include a list of pros and cons	

Table 1. Practice typologies

(i) Measure
(ii) Monitoring, assessment and evaluation
(iii) Process-related practice (i.e. creation of working groups)
(iv) Zoning
(v) Others (specify)

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

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
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
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, transshipping 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
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
G.	Fair and just transition
G.1	Stakeholder participation
G.2	Representativeness of diversity of stakeholders at different levels
G.3	Public access to data and plans

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

5.2. Annex II. Valuable practices- Factsheets

The following pages contain the factsheets of the valuable practices in the following order:

Italy

- Zoning areas for environmental and natural resources protection
- Coordinating zoning for aquaculture areas and MSP
- Zoning sources and sinks of sands in MSP: a need for climate change adaptation

Finland

- Delineation of ecologically significant marine underwater areas (EMMA) in the Finnish MSP plan
- Delineation of potential areas for offshore wind farm development in the Finnish MSP plan (Offshore wind farm location optimisation)
- Co-creation of scenarios for the future of maritime areas (together with stakeholders)

Latvia

- ELWIND offshore wind park development - experience about off-shore wind energy project implementation in cooperation with Estonia
- Coastal assessment for evaluation of tourism and recreation pressure on ecosystem and public infrastructure
- Balancing social, economic and environment interests in offshore wind park development

Spain

- Definition of High Potential Areas for Offshore Wind Farms in Spanish MSP
- Definition of elements that conform the Marine Green Infrastructure in the POEM
- High Potential Areas for aquaculture
- Zoning for biodiversity conservation

Bulgaria

- Exploring potential for allocation of offshore aquaculture areas and their integration in MSP
- Multifunctional zones and multi-use of the sea space
- Pollution prevention from land-based activities and sources

France

- From energy transition to spatial reconfiguration into ports
- Development of Marines cultures (shellfish and algae)
- Public debates on offshore wind farms planning and MSP
- An example of a marine MPA (Natura 2000 site) in a cross-border area
- MPA and fisheries activity



VALUABLE PRACTICE: Zoning areas for environmental and natural resources protection

Description

Based on the existing knowledge on marine habitat and biodiversity, established spatial measures for conservation, as well as spatial distribution of main maritime activities, the MSP Italian draft plans (hereafter the plans) identify planning units (PUs) with a process called zoning where, in several cases, specific uses (economic sectors or other activities such as marine protection) are prioritized. This is done with the aim to minimize conflicts, foster coexistence among uses, minimize environmental impacts and ensure marine ecosystems, biodiversity and resources conservation. In line with the methodology adapted for the plans, each PU can be attributed to one of the following typologies: Generic use (G), Priority use (P), Limiter use (L), Reserved use (R). Nature conservation is promoted by the plans with the attribution of either the P, L, R typology to PU. The MSP plans do not establish any type of new protected areas (nor strictly protected, nor not-strictly protected) but they provide indications on where those areas shall be identified and therefore pave the way for extension of marine protection in Italian marine waters. Environmental and natural resources protection have been prioritized:

- i. In PUs overlapping or including existing and planned protected areas. Existing MPAs have been assigned to L typology for nature conservation.
- ii. In areas where other protection regimes are defined, including Natura 2000 marine sites (SCI and SPA), the Pelagos Sanctuary for Mediterranean Marine Mammals, the PSSA (Particularly Sensitive Sea Area) in the Bonifacio Strait and the entire area of the Ecological protection zone of the Tyrrhenian Sea.
- iii. In correspondence with areas of high ecological value, e.g.: Ecologically of Biologically Significant Areas (EBSA), Important Marine Mammals Areas (IMMA), Cetacean Critical Habitats (CCH), Important Bird Areas (IBA), hard-bottom habitats, deep-water habitats, local emergencies (e.g. rocky outcrops), occurrence of iconic species (e.g. cetaceans, marine turtles, sea-monks).

A comprehensive set of national-level measures focusing on environmental protection and/or tackling connected sectors (e.g. fishing or maritime transport) are included in the Plans.

Practice typology

(iv) zoning

Topics addressed

Main	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 and D.1.2 Establishment of new or enlargement of N2K and OECMs (30% target))]
Secondary	D. Biodiversity and ecosystem protection and restoration [D.1 A coherent network of marine protected areas (D.1.5 Multi-use of the sea space: combination including biodiversity and ecosystem protection and D.1.6 Coordinated, transboundary initiatives) and D.2 Restoring marine and coastal ecosystems]. C. Sustainable seafood production.

Sectors/Activity involved

Coastal and maritime tourism; Maritime transport; Fishing; Underwater Cultural Heritage protection, and Landscape protection.

Stakeholders involved

The planning units designated with priority for "environmental and natural resources protection" priority within 12 NM have been identified by the competent coastal regions, and deliberated by the regional councils. Instead, the ones identified in the offshore areas (beyond the 12NM), have been designed at national level. All these PUs have been approved by the Technical Committee uncharged of the plans preparation and submitted to public consultation and to consultation in the framework of the SEA process were NGOs, general public, and associations could express their observation.

Geographical scope

All three MSP Italian draft plans (Adriatic, Ionian-Central Mediterranean, and Tyrrhenian-Western Mediterranean) have adopted this approach.

Areas where nature conservation is defined as a priority, or limited, or reserved use have an extension of 16.120 km² in the Adriatic, 39.403 km² in the Ionian-Central Mediterranean and 205.175 km² in the Tyrrhenian-Western Mediterranean (considering both territorial waters and continental shelf areas).

Governance context

The designation of Marine Protected Areas is under the competence of the Ministry of Environment and Ecological Transition. Marine protected areas can be established starting from a list of candidate areas which is provided by law. For the establishment of an MPA, updated knowledge on the marine environment, in addition to data relating to the socio-economic activities that take place in the area is needed. The Region and the local municipalities interested by the establishment of the MPA are consulted during the process of designation. An institutional body named as Unified State-Region Conference is also consulted for any designation procedure. The decree finalizing the designation is promulgated by the Ministry of Environment and ecological transition in agreement with the Ministry of Economy and finance.

29 MPAs are designed in Italian marine waters. They cover a total extension of about 2,350 km², corresponding to 1.5% of the territorial waters. 23 areas are identified as MPAs to be designed in line with the objectives of the Biodiversity Strategy 2030.

How this MSP practice can support the EU Green Deal

The identification of priority areas for marine conservation is a smart practice to help reaching the EGD objective of achieving a coherent network of marine protected areas. The practice can facilitate the establishment of new or enlargement of strictly marine protected areas (10% target) as well as of N2K and the establishment of OECMs (30% target). In fact, MPA designation most often do not fall within the scope of MSP. This practice can support MSP process in creating a linkage with the external process of MPA designation. For example, at regional level, consultation under MSP on priority area for nature conservation can help starting discussion and on the establishment of MPAs. The size of priority areas for marine conservation can be large enough to allow addressing the issue of connectivity between MPA as well as the issue of the scale of area of protection, to ensure effectiveness of present and future MPAs. With the identification of priority areas for marine conservation, MSP contribute to organize the sea uses in the area in order to be compatible with marine conservation, prioritizing those with lower environmental impact and addressing practices to enhance environmental sustainability. Without prejudicing any marine use (if not explicitly stated by the plan), priority for marine conservation on a PU provide a strategic orientation on the intended use of the area, that sectors need to take into consideration in their plans and strategies.



VALUABLE PRACTICE: Zoning areas for environmental and natural resources protection

Challenges/gaps/inconsistencies still to be addressed

Prioritization of marine conservation in a sea area poses issues of compatibility with other marine uses already in place or with future ones. In many cases in the Italian plans, priority for marine conservation has been associated with one or two other priority uses, generally maritime traffic, in large offshore areas, and tourism in coastal areas. In this case there is the need to identify a number of measures to enhance the environmental compatibility of economic sectors, in order to ensure co-existence with nature conservation objectives.

Replicability /Elements which can be capitalised

Identification of priority areas for marine conservation should be based on the collection of the best available knowledge on habitats and species in the planning area.

Considerations about the economic activities in place in the area and identification of opportunities for co-existence, for addressing their sustainability and eventually to promote creation of synergies could be drawn.

This practice represents an opportunity to frame the discussion on where to locate the new protected area in the larger context of MSP (generally it is a separate process).

In a climate change perspective, priority areas for nature conservation represent a tool to identify climate refugia or areas not yet protected but which are particularly vulnerable to climate change.



VALUABLE PRACTICE: Coordinating zoning for aquaculture areas and MSP

Description

Italian aquaculture represents an important area of the national agrifood sector, contributing to the reduction of the demand for fish imports, and accounting in 2017 for 150.000 tons production (generating a value of approximately 500 million euros - 44% of seafood production in volume and more than 35% in value). Growth of aquaculture sector in Italy has been limited in recent years, in line with the overall EU trend. In accordance with European Commission COM 2021 - 236 final (strategic guidelines for the development of European Aquaculture) and the GFCM resolution 36/2012/1, Italy is currently carrying out a process of definition of Allocated Zones for Aquaculture (AZA) in its waters. Regional processes of AZAs identification are currently at different stages: a few of them are complete, the large majority at a good level of advancement but lacking of legal approval from the regional board, a few are still under development. In compliance with EU Directive 2014/89/UE, Maritime Spatial Planning (MSP) represents a strategic instrument, being at the top of a tiered system of sectorial planning instruments developed by the different maritime sectors, and of objectives defined for nature conservation, landscape and cultural heritage protection. This practice proposes AZA as a valuable tool for framing aquaculture in MSP, analyzing related challenges and opportunities.

Practice typology

(i) Measure + (iv) zoning

Topics addressed

Main	C. Sustainable sea-food production [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 and C.2.4 Multi-use of the sea space: combinations including marine aquaculture)].
Secondary	D. Biodiversity and ecosystem protection and restoration.

Sectors/Activity involved

Aquaculture, nature protection and restoration, and landscape protection.

Stakeholders involved

Planning units prioritized as “aquaculture” were included in areas designed as highly-suitable by processes for AZA designation, currently ongoing at the regional level. This was carried out through the consultation of specific offices of the coastal regions managing these projects. In different cases, it was possible to interact directly with technical bodies contracted by the regions to perform the analyses and assess aquaculture suitability. The national objective “promoting high quality aquaculture, and sustaining the process of AZAs identification”, and its description, were co-defined with the Ministry of Agriculture and food sovereignty, in charge of the Italian strategic guidelines for aquaculture development. Within the SEA scoping phase, specific feedbacks on AZA related contents of the plan proposals (prioritized planning units, strategic and specific objectives, and dedicated measures) were obtained from ISPRA (National Institute for Environment Research and Protection), the body which issued the Italian guidelines for AZA definition.

Geographical scope

All three MSP Italian draft plans (Adriatic, Ionian-Central Mediterranean, and Tyrrhenian-Western Mediterranean) adopted the approach. A strategic objective at the level of maritime area was dedicated to “promoting high quality aquaculture, and sustaining

the process of AZAs identification”. Dedicated measures were identified at the national level, to support the achievement of this objective. Specific objectives and related measures were identified by coastal regions to support AZAs definition, and the integration of aquaculture with other maritime uses, and nature protection and restoration.

Governance context

In Italy, coastal Regions are currently responsible for the identification of Allocated Zones for Aquaculture. The identification of area suitability and space availability is carried out within specific project supported by FEAMPA funds. These funds are managed by the regions, and responding to priorities which are set within the National Strategy for Aquaculture development, issued by the Ministry of agriculture and food sovereignty (MASAF). AZA are defined following the technical guidelines produced by the Superior Institute for Environmental Protection and Research (ISPRA).

The Italian MSP plans proposals were co-planned from the beginning of the process between ministerial and regional entities with the support of a scientific team. The Ministry of Agriculture and food sovereignty and forests (MASAF), the Ministry of Environment and Energy security (MASE), together with the Ministry of Infrastructure (MSP Competent Authority), and each coastal Region were involved in the process.

The specific Italian MSP governance framework allowed to take into account, within the zoning phase of territorial waters, the indications of suitability for AZAs available from the FEAMP processes ongoing in the different regions. This was possible thanks to the composition of the MSP technical committee, including one representative per coastal region.

How this MSP practice can support the EU Green Deal

Italian MSP plans identified the following objective at the national level “promoting high quality aquaculture, and sustaining the process of AZAs identification”.

The Italian MSP plans identified two dedicated measures for the completion and integration of AZA plans (these were defined at the national level and applied to all coastal regions). These two measures are aimed at:

- a) developing, adopting and implementing AZA plans, on line with MSP plans;
- b) instituting a permanent working table, aimed at supporting the integration and harmonization between regional AZA plans and MSP plans.

With respect to habitat conservation and restoration, and the biodiversity strategy implementation, the plan defined dedicated measures, aimed at:

- a) enhancing the integration between AZAs and Natura 2000 network, in line with the biodiversity strategy objectives;
- b) minimizing conflicts with the landscape, due to intervisibility of aquaculture facilities (e.g. by promoting adoption by aquafarmers of gears and plant design minimizing visual impacts; by integrating the current methodology of AZA selection by including intervisibility assessment).

A specific national measure was dedicated to energy transition in aquaculture This reads as follows:

- a) promoting the adoption of targeted solutions for increasing the use of renewable energy in the aquaculture sector, looking at the value chain and including the aspects of transformation and commercialization, and considering land-sea interactions of these activities.



VALUABLE PRACTICE: Coordinating zoning for aquaculture areas and MSP

Challenges/gaps/inconsistencies still to be addressed

The main challenge of this practice regards defining how the selection of AZAs will be “integrated” within MSP plans. Different approaches can be identified in this case, according to the coherence of AZA location and MSP prioritization (e.g. priority use; other existing use).

Replicability /Elements which can be capitalised

- ✓ Within the analysis phase, defining the current spatial location of aquaculture facilities and hot-spots of production, and analyzing interactions (potential conflicts and synergies) among aquaculture and other key uses (tourism, navigation, nature conservation), with the aim of minimizing potential conflicts arising from future AZAs definition in areas interested by other uses;
- ✓ Identifying a dedicated strategic objective in the plan, which is: “promoting high quality aquaculture, and sustaining the process of AZAs identification”, and identifying dedicated specific objectives and measures at the regional level (e.g. one specific measure is to “locate, through spatial planning, the areas which present the higher suitability as AZA, with the aim of minimizing conflicts with other uses”);
- ✓ Identifying specific measures at the national level for promoting the integration of the sectorial planning efforts (AZA selection and management) with the MSP plans. This can be achieved by establishing permanent technical tables dedicated to this theme.



VALUABLE PRACTICE: Zoning sources and sinks of sands in MSP: a need for climate change adaptation

Description

Short description Based on the existing spatial uses and activities at the sea and along the coast, the MSP Italian draft plans identify planning units (zoning) and prioritize specific uses or sectors to minimize potential conflicts at the interaction between land and sea, foster coexistence of practices, and guarantee marine resources management through adaptive developments. Extended, but limited, portions of the Adriatic and Tyrrhenian Seas (in the continental shelf) are characterized by underwater sand deposits. Those sand deposits are relevant non-renewable resources that allow the coast to respond dynamically to changes and external pressures such as coastal erosion and sea level rise turning them into beach nourishment and potential climate change adaptation actions such as dunes systems (Nature-Based solution). The MSP draft plans recognize these areas as planning units (PUs) and prioritize them "sand deposits" (over other activities), as an approach to protect the resource from anthropic impact and define, at national level, strategic measures to enhance their value, improve their management from the dredging activity, and promote climate adaptation actions.

Practice typology

(i) Measure + (iv) zoning

Topics addressed

Main	B. Climate change adaptation [B.1. Green Infrastructures to enhance coastal-resilience (B.1.1 Green Infrastructures: Creation and maintenance of Nature-based solutions (wetlands, salt marshes, seagrass meadows, maërl beds, mangroves, dunes, etc.) and B.2.1 Identification of spatial and non-spatial measures with the aim of addressing the impacts from climate change)].
Secondary	A. Climate change mitigation D. Biodiversity and ecosystem protection and restoration.

Sectors/Activity involved

Marine aggregates (sand extraction for beach nourishment or dune construction); Coastal protection; Coastal and maritime tourism; Maritime transport; Fishing; Nature protection and restoration; Landscape protection.

Stakeholders involved

The planning units designated "sand deposits" priority were co-planned from the beginning of the process between ministerial and regional entities with the support of a scientific team. Specifically, the planning units established in the offshore areas (beyond the 12MN), were designed at ministry level, while those within the 12 MN in the sub-area facing the Lazio region coast directly by the region itself. In this specific case, coastal municipalities were also involved. Defined PUs were deliberated by the regional council. Subsequently, both PUs offshore and within the 12 NM were approved by the Technical Committee and submitted to the public consultation of both the SEA process and the plan, were NGOs, general public, and associations could express their observation.

Geographical scope

All three MSP Italian draft plans (Adriatic, Ionian-Central Mediterranean, and Tyrrhenian-Western Mediterranean) adopted the approach. Three planning units prioritized "sand deposit" are included in the Adriatic offshore waters (sub-area A/7) and two in the Tyrrhenian territorial waters (sub-area MO/3). Five sand deposit national measures to coastal defense (and implicitly to climate adaptation) are identified within the three MSP Italian plans.

Governance context

The current regulatory framework in Italy, specific to dredging activities of relict sands for beach nourishment purposes, is still partially in progress. The Ministry of Environment (MASE), together with the Ministry of Infrastructure (MSP Competent Authority), the Superior Institute for Environmental Protection and Research (ISPRA), the Regional environmental protection agency (ARPA) and the Region in which the activity take place are involved in the process, with specific competences, for the authorization, implementation and monitoring.

How this MSP practice can support the EU Green Deal

Establishing planning units prioritized "Sand deposit" promotes, at the national strategic level, better management of the non-renewable resource also with respect to potential spatial conflicts with other maritime activities (transportation, fishing, landscape protection, nature protection and restoration, etc.). This practice directly supports EGD challenge adaptation "(B) Green Infrastructures to enhance coastal-resilience; (B.1) Green Infrastructures: Creation and maintenance of Nature-based solutions (wetlands, salt marshes, seagrass meadows, maërl beds, mangroves, dunes, etc.); (B.1.1) Identification of spatial and non-spatial measures with the aim of addressing the impacts from climate change; (B.2.1) by improving the management of the resource". For this purpose, the MSP draft plans intend, through the measure's implementation on coastal defence, to reduce vulnerability of coastal ecosystems and limit conflicts and impacts associated by prioritizing the use of sand deposits. Moreover, based on the existing regulatory framework, the MSP plans identify two measures:

- i. Repurpose the terms of reference of the National Coastal Erosion Table (TNEC) between MASE and Regions to address, in a coordinated way, the Integrated Coastal Zone Management (ICZM) at the national scale and by systemizing existing coastal strategies and plans. This table should firstly build capacities and facilitate behavioural change to better cope with climate-related challenges, secondly it will increase knowledge and raise awareness on the effects of a changing climate in relation to sand deposits, marine ecosystems and maritime activities. Finally, it leads towards the promotion of measures and actions to research and test climate change adaptation interventions (also in synergy with mitigation goals) conceptually, environmentally, and technologically evolved (e.g., nature-based solutions) implemented at the appropriate spatial scales, and finally conduct a census and monitor these interventions at the national and regional scales.
- ii. Create a working group to improve regulations and authorization procedures related to coastal nourishment concessions and interventions with underwater sands to clarify and speed up the authorization processes in accordance with the principles of transparency and efficiency.

The management improvement of the sand deposit resource, in terms of governance, cooperation and promotion of specific adaptation action, implicitly supports the EGD's "A. Climate change mitigation and D. Biodiversity and ecosystem protection and restoration target on emission reduction and climate neutrality".

Moreover, the MSP draft plans, promote research activity to be detected by mapping new potential areas of sand deposits in order to constantly identify the resources and activate specific management to valorise and protect them.



VALUABLE PRACTICE: Zoning sources and sinks of sands in MSP: a need for climate change adaptation

Challenges/gaps/inconsistencies still to be addressed

The challenges of this practice can be listed as follows:

- ✓ MSP plans are strategic national tools thus not legally binding and still under finalization (not approved yet), while adaptation actions need immediate strategies at a more local scale.
- ✓ The phenomenon of coastal erosion in Italy affects extended areas and therefore involves ministries, regional authorities, and coastal municipalities, the scale at which adaptation measures should be implemented for their effectiveness. Related to this, a key enabling factor is the availability of economic and financial resources, relevant at regional and local scales for its implementation.
- ✓ The need of a specific and constant monitoring and mapping program of the relict sands in order to prevent potential conflict and preserve the non-renewable resource.
- ✓ Beach nourishment is a temporal adaptation action used to prevent shoreline retreat or beach erosion and requires frequent interventions if compared to the limited availability of the resource.
- ✓ Working with sand extractions can have significant impacts on the existing marine ecosystem. Sand extractions (either for creating dunes or beaches) although can work as a good strategy against climate change will also put coastal and seabed ecosystems at risk, including marine biodiversity affected by water turbidity and changes in nutrient availability and (underwater) noise pollution. In addition, coastal or near-shore extractions can also affect salinization of aquifers and future tourism development.
- ✓ MSP plans consider, through planning units and measures, the need for improved management, but being a non-renewable resource, it is closely linked to the continuous updating of geognostic control data and monitoring of interventions, and its updating must be planned as part of regional strategies for exploiting the submerged sand resource.
- ✓ On the areas identified as a "Sand deposit" priority, no dedicated meetings were held with fishermen and transportation-related stakeholders which would have enabled participatory awareness.
- ✓ There are some uncertainties related to the measure implementations by the regions in achieving a shared and long-term strategy and to the economic-financial availability that would allow adaptation actions to be effective on the Italian coast and counteract climate impacts.

Replicability /Elements which can be capitalised

The scientific-technical approach with which the planning units prioritized "sand deposits" was identified and designed and the process of defining the measures can be an element of replicability:

- ✓ Considered an ecosystem-based approach and is based on the scientific availability of data jointly offered by ministries, research institutions, and regions.
- ✓ In the case of the Lazio Region, the two PUs of "sand deposits" were vocated with dual priority, one with maritime transport and the other with fishing to emphasize the potential conflict and define appropriate mitigation measures between the two activities.
- ✓ Within the PUs there are no protected areas, areas of high environmental value importance, and none fall in deep habitat areas.
- ✓ National measures have been defined with constant cooperation between administrative bodies (ministries, regions) and specific meetings have been dedicated for gathering observations and eventual additions.

- ✓ The practice considers the issue of sand deposits not only from the spatial dimension but in support of strengthening the governance and roles to facilitate adaptation interventions.

**VALUABLE PRACTICE: Ecologically significant marine underwater areas (EMMA) in Finland****Description**

The Finnish MSP plan identifies areas with significant underwater natural values (EMMAs), which are significant especially in terms of their biodiversity, vulnerability, and uniqueness of the biotopes they host. All planning decisions made in the areas require careful consideration of the natural values and the impacts of the activity on the ecosystems. EMMA areas are not protection areas, but their status is likely to be reconsidered in the future when considering the extension or addition of protected areas.

The EMMA work takes advantage of the vast amount of data on marine species collected within the Finnish Inventory Programme for the Underwater Marine Environment (VELMU). The VELMU programme has been running since 2004 and has already collected observations from more than 170 000 sites. VELMU data together with data from other sources on themes such as coastal habitats, geology and breeding areas for fish collates all the information into an easy to use and understand spatial data set with descriptions of the valuable marine areas. Areas important for birds, marine mammals and terrestrial natural habitats are also mentioned in the descriptions. Altogether, 87 significant areas were identified ranging in size from less than 1 to almost 600 square kilometres. The EMMA areas were produced by experts from the Finnish Environment Institute (SYKE) with the aid of experts from other national research organizations and the planners from regional councils for the MSP process.

The areas were identified based on the criteria of the Ecologically or Biologically Significant Marine Areas -process by the UN Convention on Biological Diversity with minor modifications. These include for example, the uniqueness, rarity or high representativeness and the biodiversity of the areas.

Shortly the workflow was as follows:

- ✓ First the experts at the SYKE and Metsähallitus identified areas with underwater nature values. Species distribution models were created for approximately 100 taxa based on the VELMU data and data on the marine environment such as salinity and the seabed type. In addition, data on other relevant topics such as habitat types, fish spawning sites and human actions and pressures at sea was compiled.
- ✓ These data sets were then collated in a modelling exercise using the Zonation software, to identify the areas with most (and least) meaningful nature values¹. The areas with the highest priority nature values (the best 3 % of the whole area) together with specific key areas of biodiversity hotspots identified directly from the VELMU data were used to create the first draft of the EMMA areas.
- ✓ The work continued as a collaboration of the VELMU-consortium members, who based on expert knowledge, data on the marine environment and the VELMU data and knowledge from scientific literature created the proposal for precise demarcations of the EMMA areas and filled the descriptions for each area. This work was followed by workshops and meetings where multiple experts from the VELMU collaboration, coastal regional councils and from national research institutes were engaged in the validation of the proposal and to add information on relevant topics such as fish spawning sites and marine geology.
- ✓ Based on the collaboration both the areas and their descriptions were modified when needed. Then a systematic approach was used to secure that all areas fulfilled the set criteria for EMMAs. Not all areas where important nature values were present were in the end identified as EMMAs. Valuable areas identified by the model where field observations were missing were left out. The EMMAs will be updated in the upcoming years and the updated

information will be include in to the second cycle of MSP in Finland.

- ✓ Finally, the data set of the EMMA areas was handed to the MSP planners. First a workshop was organized between the MSP planners and the EMMA experts, where the purpose and ways of presenting EMMAs were discussed. In further discussions between the MSP planners, a decision was made to generalize the spatial demarcation of EMMAs to match the scale of the Finnish MSP plan. In addition, a few other important nature areas, which were not considered EMMAs, were included under the same map marking in the MSP plan called Ecologically significant marine underwater areas.

Practice typology

(iv) Zoning

Topics addressed

Main	D. Biodiversity and ecosystem protection and restoration
Secondary	B. Climate change adaption
	C. Sustainable sea-food production

Sectors/Activity involved

Nature protection and restoration, indirectly also fishing as many of the areas are also important fish spawning areas.

Stakeholders involved

The stakeholder involvement took place in multiple stages, first within the VELMU consortium and later expanded to administrative personnel, planners from regional councils, and experts on thematic fields such as geology and fish and marine biology from national research institutes. Both national and regional workshops and meetings were organized.

The stakeholder involvement followed the initial analysis step, where the first draft of the EMMA areas was created. After this the main objective was to add information that was seen as relevant for the demarcation of EMMA areas and to validate the areas and their descriptions. The participants supported this objective by bringing in expertise from different thematic fields and points of views.

Geographical scope

National (Finnish maritime areas).

Governance context

There are multiple national and international programmes, strategies and legislation on natural values in marine areas (such as Natura 2000, EU Biodiversity Strategy and areas protected under the Nature Conservation Act), which together with various forms of cooperation create the conditions for preserving, protecting and enhancing the environment and nature in MSP. MSP in Finland does not have the mandate to set up new protected areas and the existing areas are shown in the background information of the plan. There is a continuing collaboration between the authorities responsible for MSP and nature protection. The existing protection areas and the nature values connected to them affected the planning decisions regarding the identification of suitable and/or potential areas for different marines uses. The Land Use and Building Act (132/1999) sets the objective for MSP to achieve of a good status of the marine environment and defines that MSP needs to consider the conservation, protection, and restoration of the marine environment and nature. In practice, MSP plays an important role as a platform for collaborative planning that guides towards a more systemic approach in marine areas.



VALUABLE PRACTICE: Ecologically significant marine underwater areas (EMMA) in Finland

How this MSP practice can support the EU Green Deal

The practice supports the protection of biodiversity and ecosystem in the marine areas. Although EMMAs are not protected areas, they are areas where special consideration of the value of nature is required in all actions and planning decisions. The areas are also useful tools in guiding the discussion on how to reach the 30 by 30 objectives for the marine areas. Additionally, by making nature values visible on the MSP plan map, the plan raises awareness among planners and stakeholders on the importance and spatial distribution of underwater nature values. The detailed description of each site provides the change to easily identify the criteria that make the area valuable, which supports the use of the information in decision-making.

By supporting the protection of the marine environment, EMMAs also indirectly support the protection of important fish spawning sites, which are crucial for the sustainability of the fishing sector. Underwater nature will also protect the coastal areas and support carbon sequestration into the ecosystems, therefore contributing to climate change mitigation and adaptation to the related effects in the future.

Challenges/gaps/inconsistencies still to be addressed

Although the distribution of EMMAs cover the whole sea area of Finland, there are likely to be important underwater natural values outside of the demarcated areas as well. Although the modelling did identify potential valuable areas in multiple locations, only areas where sufficient field observations were available could be defined as EMMAs.

The analysis is done at the national scale, which can leave out local level details and important areas. A more localized and smaller-scale application of the EMMA works has been implemented on the capital region of Finland (Helsinki – Espoo) to identify local ecologically significant marine underwater areas (PEMMA). The identification of such areas for all regions would be beneficial all Finnish sea areas. This work might benefit the more detailed planning in the territorial sea area carried out by coastal regional councils and municipalities.

Replicability /Elements which can be capitalised

The delineation of EMMA areas can be replicated to other countries. When applied it is important to consider, that the approach is heavily dependent on the field data collected in the VELMU program and other data sources such as the marine geological data from the Geological Survey of Finland and data on endangered species from the Metsähallitus and the Finnish Environment Institute. If similar data is not available, the implementation of the process would require substantial investments into data collection.

Some elements which can still be easily capitalised:

- ✓ The concept of areas with significant nature values, which are not protection areas, can be beneficial for bringing nature values into the discussion outside of protected areas. Replicating this way of thinking can be a successful approach to raising awareness and discussion on the importance of supporting marine biodiversity and ecosystems in all maritime activities.
- ✓ The modelling is done using a spatial prioritization analysis software Zonation, which is openly available for all users

**VALUABLE PRACTICE: Offshore wind farm location optimisation****Description**

To support the energy transition at sea, the Finnish MSP plan identifies potential areas for Offshore Wind Farm (OWF) development. The areas aim to guide the development of OWF to locations where energy production is both viable and the impacts of the development on marine nature and the environment and the possible conflicts with other sea uses are minimized.

Experts at the Finnish Environment Institute evaluated the suitability of the whole Finnish sea area for OWF development on a 100 m resolution using a geospatial zoning analysis. The analysis was done within the SmartSea project and the other project partners also contributed to the work. The analysis was based on approximately 150 indicators, which define whether certain areas are suitable for OWF development. The indicators consider conditions related to biodiversity, multiple social topics, such as social impacts and landscape scenery, and a few economic variables such as profitability. These analysis results were used in the planning process to delimit the final areas that are shown in the MSP plan. All the identified areas are located at least 10 kilometres from the coast in a depth of 10–50 metres.

Practice typology

(iv) Zoning

Topics addressed

Main	A. Climate change mitigation [A.1 Renewable energy production, storage and transportation]
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Sectors/Activity involved

Offshore renewable energy. Indirectly multiple marine sectors and qualities of the marine environment are considered as factors that impact the delineation of the potential areas.

Stakeholders involved

The main administrative stakeholders involved in the process are the coastal regional councils, the Finnish Ministry of Environment and the Finnish Environment Institute, who conducted the spatial analysis. In addition, stakeholders from all marine sectors were included into the process. This work is described in more detail below.

The purpose of the work was to use the results of the modelling analysis to create area demarcations for the MSP plan map. Collaboration in making the planning decisions guided the work on defining which of the potential areas were considered most important, how they should be delineated and at which scale they should be presented in the plan.

The first delineation of the potential areas was based on the modelling results. The areas were presented to all stakeholder groups, including OWF developers, in regional workshops during the vision phase of the MSP planning process. Stakeholders outside of the wind energy sector thought that the areas were too large and were very likely to lead to conflicts between marine activities. Due to the feedback, the size of the areas was made smaller. After this another workshop aimed solely on the wind energy sector was organized. There the discussions focused on the new smaller areas and the modelling process in general. After the discussions the MSP planners delimited the final proposal of the potential OWF areas. An open opportunity for all stakeholders to comment on the plan draft and the identified potential OWF areas was provided as a part of the public hearings process.

Geographical scope

National (Finnish maritime areas).

Governance context

The MSP authorities are not responsible for the permitting or zoning of offshore wind farms. Strategic MSP provides a collaborative platform for stakeholders and shared information for more detailed legally guiding planning. In Finland regional planning guides the OWF development in the territorial waters and the responsible authority for natural resource management in the state-owned territorial water areas is Metsähallitus.

How this MSP practice can support the EU Green Deal

The practice of identifying suitable areas for offshore wind energy production supports the objectives of renewable energy production (A1) and more specifically the development of marine renewable energy installations (A1.1). The practice guides the planning of placement of the OWF development and aims to minimize the impacts on nature and the environment and potential conflicts to other sea uses, such as fisheries and maritime transportation. The areas do not rule out other sea uses nor are any production targets set for them.

If fully developed the areas could reach 15 GW in energy production. Although, this estimate is not precise. In practice the technical requirements for OWFs will define how much energy could be produced in the areas. The areas match the level of generalization suitable for strategic level MSP and form an easy-to-understand overview of the scale of OWF development that is required to meet certain objectives.

The practice serves important information into the national scale discussion and sends a positive indicator of the MSP plan as a promoter of sustainable OWF development. As additional materials for looking at the whole picture of energy production at sea, the OWF areas from regional land use plans and the permit application process are presented in the background materials for the plan.

The Finnish MSP plan presents spatially overlapping suitable or potential areas for different marine uses. The aim is to convey a message to the marine sectors that different actors have overlapping interests in certain areas, which need to be considered when planning activities. Having information on the most suitable areas for OWF can promote the multi-use of sea space by identifying areas where the co-existence of wind energy production with certain uses could be possible. Having these areas on a map can facilitate the discussion when considering possibilities of multi-use, such as OWF and fishing or aquaculture, in certain sea areas.

Challenges/gaps/inconsistencies still to be addressed

Challenges/gaps/inconsistencies still to be addressed (indicate to which phase of the process they relate). This will feed the work on task 3.2. There are things that still need to be addressed related to OWF development and location optimization related to both the modelling approach and factors included in it as well as the information that is desired by both MSP authorities and OWF developers. The issues presented below do not undermine the value of the practice and their validity is dependent on the context where the practice is applied.

- ✓ The cumulative effects of OWF development have not yet been considered and further knowledge on the topic is required for making sustainable planning decisions. For example, collaboration and sharing of information across borders on OWF development with the neighbouring countries is required to form a comprehensive overview of the future of the sector and its impacts on the marine environment and the different sea



VALUABLE PRACTICE: Offshore wind farm location optimisation

uses. However, this valuable practice supports planning which aims to mitigate and/or control the pressures caused by OWF development. While this does not replace the need for evaluating the cumulative effects, it provides a well-founded way of taking the pressures into consideration in MSP.

- ✓ Suitable areas for OWF are also located outside of the delimited areas. The permitting of OWF is under strong pressure as it needs to consider both individual projects and their cumulative impacts. If the area is outside of the areas delimited in the MSP plan, a lot of the knowledge base supporting the development of OWF in the specific area is lost.
- ✓ Seasonal changes in the use of sea areas such as fishing practices and ice conditions still need to be better considered when defining areas suitable for OWF.
- ✓ The OWF developers have identified a need for no-go zones, which would define which areas are definitely not suitable for development.
- ✓ The modelling approach does not consider the connections of the OWF to the power grid nor the possible impacts of the cables transferring the energy to the grid both on marine and the coastal areas.
- ✓ The regional plans in Finland also have zoning for OWF. These areas are synchronized with the results achieved in MSP. Depending on the planning cycle in the regions this takes time from one to five-six years. Strategic MSP is the only planning tool in the EEZ and a clear distribution of the responsibilities for directing the development of OWF in the EEZ needs to be defined.

Replicability /Elements which can be capitalised

The process can be replicated in other countries. However, it is important to consider that the analysis can only consider factors where suitable data is available. To make a comprehensive analysis a large variety of high-quality data is needed, which makes the practice dependent on open data or its implementation will require considerable investments in data production and collection. The analysis is done using a spatial prioritization analysis software Zonation, which is openly available for all users and the description of the method is available in a scientific publication (Virtanen et al. 2022).

When implementing the valuable practice there are certain issues which are important to consider:

- ✓ The analysis can only delimit the potential areas for OWF development. The definition of the actual sites requires extensive fieldwork and mapping, which is expensive and currently done mostly by the OWF developers, at least in the Finnish context.
- ✓ The technological development in offshore wind energy production and the increase in understanding and data on the marine environment creates a need to repeat the analysis with new parameters. As the analysis is replicable, allocation of resources for doing so in the future is advisable.

**VALUABLE PRACTICE: Co-creation of scenarios for the future of maritime areas****Description**

For MSP to support the objectives of the European Green Deal (EGD) they need to be forward-looking. The Finnish MSP authorities, together with 350 stakeholder representatives, developed three possible and alternative scenarios for the future of the maritime area until 2050 and assessed their impacts. The scenarios discuss the changes in the operating environment and the needs and views of interest groups regarding the future development of the Finnish maritime area. They considered drivers related to climate change, environmental protection, condition of the maritime area, security situation, international trade, urbanization and development of maritime logistics, energy, fishing and aquaculture and tourism sectors.

The scenarios take a holistic view on the future development of maritime areas. The end results guide towards varied and consistent thinking over some alternative future options and thereby enhance the conditions for interpreting and understanding current phenomena and enhancing the planning of operations and the ability to respond. By describing the possible characteristics of the future operating environment and identifying the potential risks and opportunities, MSP planners can recognize tangible actions that could be guided or influenced to reach the desired vision for the future. In addition, actions that need to be done, regardless of which future ends up unfolding, can be identified.

The advantage of the scenario work was that maritime stakeholders did not stick to their usual roles of defending their rights. Instead, they considered the potential of their sector and the use of marine space in different alternative future scenarios. This also increased understanding among stakeholders of the needs of other maritime sectors. After the scenario phase, the stakeholders moved on to reflect on the future of the maritime space that they collectively want to achieve.

The practice consisted of the following steps:

- ✓ First, the alternative future scenarios were drafted based on information collected in expert interviews (15 in total). The interviews aimed to build a comprehensive view of the marine areas by focusing on high-level experts from different marine sectors and other societal sectors. Consistency analysis was used as the method for forming the scenarios from the collected information.
- ✓ The scenarios were presented to actors from all marine sectors in national and regional workshops. The aim was to identify what do the alternative futures mean for the sectors that the participants are representing.
- ✓ Two workshops were organized in each of the planning regions. The first workshop focused on the scenarios from the regional perspective. In addition, preliminary discussions of the impacts of the scenarios on the marine sectors and to different areas were held. The second workshop focused on the impacts of the scenarios on all marine sectors and the sustainability of the sea areas (including the environmental status of the sea areas, sustainable blue economy, and the welfare of people).
- ✓ The scenarios and their estimated impacts were modified based on the results of the workshops and shared to all stakeholders who participated in the work for commenting. After this the scenarios were finalized and presented in the draft of the MSP plan.

Practice typology

(v) Process-related practice (i.e. creation of working groups)

Topics addressed

Main	A. Climate change mitigation
Secondary	D. Biodiversity and ecosystem protection and restoration

Sectors/Activity involved

Multisector. The scenarios considered drivers related to climate change, environmental protection, condition of the maritime area, security situation, international trade, urbanization and development of maritime logistics, energy, fishing and aquaculture and tourism sector.

Stakeholders involved

The scenario work followed the principle that everyone had the right to participate in the workshops. In practice this meant that all authorities, organisations and private actors, whose areas of activity are covered by the plan, and the public interested in MSP could participate in the workshop. The invitation to participate was widely distributed to all possibly relevant actors. In addition, expert interviews of representatives from the key sectors were organized and an open opportunity to comment on the drafted scenarios was provided as a part of the public hearings process.

The main purpose of the stakeholder involvement was the co-creation of the scenarios and to increase stakeholder engagement in the MSP process from an early stage. The work provides MSP a structured format for thinking over alternative future options from multiple perspectives, which supports the application of an ecosystem-based approach in the planning of marine areas. The approach is also a learning experience for the MSP planners involved: it provided a valuable opportunity to enhance their knowledge on the current state of the marine realm and the future possibilities through discussion with the stakeholders.

Geographical scope

The future scenarios were created at the national (Finnish maritime area) and regional (three regional MSP areas) scales, but they widely consider issues relevant for the whole Baltic Sea basin.

Governance context

The scenario work was organized as a part of the first planning cycle by the authorities responsible for the MSP in Finland (the eight coastal regional councils and the Ministry of the Environment) together with consulting firms Capful and WSP Finland.

How this MSP practice can support the EU Green Deal

The work supports MSP in reaching the objectives of the EGD by enhancing the planning of maritime space usage through an ecosystem-based approach. The approach does not focus on a single objective and instead supports planners in evaluating how objectives related to topics such as marine renewable energy, sustainable sea-food production and biodiversity and ecosystem protection, including habitat restoration, could be reached in the future through actions done in MSP today.

The scenario phase of the first cycle of Finnish MSP supported the representation of marine stakeholders in planning process, thus legitimizing their knowledge and experience in decision-making. The approach provides an opportunity to combine existing ecological data with information collected from the stakeholders to produce socially acceptable solutions for existing complex challenges which go beyond single thematic objectives of the EGD. The co-creation of knowledge supports open and participatory MSP as well as increase the adaptiveness of MSP.



VALUABLE PRACTICE: Co-creation of scenarios for the future of maritime areas

Challenges/gaps/inconsistencies still to be addressed

The challenge in all participation is the ability to incentivize all significant stakeholder groups to engage into the co-creation process. The process was unable to engage stakeholders with significant decision-making power such as politicians and the local public of coastal municipalities into the scenario planning process.

New topics and interactions between the topics can always be added to the framework of the scenario work to widen the consideration of additional aspects of possible futures and their effects on all relevant marine activities.

Replicability /Elements which can be capitalised

The co-creation approach to building futures scenarios is replicable to other countries without any significant challenges. The application of the approach is independent of the country or the sea basin but will require the planners to be knowledgeable of the topics that are relevant to consider and the stakeholders to involve in the context of their MSP process.

There are some things that need to be considered when evaluating the feasibility of the practice.

- ✓ Sufficient allocation of time and financial resources needs to be covered. The availability of good quality data and information of relevant stakeholder groups facilitates the implementation. The absence of these factors will likely raise the requirements for financial commitments to produce them. Inclusion of multiple perspectives from different stakeholder groups into the process supports the formulation of well-founded scenarios relevant for the sea basin in question.
- ✓ The practice needs to be adequately located into the MSP development timeline, so that it best serves the whole planning process. Correctly timed allocation of coordination resources enables the incorporation of the practice and the execution of comprehensive stakeholder engagement.
- ✓ Institutional trust can play a significant role in stakeholder engagement making it another relevant factor to consider when replicating the practice.
- ✓ The specific ways that the scenario work is done need to be carefully considered. For example, the presented practise employed a “blank canvas” approach where the discussion was based around identified potential scenarios of the sea basin, instead of focusing on drafts of the MSP plan. This proved to be a successful method for encouraging ideation from all the stakeholder groups present. In addition, the approach steered the thinking of the stakeholders away from individual agendas that they are most familiar with and opened the discussion for all participants and topics.
- ✓ The specific methodology used for creating the scenarios cannot be openly shared as it is company property of the consulting company responsible for drafting the scenarios.

VALUABLE PRACTICE: ELWIND offshore wind park development

Description

ELWIND is a joint Estonian-Latvian state-run cross-border offshore wind project aiming to raise energy independence in the region by increasing production of green energy (a total of 700-1000 MW of offshore wind capacity) and improving interstate electricity connectivity (<https://elwindoffshore.eu/>).

In 2020 the Latvian Minister of Economics and Estonian Minister of Economy and Infrastructure have signed a Memorandum of Understanding on the joint project of the Latvian and Estonian offshore wind farm for energy production from renewable energy sources. It established a non-binding framework for the joint management and financing of the offshore wind park (OWP) project. Environmental impact assessment (EIA) process was started as 2 separate national processes in May 2023. This is the first significant attempt to develop an OWP in Latvia since 2010 which has reached the stage of EIA. The process is still in its early phase. Therefore, it gives the opportunity to test in practice the Maritime Spatial Planning (MSP) recommendations for OWP development and how the conflicts within the OWP development can be solved in real life situation, learning from successes and mistakes of ELWIND project. Discussions with stakeholders within the Working group (national level institutions), thematic discussions with specific stakeholders (on best available data), public hearing meetings within the EIA process are giving opportunities for better feedback to and from society.

Practice typology

(i) Measure + (v) Others (implementation of the maritime spatial plan – OWP development in foreseen zoning)

Topics addressed

Main	A. Climate change mitigation [A.1 Renewable energy production, storage and transportation (A.1.1 Development of marine renewable energy installations and A.1.7 Coordinated, transboundary initiatives)].
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Sectors/Activity involved

By increasing production of green energy and improving interstate electricity connectivity, ELWIND focuses on:

- ✓ Offshore renewable energy
- ✓ Cables and pipelines.

Stakeholders involved

The main stakeholder groups/types directly involved are administrative authorities. The stakeholder involvement includes cooperation between 2 countries. Still, each country organises their own stakeholder involvement on a national level.

The ELWIND project is being implemented by the Estonian Ministry of Economic Affairs and Communications, the Latvian Ministry of Economy, the Environmental Investment Centre, the Investment and Development Agency of Latvia and the Latvian Transmission System Operator Augstsprieguma tīkls (AST).

The working group for ELWIND project development in Latvia involves the ministries responsible for transport (shipping), defence, construction, environmental protection, energy development and maritime spatial planning (Ministry of Environmental Protection and Regional Development of the Republic of Latvia is the responsible authority on MSP and EIA process).

The cooperation is taking place also informally with various subnational entities, consulted by the project coordinators on data, environmental parameters, and other aspects crucial for the OWP

development.

Main purpose - stakeholders are being involved in the development of the ELWIND project by means of consultation practises and technical assistance expertise, but also foreseen in the phases of monitoring, which is supporting the MSP implementation.

Geographical scope

The ELWIND project is taking place in Latvian and Estonian marine waters of the Baltic Sea (Figure 1).



Figure 1. Map of ELWIND Offshore Wind Farm project. Source: <https://elwindoffshore.eu/>.

Governance context

The main governance sector is energy, but the project also impacts other sectors like shipping, tourism, fishing, defence. Sectors of environment and nature conservation are directly involved through the EIA process initiated in 18.05.2023., also foreseeing the involvement of general public (by public hearing and consultation sessions).

A national level working group for ELWIND project development ensures formal cooperation platform between various branches of government/relevant national authorities. The initiative is also governed on international level between responsible bodies in Latvia and Estonia.

How this MSP practice can support the EU Green Deal

The ELWIND project example shows that neighbouring countries can establish a joint project supporting the climate change mitigation efforts and improving the energy security through implementing interstate electricity connectivity.

As the project intends to create 2 new OWFs and an interconnection between Estonia and Latvia, considering the zoning prescribed by both country MSPs, it will directly support the implementation of the European Green Deal (EGD) objectives.

Until the proposal of implementing the ELWIND project, OWP development in Latvia was attempted to a limited extent. In particular, certain developers have tried to acquire the licences for OWP development, but there are no success stories and no OWP as so far, due to the incomplete knowledge of sea conditions and rigid environmental restrictions.

ELWIND project focuses on investigating all preconditions for the OWP, and after successful auction of licenses, could be the first visible action in establishing sustainable new sea uses within the marine territory of Latvia - following the guidance of the MSP.



VALUABLE PRACTICE: ELWIND offshore wind park development

Challenges/gaps/inconsistencies still to be addressed

Lack of data and data quality variations in Estonia and Latvia is an issue. For which the ELWIND project coordinators consulted many stakeholders and were supported. As a result, the data sharing solved a part of the initial information requirements. More in depth data gathering will be taking place within the EIA process in terms of geological features and other investigations for pre-conditions of sea space.

Within the process of ELWIND implementation, not all stakeholders of relevance from a direct impact of the OWP development were consulted at an early stage e.g. local governments, small businesses in coastal areas and relevant NGOs.

That could be a possible cause of a very strong backlash from local inhabitants and the coastal municipalities near the project development area in wider public consultation meetings in the initial EIA process (in Latvia), which took place in August 2023. It should be addressed in future by organising specific tailored discussions with the stakeholders predominantly opposing the project. This backlash could be minimised if the ELWIND project coordinators would fully consider the MSP recommendations for conflict management and stakeholder involvement.

Deeper analysis of costs and benefits, the visibility (of OWF) and compensatory mechanisms would be of help to reduce the opposition to the project.

Replicability /Elements which can be capitalised

Main approaches and concepts the study case applied that might be replicable:

- i. The procedure of formal documents for the establishment of international cooperation on a political level:
 - ✓ A Memorandum of Understanding and further national level supporting documents can create a formal ground for complex cross-border OWF and improving interstate electricity connectivity.
- ii. Formal and informal cooperation and stakeholder involvement:
 - ✓ Formal working groups for coordinating inter-institutional relations can support the project development in early phase and help with getting early feedback from responsible authorities (including those dealing with nature conservation etc.).
 - ✓ Stakeholder involvement is essential and should be as carefully specified, considering the direct impacts of action. Regular consultations with local stakeholders are crucial for acceptability of the OWF project.
- iii. Starting the process of OWF development, it is important to prepare a scoping of available information and look at the MSP practitioners work and existing cooperation with key stakeholders:
 - ✓ Proper scoping and appreciation of relevant plans and policies allows avoiding unnecessary conflicts, that are identified in planning process.

VALUABLE PRACTICE: Coastal assessment for evaluation of tourism and recreation pressure on ecosystem and public infrastructure

Description

In 2016 the National long-term thematic plan for public infrastructure development in coastal area (further on - Coastal plan) was adopted by the Cabinet of Ministers. In order to reevaluate the Coastal plan, the coastal assessment was performed taking into account the initial methodology (in 2015) and repeated with some minor updates in 2019. The assessment on behalf of the MoERPD in 2019-2020 included analysing the visitor flow to the Baltic coast (which concerns the Latvian territorial coastline), and assessed its pressure on key habitats to improve their preservation.

The resulting assessment data are comparable with baseline information on the coastal visitor count, its environmental pressures and public infrastructure assessment made in 2015, which was obtained using the same research methodology. The assessment includes clearly structured information about:

1. coastal development tendencies and interrelations of environmental pressure in the municipalities;
2. an assessment of the visitor flow intensity and spatial-temporal mobility;
3. long-term marine litter load and its dynamics on the Latvian beaches;
4. anthropogenic impact on vegetation in the coastal dune protection zone;
5. evaluation of public infrastructure (capacity and quality);
6. access to the sea of emergency services.

In addition, detailed geospatial information data has been produced and represented in cartographic materials specifying the intensity of coastal visits, marine litter load and anthropogenic impact on vegetation for every 100m segment of seashore. This information meaningfully contributes to coastal planning and decision-making of the spatial policy implementation under the theme of land-sea interactions (both on national and local/municipal level). The summary of the assessment is available here: https://drive.google.com/file/d/1QwWnD1gP8468OXGjDZ_9pSVRLItnc6CO/view?usp=share_link

Practice typology

(ii) Monitoring, assessment and evaluation + (v) Others (analysis of tendencies for better decision making)

Topics addressed

Main	B. Climate change adaptation [B.2 Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes; and B.3 Anticipation of climate change-related effects (B.3.3 Identification of unplanned areas to be used in future (specific uses not identified))].
	D. Biodiversity and ecosystem protection and restoration [D.2 Restoring marine and coastal ecosystems (D.2.1 Remediation of contaminated marine and / or coastal sites)].
	F. Zero pollution [F.1.2 Measures related to coastal and maritime tourism

Sectors/Activity involved

- The study focuses on:
- ✓ Coastal and maritime tourism
 - ✓ Recreation
 - ✓ Nature protection and restoration

Stakeholders involved

The main stakeholder groups directly engaged in the assessment were coastal visitors (survey participants), Nature Conservation Agency (national authority responsible for management of nature protection areas and protected species and biotope protection) and representatives of the tourism sector, including small businesses and tourism information centres (at local municipality level). The national authority Ministry of Environmental Protection and Regional Development (MoERPD) which is responsible for both maritime and coastal planning used the assessment information in the Interim assessment of the Coastal plan in 2019.

The coastal visitors gave feedback through interviews on site (on the beaches of Latvian coast) and in online surveys.

The Nature Conservation Agency and certified biotope experts were involved in the assessment of the coastal visitor impact on vegetation (in coastal sandy and forested dunes), cross-checking the field work results to better reflect the coastal visitor impact on dune vegetation.

The results were also presented to and discussed within the Coastal cooperation and coordination group members (formal interaction platform established by MoERPD with relevant stakeholders from national, regional and local level, including all coastal municipalities, planning regions, NGOs and national authorities involved in coastal management).

Main purpose - stakeholders were involved in monitoring activities and also informed about the results, mainly the MoERPD and coastal municipalities can use the results for balanced spatial planning solutions.

Geographical scope

The coverage of the whole coastal area of Latvia along the shoreline (~ 496 km) accounts up to 300 m in direction to inland from the shoreline. (Figure 1).



Figure 1. Coastal area of Latvia.

Governance context

The Coastal assessment is interrelated with coastal development planning and tourism governance, giving information for decision-making. It is foreseen by Coastal plan as one of the policy measures (task 3.4).



VALUABLE PRACTICE: Coastal assessment for evaluation of tourism and recreation pressure on ecosystem and public infrastructure

How this MSP practice can support the EU Green Deal

One of the issues that covers land-sea interactions in MSP is the tourism and recreation on coastal areas.

This coastal assessment also contributes to the implementation of the EU's biodiversity strategy for 2030 (which is a core part of the Green Deal) by addressing the need for stronger action as marine and coastal ecosystem biodiversity loss is severely exacerbated by global warming and supporting the efforts to reduce the coastal visitor impacts on coastal dune vegetation.

The number of visits to the coast reached 8 million in Latvian coast in 2019. About 30% of the coastal vegetation in the dune area suffers from the impact of visitors and is strongly or even very strongly affected.

The main conclusions of the assessment were that there is a need for aggregated coastal visitor flows with sustainable infrastructure development in intensively visited places with large anthropogenic pressure and erosion risk.

In 2023 MoERPD will use a similar approach for the next phase of the Coastal Plan assessment, based on the methodology to evaluate the situation development, the coastal areas most affected by anthropogenic pressure on environment and the effects of COVID-19 pandemic and energy crisis on tourism and recreation in coastal areas.

Challenges/gaps/inconsistencies still to be addressed

The assessment gives an overview of information necessary for balancing the preservation of the natural and cultural heritage with the sustainable economic development, taking into account Biodiversity strategy and Blue Economy goals.

Therefore such assessment requires capacity and funding, which until now was supported by international cooperation projects. There are also a limited number of experts that can work with methodology for the assessment and field works are limited by the length of summer season.

Another challenge to be mentioned relates to land-sea interactions. Latvian MSP considers coastal development opportunities related to maritime, which includes coastal landscapes, tourism development, coastal infrastructure, etc., while planning sea uses. Since sea uses are strongly linked to the coast, for example grid networks for OWF, harbours to shipping, landscapes from the sea side and opposite.

The coastal assessment tends to draw attention to the incoming flow of tourists, identifying places where the development of the tourism industry is observed more clearly. Thereafter, in the Coastal plan identified areas are designated as places to be developed. As such, in order to preserve the factors contributing to the development of tourism, for example, the scenic values as characteristic of the place, the types of land use of the Maritime Plan are outlined - taking into account the developed areas identified on the coast. For example, the offshore wind farm development areas are planned at a certain distance from the coast with an intention to not significantly change the existing coastal landscape, specifically concerning the identified coastal development areas. At the moment, however, new challenges are to be faced, when technologies foresee drastic industry improvements and wind turbines are determined much larger than at the time of the development of the Maritime spatial plan. Therefore the initial distance criteria set in the plan no longer serve their purpose.

Replicability /Elements which can be capitalised

Main approaches and concepts that might be replicable:

1. Unified structure of information on coastal areas covering specific topics (it could be also other data besides the coastal visitors and other coastal assessment aspects like coastal erosion, etc.):
 - ✓ The assessment provided information on both the socio-economic drivers and the coastal visitor impact on nature in coastal areas;
 - ✓ Information is easier to use for various stakeholders, including municipalities;
 - ✓ The elaboration of methodology and the data gathering requires resources and capacity (time, funding etc.).
2. Relevant data stored and published in easy to use online tool (interactive map online):
 - ✓ The spatial data gathered and structured in one geospatial database
 - ✓ Data is accessible online
 - ✓ Capacity of the institution publishing the data is needed.
3. Citizen surveys to get wider feedback on public needs for coastal planning and management:
 - ✓ Surveys can provide insights for public needs that benefits to planning solutions in Coastal development
 - ✓ Surveys require additional capacity.

VALUABLE PRACTICE: Balancing social, economic and environment interests in offshore wind park development

Description

The case study aims to address land-sea interaction challenges by:

- i. Assessing the development potentials and trade-offs in the coastal areas;
- ii. Proposing spatial planning solutions, which would balance the national interest for development of the off-shore renewable energy with local community interests for maintaining of the coastal landscape and tourism development.
- iii. Proposing spatial planning solutions, which considers best options for biodiversity and ecosystem protection combining with off-shore renewable energy interests.

Multiple values of landscape and seascape were assessed.

More information on case study: https://land-sea.eu/wp-content/uploads/2022/01/LSA_Case_Study_Latvia.pdf

Practice typology

(ii) Monitoring, assessment and evaluation + (v) Others (public participation)

Topics addressed

Main	A. Climate change mitigation [A.1. Renewable energy production].
	B. Climate change adaptation [B.2 Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes and B.3 Anticipation of climate change-related effects (B.3.3 Identification of unplanned areas to be used in future)].
	D. Biodiversity and ecosystem protection and restoration [D1.5 A coherent network of marine protected areas (D.1.5 Multi-use of the sea space: combination including biodiversity and ecosystem protection)].

Sectors/Activity involved

Multisector (if the practice is not related to a particular sector). The case study includes several sectors, but highlighted in particular:

- ✓ Coastal and maritime tourism;
- ✓ Offshore renewable energy;
- ✓ Landscape protection;
- ✓ Others (local community).

Stakeholders involved

The main stakeholder groups directly engaged in the case study are representatives of local authorities, national and regional environmental and nature conservation authorities, and other governmental institutions as well as representatives of the tourism and renewable energy production sectors.

Local knowledge collected from stakeholders on landscape qualities and important sites for recreation was used to supplement and verify the expert assessment. The anticipated offshore wind energy development is raising concerns among local communities regarding negative impact on landscape and coastal tourism. At the same time, stakeholders are worried about expansive, uncontrolled tourism development and insufficient tourism infrastructure, resulting in damage to fragile coastal habitats and landscape.

Main purpose - stakeholders are involved in the co-design process of the future sustainable development strategy for the coastal area. This is done by balancing the interests of renewable (wind) energy

production at sea with the development of coastal tourism, preservation of landscape and environmental quality.

Geographical scope

Local case study - the demonstration case at the Southwestern Kurzeme coast of Latvia and adjacent marine area. South-western coast of Latvia in the Eastern part of the Baltic Sea, including terrestrial part, up to 10 km inland from the shoreline, as well as a marine part, which includes the adjacent territorial waters and EEZ (Figure 1).



Figure 1. Local case study area.

Governance context

This practice addresses energy, environment and tourism governance at national level. However, as this is a multidisciplinary case, piloting shared competences (Horizontal - national level institutions, Vertical – sub-national level institutions) between sectorial policies, the practice was carried out in the context of MSP and coastal planning processes, that are led by Latvian Ministry of Environmental Protection and Regional Development.

How this MSP practice can support the EU Green Deal

The case study aimed to develop proposals for balancing national interest in offshore wind park (OWP) development with that of local communities in preserving the landscape and boosting coastal tourism and recreation.

For that purpose, multiple values of landscapes and seascapes were assessed by applying an ecosystem services approach. Particular attention is devoted to mapping and assessing landscape qualities. The assessment results were applied in discussing alternative scenarios or pathways for achievement of ambitious goals for offshore wind energy production by 2050, which would be in balance with sustainable tourism development and preserving coastal landscape and nature assets. The results of scenarios development identified new areas in sea is to be considered for zoning of potential OWP development in revision process of national MSP.

Challenges/gaps/inconsistencies still to be addressed

The main limitations of the approaches tested by the case study are related to scarcity of data and knowledge on structures and functions of marine ecosystems. In Latvia detailed mapping of benthic habitats have been performed so far only in the coastal waters for designation of marine protected areas.

Another important limitation is shortage of knowledge of cumulative impacts of different pressures caused by construction of OWP. Accumulation of evidence-based knowledge on adaptation of marine ecosystems to OWP infrastructure could produce contrasting results with regard to analysed ecosystem functions (i.e., underwater constructions of OWPs can serve as artificial reef providing habitat for algae or mussels) thus also changing provision of ecosystem services and its contribution to human well-being.



VALUABLE PRACTICE: Balancing social, economic and environment interests in offshore wind park development

Also, the assessment of the coastal inland landscapes and ecosystem services at the scale of landscape units is rather data and labour intensive (e.g., some of landscape qualities can be assessed only by experts at the site, thus requiring systematic field surveys).

Variability of parameters used - technological possibilities evolve and therefore an assessment made at a given point in time may become inappropriate after some time, for example the height of wind turbines and the visual attractiveness of the landscape.

Replicability /Elements which can be capitalised

Main approaches and concepts study case applied that might be replicable:

- i. Ecosystem services and landscape assessment using combined/multiple methods:
 - ✓ The method for mapping and assessing landscape units can be replicated based on the indicators used in the case study, as well as ecosystem service assessment.
 - ✓ There are gaps in knowledge about ecosystem services, calculation approaches may vary due to the granularity of the data (replicability may require a flexible approach in terms of indicators and data).
- ii. Participatory methods/stakeholder engagement in mapping of cultural ecosystem services and defining objectives for coastal development:
 - ✓ Participatory approaches for themselves (e.g., workshops, surveys, participatory GIS) might be used to verify results through incorporating people's experiences, perceptions, and local knowledge.
 - ✓ Participatory GIS method and surveys may be replicable to collect spatial information and opinions about sites important for stakeholders.
 - ✓ Advanced preparation required, as well as careful checking of the results (one of problem using participatory GIS – sites can be added in different scales, which may cause misinterpretations). The result may also depend on stakeholder skills.
- iii. Scenario building by applying “target-seeking scenarios method” and assessment of scenario impacts to coastal ecosystems, services and human well-being:
 - ✓ Participatory scenario building methods allow to explore different development alternatives and spatial options considering stakeholders views and local knowledge.

The multi-level governance idea contained in the case study is further developed and refined in another project called Baltic Sea2Land.

More information on project results: <https://land-sea.eu/results/>

VALUABLE PRACTICE: Definition of High Potential Areas for Offshore Wind Farms

Description

For certain sectorial activities whose future development is foreseeable and in which it is necessary to identify the most appropriate space for their development, the Spanish MSP plans (POEMs) establish and delimit High Potential Areas (HPA) in order to minimize potential environmental impacts and maximize synergies and coexistence between the different uses and activities. These areas have been identified for Offshore Wind Farms (OWF) as highly suitable for the possible deployment of commercial offshore wind energy infrastructure, without prejudice to the fact that such projects may include hybridisation with other offshore renewable technologies. In order to enhance the management of wind energy uses and activities, several measures have been proposed to address the assessment and modelling of the landscape effects caused by OWF in Spanish waters, as well as the analysis of the fishing sector and the potentially affected marine ecosystems in the proposed areas. The areas' zoning has been obtained after the analysis of oceanographic, geological, wind resource and biodiversity conditions and the consultation to key stakeholders in order to consider the spatial overlapping with other economic sectors.

Practice typology

(i) Measure + (iii) Process-related practice + (iv) zoning

Topics addressed

Main	A. Climate change mitigation [A.1. Renewable energy production, storage and transportation (A.1.1. Development of marine renewable energy installations)]
Secondary	D. Biodiversity and ecosystem protection and restoration. G. Fair and just transition

Sectors/Activity involved

Offshore renewable energy and, indirectly, fishing, coastal and maritime tourism, cables and pipelines, maritime defence, nature protection and restoration, landscape protection, scientific research, marine industry.

Stakeholders involved

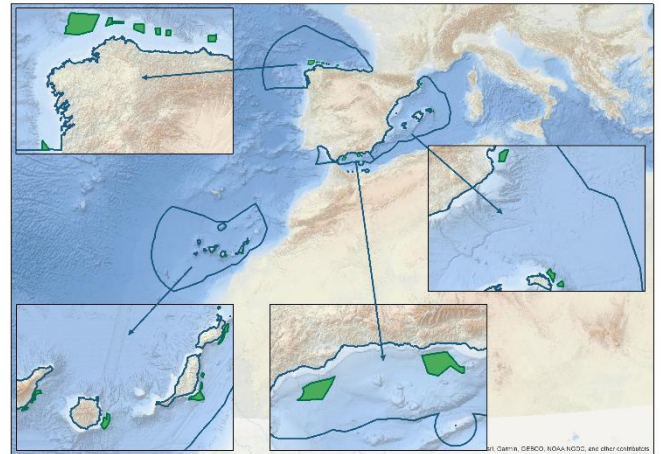
Since the beginning of the designing process, **administrative stakeholders** from the different affected departments of the Ministries with competences at-sea (Energy, biodiversity, fisheries, defence, maritime transport, civil aviation, Spanish air navigation manager, airport operator, climate change office, quality and environmental assessment, aquaculture, ports and technical institutions as IEO(CSIC) and CEDEX) were involved at the **national and sub-national level** for **co-defining** the HPA as part of the technical MSP working group created for the development of the MSP national process, in the framework of Marine Strategies. Additionally, an ad hoc group for OWF was created for detailed discussions of the topic and the zoning.

Afterwards, **private stakeholders** at the **sub-national level** from the fisheries sector were involved in a dedicated online event (during the period of the official public **consultation** of the POEM), where the HPA were presented by Marine Demarcation and sector's representatives could expose and justify their allegations towards them.

Geographical scope

The criteria used in the analysis for the identification of these areas has been applied for all Spanish jurisdictional waters (divided in 5 Marine Demarcations). HPA for OWF have been identified in 4 of the 5 Marine Demarcations (Figure 1).

Figure 1. Surface occupied by High Potential Areas for the OWF in Spain.



Governance context

For this practice we have to talk about the governance of Energy, Biodiversity Protection and Fisheries at the national level. The first two aspects are addressed by the same Ministry, which is also the Competent Authority for MSP. The competences in Fisheries relies on a different Ministry.

There are some shared competences between the national and the sub-national level (i.e. fisheries, land and coastal planning, coastal MPAs, tourism, some ports) that needs to be considered, for instance, beholding the impacts of cables connecting the OWF to land, or the landscape impact, among others.

How this MSP practice can support the EU Green Deal

The aspect on which this practice mainly supports the EGD is in A. Climate change mitigation through *A.1. Renewable energy production through the facilitation of A.1.1 Development of marine renewable energy installations* by the definition of areas where the OWFs are technically viable according to assessment studies of the landscape impact, are minimizing conflicts with other sectors as the fishing sector (according to the analysis conducted, that has its limitations as it will be highlighted in the following section) and minimizing impacts on marine ecosystems through the development of a methodological guide (this also associated to the methodology limitations) which, will make more probable a favourable Environmental Impact Assessment (EIA), mandatory even inside HPA for OWF.

In summary, the definition of HPA for OWF makes the investment in OWF projects in the marine environment more secure, which in turn, is expected to increase the production of renewable energy in Spain, which will contribute to climate change mitigation.

Challenges/gaps/inconsistencies still to be addressed

Limitations identified in the practice towards the achievement of EGD objectives:

- ✓ It is difficult to assess how much electricity would produce the defined HPA if they were covered by OWF in their totality. This has not been calculated for the POEMs and it cannot be assured that all the space occupied by HPA will be, in fact, covered by OWF. However, the POEM mentions the Roadmap for Offshore Wind and Marine Energy Development in Spain, which has specific objectives including the power to be achieved.
- ✓ The MSP process in Spain has not conducted a proper Cumulative Effect Assessment (CEA) so HPA are designed without considering pressures that are already happening. Also regarding the impact on biodiversity, consideration have been made for defined protected areas, however, for mobile species, it just take into consideration the critical areas for

**VALUABLE PRACTICE: Definition of High Potential Areas for Offshore Wind Farms**

species that: 1) are declared as such (e.g. killer whale), 2) are identified in draft of Natura 2000 site management plans or conservation/recovery plans, and 3) have a scientific basis non taking into account the single mobile species as seabirds, fish, marine turtles, cetaceans (for more information refer to the criteria included in the “replicability section”). These aspects could risk the objectives of the EGD and related policies regarding *D. Biodiversity and ecosystem protection and restoration*.

- ✓ Also talking about the Just and Fair Transition element of the EGD, private stakeholders were involved only well advanced the process. This is, the fisheries sector at the level of the practitioners (the national representatives were present before) were only involved when the first version of the HPA was already drawn, instead of involving them in the co-design process. Many of their requirements were fulfilled after the official public consultation (many areas were reduced and some of them were removed), however, this did not prevent the POEMs from being heavily criticised in this regard.

In these HPA for offshore wind energy development, interactions have been detected with some Priority Use Areas (PUA), or HPA, or with other uses of space that will have to be considered in detail at the project level. Specifically, and depending on the case:

- ✓ Overlaps with PUA for the protection of biodiversity (not SPAs).
- ✓ Overlaps with any type of aeronautical easement, and therefore detailed studies of the projects to be implemented will be required to assess the feasibility of the project, and reports from the aeronautical administration, without prejudice to the necessary prior favourable agreement of the State Agency for Aeronautical Safety for all elements exceeding 100m in height.
- ✓ Overlaps with any of the areas identified as having a high potential for biodiversity conservation, as long as these areas do not meet the criteria that the General Directorate of Biodiversity, Forests and Desertification of the MITECO identifies as prohibited for the installation.
- ✓ Overlaps with some Interest Areas for Aquacultures and with some of the zones identified as having high potential for aquaculture.
- ✓ Overlaps with some areas where it has been detected, based on the best available information, the presence of fishing activity at an intensity that may be relevant.

**Some of these challenges and limitations will be addressed by task 3.2. New actions fostering MSP contribution to EGD objectives.*

Replicability /Elements which can be capitalised

The **co-design process** at the administrative level can be replicated itself.

Also, this process of discussions among the affected administrations and involving technical institutions (IEO(CSIC) and CEDEX) produced the list of criteria that was used to define the HPA. This list can be used as preliminary criteria to start a similar process in another country, obviously adapting it to its particular characteristics, using the co-design process mentioned before:

- ✓ The wind resource is suitable for commercial exploitation, reaching wind speed values of over 7.5 m/s, at a height of 100m for the four peninsular marine demarcations, and at a height of 140m in the Canary marine demarcation (this difference is due to the availability of better modelled data for the Canaries).

- ✓ Maximum depth is 1000m.
- ✓ If possible, they are located close to an onshore area with adequate electrical infrastructures for the evacuation of the energy generated.

They also comply with the criteria of not overlapping with areas identified as incompatible or as “prohibition to install wind turbines (whether pivoted or floating)” according to the criteria proposed by the environmental authority. The criteria are the following:

- ✓ Natura 2000 Special Protection Areas for birds (SPA) declared on the sea
- ✓ Study areas to declare in the future as SPAs.
- ✓ Identified areas as valuable and of interest for seabirds.
- ✓ In SCAs and SCIs (Natura 2000 sites), in those areas with presence of Habitats of Community Interest (1110, 1120, 1170, 1180, 8330). This presence will be established on the basis of official information and, where it does not exist or is not available, through the corresponding surveys to be carried out by the developer. Those areas where there is a presence of Habitats of Community Interest. This presence will be established on the basis of official information and where it does not exist or is not available, through the corresponding surveys to be carried out by the developer.
- ✓ Areas identified as valuable or interest for their future declaration as SCAs or SCIs.
- ✓ Critical areas for species, especially killer whale, beaked whale, sperm whale, porpoise, turtles, and pilot whale. The requirements for the inclusion of these areas are that: 1) they are declared as such (e.g., killer whale); 2) they are identified in draft management plans for RN2000 areas (e.g., green turtle, pilot whale, bottlenose and angel shark in Canary Islands ZEC management plans) or conservation/recovery plans (e.g., porpoise in draft recovery plan); 3) they have a scientific basis (scientific article attesting that an area meets the definition of a Critical Area in Law 42/2007, December 13, 2007). 3) have a scientific basis (scientific article attesting that an area complies with the definition of Critical Area of Law 42/2007, of December 13).

From the point of view of interactions with shipping and port activity, high potential areas for offshore wind energy also respect the navigational safety criteria established for priority use areas:

·They do not hinder the approach roads to ports or manoeuvrability in ports, including the waters of the service area. They are not located in areas with high traffic density contrasted by AIS data. They respect the navigation channels that have been required by the Directorate-General for Merchant Shipping (MITMA).

VALUABLE PRACTICE: Definition of elements that conform the Marine Green Infrastructure in the POEM

Description

Marine Green Infrastructures (MGI) elements are included in the POEM as one of the uses and activities considered as “the listed or additional elements that should form part of the green infrastructure of Article 15 of Law 42/2007 of 13 December 2007 on Natural Heritage and Biodiversity”. These elements have been integrated in the POEM as a selection of natural and seminatural elements that enable and ensure ecological connectivity and ecosystem functionality, mitigation and adaptation to the effects of climate change, defragmentation of strategic areas for connectivity, and restoration of degraded ecosystems. For the selection of these elements an identification and mapping have been carried out for the 5 marine demarcations. This is included as factsheets with the description, cartography and ecosystem services that provides each element and these factsheets have been included as an annex of the diagnosis of each marine demarcation. As an MSP measure included in the POEM, the list of elements will be updated during the first cycle of MSP integrating new elements not considered in the first selection, such as restoration areas. Additionally, its incorporation into the forthcoming spatial analyses will be carried out in the context of the POEM.

Practice typology

(i) Measure

Topics addressed

Main	B. Climate Change adaptation [B.1. Green Infrastructures to enhance coastal-resilience (B.1.1. Green Infrastructures: Creation and maintenance of Nature-based solutions: wetlands, salt marshes, seagrass meadows, maërl beds, mangroves, dunes, etc.)]
Secondary	A. Climate change mitigation [A.4. Blue carbon sinks] D. Biodiversity and ecosystem protection and restoration [D1. A coherent network of marine protected areas (D.1.4 Elements that improve marine connectivity (i.e. submarine canyons)) and D.2. Restoring marine and coastal ecosystems]

Sectors/Activity involved

Nature protection and restoration, landscape protection, coastal protection and, indirectly, fishing, aquaculture, offshore renewable energy, port activities, maritime transport, cables and pipelines.

Stakeholders involved

The elaboration of the list of the MGI elements included in the POEM was developed by the MSP Competent Authority. The work of implementation and update of measure OEM3 “Definition, and incorporation in the POEM of the set of elements that make up the marine green infrastructure” will be carried out with the support of scientific institutions.

Additionally, measure OEM5 of the POEM aims to “create working groups to address management issues at the appropriate detail and scale”. These groups will involve administrative stakeholders from various departments (biodiversity, fisheries, navy, and technical institutions and research institutions) at the national, regional, and local level. One of the topics to be addressed will be: Peripheral protection zones of Priority Use Areas and High Potential Areas Biodiversity, the role of MGI within the POEM and management criteria and provisions for its appropriate conservation and coexistence with different uses and activities. Other subgroup is expected to assess the environmental services provided by marine ecosystems and how they are affected by maritime uses and activities, which is directly linked to MGI.

Geographical scope

MGI elements have been mapped for the 5 Marine Demarcations.

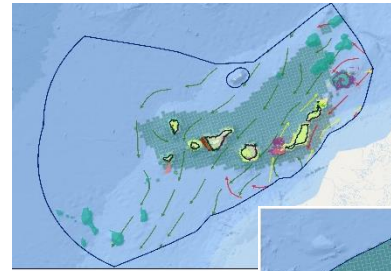


Figure 1. Surface occupied by MGI in the Canary marine demarcation.

Figure 2. Surface occupied by MGI in the North Atlantic marine demarcation.

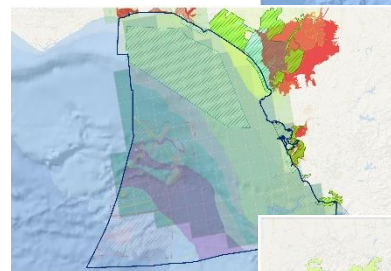
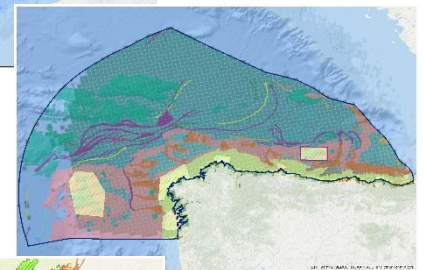


Figure 3. Surface occupied by MGI in the South Atlantic marine demarcation.

Figure 4. Surface occupied by MGI in the Strait and Alboran marine demarcation.

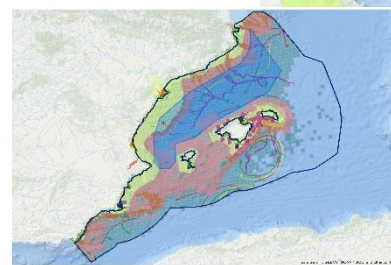
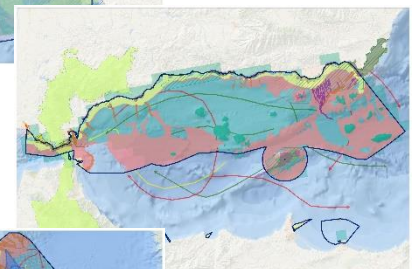


Figure 5. Surface occupied by MGI in the Levantine-balearic marine demarcation.

Governance context

The MGI framework is included in the Law 42/2007 of 13 December 2007 on Natural Heritage and Biodiversity which indicates in its article 15 that “...to ensure the ecological connectivity and restoration of the Spanish territory will develop a State Strategy for Green Infrastructure, Ecological Connectivity and Restoration...”. This Strategy was approved in 2021 at the national level, establishing guidelines for the identification of the green infrastructure.

The competent authority for MSP in Spain is the same one responsible for the implementation of the mentioned strategy.

How this MSP practice can support the EU Green Deal

The MGI aims to enhance and ensure connectivity, mitigate and adapt to the effects of climate change, defragmentation of strategic areas and the restoration of degraded ecosystems. This concept is directly related to protection and restoration, in the list of MGI elements there are some elements identified that directly contribute to the topic, such as: MPA by different protected tools (national, European and international scale); Community Interest Habitats; Geological marine elements; and other important areas of connectivity, among others. The role that these elements bring to



VALUABLE PRACTICE: Definition of elements that conform the Marine Green Infrastructure in the POEM

the marine environment is not only about conserving areas of high biodiversity value, but also about improving the connectivity of species and habitats, and enhancing the ecosystem services that these elements provide.

Regarding climate change mitigation and adaptation, the selection of some MGI that contribute to this topic as nature-based solutions has been included in all marine demarcations, such as some habitats of Community Interest like 1120 (*Posidonia* beds (*Posidonia oceanicae*)) which contribute to mitigate some of the adverse effects that climate change can cause, such as erosion, and regulating atmospheric CO₂.

Challenges/gaps/inconsistencies still to be addressed

One of the issues to take into consideration is the data gaps. Having adequate data to illustrate each of the identified elements is not easy as there is no homogeneity of data for all marine demarcations. For example, the cartographic layer containing information on habitats of community interest or species is not continuous for any of the marine demarcations. This happens because projects have often been focused on the study of localised areas within a marine demarcation, normally associated with projects for Natura 2000 sites. In addition, the working scales used to obtain this cartography are different for each marine demarcation, so it is not easy to homogenise and illustrate some of the information. Additionally, some information has not been included yet, due to the fact that there was not cartography available yet, for example, for restoration areas.

Another gap encountered is the limitation of some of the criteria to include MGI elements in the POEM. The selection of these elements has its origin in the list of elements approved in the State Strategy for Green Infrastructure, Ecological Connectivity and Restoration, from which the elements for which cartographic information existed for the marine environment were selected. However, for some of the elements, it is not certain whether or not they should be included in this list of MGI given their nature. This implies that a specific analysis of the criteria for inclusion of these elements has not yet been established and is expected to be carried out during this first MSP cycle.

The fact that some elements that are part of the MGI does not give them protected status unless they have it by other means (i.e. if they are as a marine protected area or are included in it, for example a submarine canyon inside a protected area). Their inclusion in MGI acknowledges their significance in marine conservation, without implying specific measures to address conflicts or impacts from activities and uses, although they will be taken into consideration.

Replicability /Elements which can be capitalised

The methodology developed for the selection of the elements that conform the MGI in Spain, can be replicated in other countries.

As mentioned, the State Strategy for Green Infrastructure, Ecological Connectivity and Restoration is the guidance document for the development of MGI. This Strategy has 8 goals, which are divided into action lines. It also includes the list of the possible elements that can conform terrestrial and marine Green Infrastructure.

For the development of the MSP plans, an analysis of the goals of the Strategy was carried out, in order to evaluate and select the elements of Strategy that can be applied to the marine environment. The following goals were selected:

- ✓ Action Line 1.05 within Goal 1, seeks to strengthen and improve connectivity, as well as prevent its loss, in the marine

environment. In relation to ecosystem services.

- ✓ Action Line 3.01 of Target 3 proposes to identify, classify and map the key areas for the provision of ecosystem services of the elements of the Green Infrastructure.
- ✓ Goal 6 has as its line of action 6.07 the integration of Green Infrastructure in strategic instruments, planning and management of the marine and coastal environment.

This led to the elaboration of a list of MGI elements for the marine environment maintaining the same structure of typologies of elements as indicated in the Strategy. This was complemented by the best existing cartography used for the description of each element in factsheets. Additionally, a qualitative assessment of the elements was carried out in order to identify the supply, regulation and cultural services provided by each of them.

The list of the elements that conforms MGI included in the POEM is structured as following (it has to be mentioned that not all elements of the list are present in all marine demarcations):

01 Natura 2000 network sites:

- 0101 Site of Community Importance (SCI) / Special Area of Conservation (SAC)
- 0102 Special Protection Area (SPA)
- 0103 Corridors and areas of high connectivity between habitat types of Community interest:
- 010301 Habitat 1110: Sandbanks permanently covered by shallow, seawater
- 010302 Habitat 1120: *Posidonia* meadows (*Posidonia oceanicae*)
- 010303 Habitat 1170: Reefs
- 010304 Habitat 1180: Underwater structures caused by outgassing
- 010305 Habitat 8330: Submerged or semi-submerged sea caves

02 Protected natural areas

- 0201 Marine Protected Area
- 0202 National Park
- 0203 Other protected areas

03 Areas Protected by regional and sub-regional land-use planning and management

- 0301 Wetlands of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR)
- 0302 OSPAR Protected Areas of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)
- 0303 Specially Protected Areas of Mediterranean Importance (SPAMI) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (CMS)
- 0304 Natural Sites on the World Heritage List of the UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage.
- 0305 Biosphere Reserves

04 Areas with environmental management of the Public Domain

- 0401 Maritime-terrestrial Public Domain
- 0402 Cartography of flood zones, areas of significant potential risk of flooding (ARPSIs)

05 Elements of the marine environment

- 0501 Submarine banks or elevations
- 0502 Submarine canyons and channels
- 0503 Ridges and escarpments
- 0504 Submarine outgassing
- 0505 Continental shelf (certain neritic areas)
- 0506 Slope areas
- 0507 Marine currents

06 Other areas important for the conservation of biodiversity and the provision of ecosystem services

- 0601 Marine fishery reserves
- 0602 Specially Protected Wildlife and Threatened Species range areas and critical areas designated in Recovery Plans
- 0603 Areas identified as ecologically vulnerable and ecologically at risk on the coast

07 Other areas important for connectivity

- 0701 Migratory routes and dispersal areas (birds, cetaceans, marine larval and juvenile dispersal areas)

08 Wetland protection

- 0801 Areas sensitive to urban water purification

Next steps will be focused on the selection of the criteria to integrate this list of elements in the final version of the list of MGI by expert consultation.

VALUABLE PRACTICE: Definition of High Potential Areas for aquaculture

Description

Zoning in aquaculture aims to plan and manage its sustainable development from an environmental, biological, social and economic perspective. For this purpose, High Potential Areas (HPA) have been identified and designated in the POEM. These areas are considered to be highly suitable for the development of aquaculture facilities, they play a crucial role in making aquaculture production compatible with the preservation of the marine environment based on their suitability and environmental considerations, resource use can be effectively optimized, environmental impact on vulnerable ecosystems minimized, and medium and long-term strategic planning facilitated. To improve the organization of zoning in aquaculture, the competent authorities of the Autonomous Communities may declare Areas of Interest for Marine Cultures (ZICM - for its initials in Spanish) and Areas of Interest for Aquaculture (ZIA - for its initials in Spanish) in the HPAs for aquaculture defined in the POEM (POEM's measure AC1). The regional authorities may also develop tools for their organization and management (POEM's measure AC2), as well as actions related to spatial planning in the area in the framework of the Sustainable Aquaculture Development Strategy 2021-2030 (POEM's measure AC3).

Practice typology

(i) Measure + (iii) Process-related practice + (iv) zoning

Topics addressed

Main	C. Sustainable sea-food production [C.2 Sustainable aquaculture and shellfish production]
Secondary	B. Climate change adaptation [B.3. Anticipation of climate change-related effects (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.))].

Sectors/Activity involved

Aquaculture, nature protection and restoration and, indirectly, coastal and maritime tourism, recreation, fishing, offshore renewable energy, maritime defence, marine industry.

Stakeholders involved

At a national level, the representative from aquaculture was involved in the inter-ministerial working group of MSP since the begging of the development of the POEM. Additionally, the competent authorities of the Autonomous Communities (CCAA - by its initials in Spanish), through the National Marine Crops Advisory Board (JACUMAR), participate in the process providing aquaculture data to the MSP Competent Authority to be included in the POEM.

Governance context

In Spain, the main entity in charge of coordinating and regulating aquaculture at the strategic level is the Ministry of Agriculture, Fisheries and Food, specifically through the General Secretariat for Fisheries, which is the competent authority in matters of fishing and aquaculture at the national level.

However, planning and management of aquaculture is a responsibility of the Autonomous Communities, which have regulations for the management of the activity of aquaculture establishments, although the general guidelines are established at the national level. The POEM therefore tried to homogenize the zoning of the different Autonomous Communities for aquaculture at the national level integrating them in the HPA for aquaculture.

Geographical scope

HPAs for aquaculture are defined in the 5 Marine Demarcations.

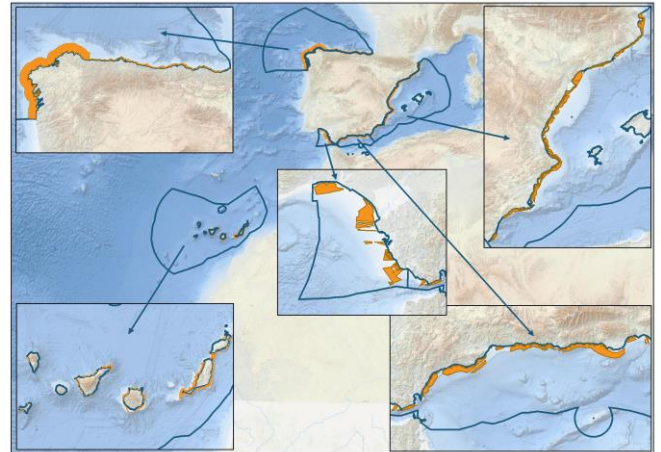


Figure 1. Surface occupied by High Potential Areas for aquaculture in Spain.

How this MSP practice can support the EU Green Deal

The aspect on which this practice mainly supports the EGD is in C. Sustainable sea-food production through C.2. Sustainable aquaculture and shellfish production by mean of identify the most suitable areas for the development of this activity considering criteria of sustainable development, enhancing resource efficiency, and fostering responsible blue economy growth. By designing a spatial planning of aquaculture, environmental conservation and protection of the marine ecosystem are intended to achieve, as well as the needs for resilience, adaptation, and mitigation of climate change.

In addition, zoning in aquaculture in Spain aims to foster a multi-use approach to sea space utilization for both aquaculture and other marine activities such as renewable energy generation; and furthermore, seeks to promote climate-friendly practices, like seaweed farming, which actively absorbs carbon dioxide, effectively addressing climate change while sustaining the industry.

Challenges/gaps/inconsistencies still to be addressed

It is necessary to promote the contribution of aquaculture to the good environmental status, and promote its multiple environmental services. Furthermore, to face the challenges of climate change, it is crucial to implement coordinated initiatives, based on solid scientific evidence, as well as the participation and effective dialogue of all the actors involved for the analysis and management of risks. It is also necessary to quantify the contribution of aquaculture to mitigating the effects of climate change and boosting its ecosystem services.

In the zoning processes, a certain lack of definition of objectives and spatial and temporal scope is observed; little consensus on technical criteria; in addition to interterritorial inconsistencies in the interpretation of interactions and synergies with other activities and uses. The lack of systematics in the Strategic Environmental Assessment procedure and the limited availability of dynamic risk assessment models are also challenges to be resolved.

A clear challenge comes from the integration of ZICM and ZIA defined by the regional authorities into a common framework and common categories at the national level (HPA). This may imply the use of different criteria and the loss of knowledge and detail in the process of homogenization at the national level in the POEM. For instance, regional government may define different kind of categories of zones for aquaculture, the variables and criteria to identify these categories may be different. However, in the POEM, these different categories may all be encompassed by an HPA, losing



VALUABLE PRACTICE: Definition of High Potential Areas for aquaculture

the detail given by each category.

Some dispositions established by the POEM, as the consideration of the carrying capacity of the area, face the challenge of lack of data and knowledge. In addition, zones defined within the service areas of the ports have not been included, as these waters are outside the scope of the POEM. The defined zones respect the perimeter and geographical location established by the Autonomous Communities.

There are some considerations regarding the effects of planned activities in areas established for aquaculture:

- ✓ The effects of aquaculture on seagrass meadows and maërl beds have not been adequately considered; the possible indirect effects on seabed and the negative interaction with cetaceans, particularly with the bottlenose dolphin.
- ✓ Potential chemical contamination of water. Aquaculture not compatible with the quality of bathing water. The impact of aquaculture areas on the coastal environment would be relevant.

It should be noted that some existing aquaculture facilities are located within HPA, and similarly other aquaculture farms are located outside the HPA for aquaculture. Existing aquaculture uses are safeguarded under the conditions under which they have been authorized or declared. Therefore, the POEM does not establish any additional regulations or conditions on existing aquaculture uses (either inside or outside the High Potential Areas), and the provisions exclusively affect the possible development of future aquaculture facilities.

Replicability /Elements which can be capitalised

The replicability of this practice relies in the governance system in place. This practice is valuable for those systems in which general guidelines are established by the national administrations but the planning and management of the activity is up to the regions, as a way to homogenise the criteria at the same time that it gives flexibility for adapting to the different contexts.

HPAs for marine aquaculture are considered for their high suitability for the development of aquaculture facilities based on sectoral and spatial analyses. The POEM includes an Inventory of existing uses with aquaculture establishments located in the sea; the declared Shellfish Production Areas and the declared Areas of Interest. In addition, an Inventory of future uses is also included, with potential Zones and preferred Areas (which are encompassed as HPA):

- ✓ Potential zones, defined according to non-limiting parameters and criteria for the activity.
- ✓ Conditioned potential zones, which may present limitations due to parameters, other uses or regulatory limitations.
- ✓ Preferential areas, without limitations for activity a priori, are candidates to host establishments and are the subject of detailed study for their declaration as Areas of Interest in the near future.
- ✓ Conditioned preferential areas, which may present limitations due to certain criteria, technical or regulatory limitations, and which must be analysed on a case-by-case basis to accommodate establishments and for their consideration as areas of interest.
- ✓ Zones of interest declared by the different Autonomous Communities: ZIA and ZICM.

Due to the ideal nature of the HPA for the development of marine aquaculture, it will be promoted that the future development of the sector be directed primarily to these spaces.

However, this does not limit the development of aquaculture facilities outside the established areas, as long as these other possible locations are considered in accordance with the rest of the criteria and conditions established in the plans. Therefore:

- ✓ The promoters of aquaculture activity will locate, if possible, their possible projects for future marine aquaculture facilities, within the zones established as HPA for aquaculture.
- ✓ Similarly, the competent aquaculture authorities will grant, if possible, authorizations for future marine aquaculture facilities, within the areas established as HPA for aquaculture.

The criteria to address interactions with other uses are as follows:

- ✓ In those HPA for aquaculture, which overlap with areas of priority use for the protection of biodiversity, it will be ensured that the facilities do not endanger the conservation values for which the protected marine space has been declared, and attention will be paid to what is established in the corresponding management plan.
- ✓ In those HPA for aquaculture, which overlap with HPA for the conservation of biodiversity, efforts will be made to ensure that the facilities do not endanger conservation values:
 - i. When they are valuable areas for seabirds, possible synergies will be studied and work will be done to coexistence of both uses.
 - ii. When they are areas with the presence of species of community interest, aquaculture will be developed considering the necessary limitations to ensure conservation.
 - iii. When they are areas with the presence of habitats of community interest, the location of new facilities on these habitats will be avoided.
- ✓ In cases where an HPA for aquaculture overlaps with protected marine spaces of the Natura 2000 Network, the projects developed must carry out a detailed analysis of the technically and environmentally viable alternatives, and provide a justification of the main reasons for the solution adopted, considering the effects of the project on such space.
- ✓ When the HPA for aquaculture overlap with areas of priority use for national defense, it will be ensured that the facilities are not located in the areas of maneuvers or military exercises.
- ✓ In those HPA for aquaculture, which overlap with areas of priority use for the protection of underwater cultural heritage, it will be ensured that the facilities do not produce any impact on the underwater cultural heritage, and those safety distances and preventive measures will be established as appropriate.
- ✓ In those HPA for aquaculture, which overlap with areas of priority use for landscape protection around elements of cultural interest located on the coast, aquaculture will be developed considering properly defined landscape integration parameters.
- ✓ The competent administrations will consider the carrying capacity of the marine environment and the cumulative effect of all the facilities present in the area.
- ✓ In the case of HPA that overlap with areas of priority use for the extraction of aggregates, the competent administrations will prioritize the authorization of aquaculture facilities outside these HPA, or will be developed considering the safety distances and preventive measures that may be appropriate

VALUABLE PRACTICE: Zoning for biodiversity conservation

Description

For the protection of the biodiversity, POEM identify and designate Priority Use Areas (PUA) and High Potential Areas (HPA) in order to protect biodiversity considering already protected areas and future areas of high biodiversity value to meet international commitments (30%), respectively. For this purpose, PUA are defined to integrate all Marine Protected Areas (MPA) established by different protecting tools existing in national or regional policies. The HPA include areas considered to be of high value for the protection of biodiversity due to the presence of habitats and/or species of high conservation value, and which are not currently included in any figure of protection, but could be in the near future.

Practice typology

(i) Measure + (iii) Process-related practice + (iv) zoning

Topics addressed

Main	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; and D.1.4 Elements that improve marine connectivity (i.e. submarine canyons, artificial reef, etc.)) and D.2. Restoring marine and coastal ecosystems].
Secondary	B. Climate change adaptation [B.1 Green Infrastructures to enhance coastal-resilience (B.1.1 Green Infrastructures: Creation and maintenance of Nature-based solutions (wetlands, salt marshes, seagrass meadows, maërl beds, mangroves, dunes, etc.)); B.2 Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes and B.3 Anticipation of climate change-related effects (B.3.1 Identification of climate refugia for marine species and habitats)]. C. Sustainable sea-food production [C.1 Sustainable fisheries: sustainable fisheries management, including area and time-based measures].

Sectors/Activity involved

Nature protection and restoration and, indirectly, offshore renewable energy, fishing, aquaculture, coastal, landscape protection and maritime tourism.

Stakeholders involved

For the definition of the zoning for biodiversity protection, in the framework of the inter-ministerial technical MSP working group, the Ministry with the competences at-sea for biodiversity, which is the same ministry as for MSP, was involved since the beginning, through its department for biodiversity protection, to ensure that the objectives for biodiversity protection were appropriately considered by the POEM. Additionally, the Autonomous Communities (CCAA by its initials in Spanish) (which have some competences in biodiversity conservation) also participated in the process through the Monitoring Committees for Marine Strategies for each marine demarcation.

Due to the fact that Marine Protected Areas (MPA) was one of the “hot topics” to be addressed during the development of the POEM, a specific ad hoc group was created including the regional authorities (Autonomous Communities) in order to discuss how to integrate the management plans of these sites (if exists, or when will available in the future) in the POEM. This ad hoc group was conformed by national and regional administration and research

centres that supports MPA designations and the MSP process.

Geographical scope

The area representing the PUA and the HPA for biodiversity conservation extends to the 5 Marine Demarcations (Figure 1).

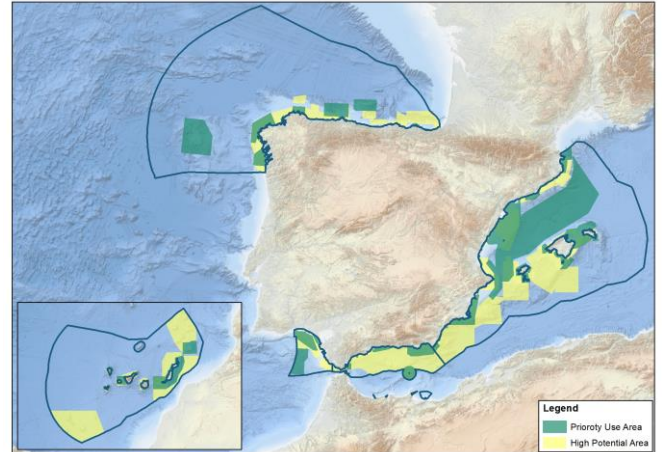


Figure 1. Surface occupied by High Potential Areas for the OWF in Spain.

Governance context

In the planning framework for the protection of biodiversity, the Central Government is involved in coordination with a Ministry in policies and regulations related to biodiversity conservation in the marine environment.

There are also shared competencies between the national and sub-national levels, involving the CCAA that have responsibilities in the management of maritime spaces within their territorial waters, conservation, establishment and management of MPA, biodiversity monitoring and the regulation of activities affecting marine ecosystems.

Regarding MPA in the marine and coastal domains, we have to make a distinction between internal waters (competency of the CCAA) and external waters (normally competency of the central government). Therefore, there is a distinction between strictly marine MPAs (managed by the central government if located in external waters) or coastal MPAs including both marine and a terrestrial part. The management of these coastal MPAs can be carried out either by the Central Government or the CCAA, whether the MPA constitutes a geological or ecological extension of a terrestrial protected area or is located in the internal waters. In such cases, management responsibility falls to the respective Autonomous Region.

How this MSP practice can support the EU Green Deal

To achieve the 30% of marine waters protected, the HPA defined include areas that can be protected in near future: those identified as being of high value for benthic habitats, areas of high value for birds and cetaceans, areas of high value for species of Community interest and areas of high value for cetaceans including:

- ✓ Areas that have been identified in the framework of a process for the determination of Natura 2000 network gaps as areas of interest for species (birds, cetaceans and turtles) or marine habitats for possible designation as a protected area.
- ✓ Areas being studied in the framework of the LIFE IP PAF INTEMARES project to be declared in the near future as Special Protected Areas for birds (SPAs) or proposed as Site of Community Importance (SCIs).
- ✓ Areas identified as areas of interest for cetaceans in the framework of international bodies, such as the CCH (Critical Cetacean Habitats) of ACCOBAMS.

First ambition is focused on protect 20% of the marine waters by

**VALUABLE PRACTICE: Zoning for biodiversity conservation**

2025 through the areas studied by the LIFE IP PAF INTEMARES project, which will increase the % of protection from 12 to 20%. Furthermore, the approval and development of the Director Plan for the Network of Marine Protected Areas of Spain (RAMPE for its Spanish acronym) is one of the measures of the POEM (PB2), which is the basic coordination instrument for achieving the objectives of the MPA network.

Challenges/gaps/inconsistencies still to be addressed

It is important to highlight that HPA for biodiversity protection identify future areas that can be protected, however they do not impose a preventive protection regime or management plan, which can be a handicap for the preservation of its values till it is declared as an MPA (at the latest by 2030). POEM stated that the competent administrations shall consider the conservation values existing in these areas when authorising any activity; they specify that it should be through the Environmental Impact Assessment, but it does not establish criteria or thresholds.

For the integration of MPA management plans (available or that will be developed in future), POEM include the management plans of protected areas that take precedence over sectoral regulations and the POEM itself. However, as protected areas management plans are considered but not really developed by the POEM, they cannot solve the issue of having protected areas without management plans.

Another issue still to be addressed is the cumulative and synergistic effects of nearby activities (the same or different, in national waters or cross-border). This is something that is starting to be addressed through the analysis of case study sites, in order to define an effective methodology to approach not only protected areas, but also the rest of Spanish jurisdictional waters.

Biodiversity conservation zoning has been the limiting criteria for the development of HPA for other uses (e.g., offshore wind, aggregate extraction, maritime transport of goods or cruises). For example, in the development of the zoning for OWF or for aquaculture, their repercussions must be analysed where biodiversity protection was previously identified as a PUA or HPA. In the aggregate extraction sector for coastal protection, the overlap with PUA or HPA for the protection of biodiversity, not only its repercussions on the MPA must be analysed but it must be justified that there are no other suitable deposits for the affected coastal section, outside these spaces. However, there is insufficient consideration of the effects of noise generated by certain uses and activities on susceptible marine fauna.

In relation to this, two major challenges are identified: (1) POEM still identify some overlaps between PUA and HPA for biodiversity conservation and (2) leave the assessment of those potential impacts at the project level, without identifying concrete criteria or thresholds, as already mentioned.

Additionally, and with regards to it, it is necessary to improve the assessment of the potential impacts of uses and activities on coastal and/or littoral zones and ecosystem services affected by such activities and by climate change. Establish how the monitoring of the pressures associated with each activity and the impacts they generate could "constrain" the management of these activities including the incorporation of best indicators to assess positive and negative effects on natural resources and activities.

Finally, the best available data might not be enough regarding quality, extend, coverage, scale, etc. In this regard, biodiversity data mainly comes from the implementation of the MSFD, the LIFE IP PAF INTEMARES project, and other biodiversity projects managed by national or regional administrations.

Replicability /Elements which can be capitalised

Zoning established in the POEM for the protection of biodiversity can be replicate in other contexts by the identification of the PUA

and HPA. The criteria applied for both are the following:

- ✓ Criteria applied for the identification of PUA for biodiversity conservation: These areas include marine protected areas, including Natura 2000 Network sites, both managed by the national administration or the regional authorities. For different marine uses and activities, there are elements to consider prevailing over the POEM:
 - i. In areas declared for the presence of seabirds (SPAs or other protected areas), in critical areas of protected species and, within other protected marine areas, in areas with Habitats of Community Interest, the installation of OWF for commercial purposes shall be avoided.
 - ii. All the restrictions set out in the law regulating natural heritage and biodiversity (In Spain Law 42/2007 of 13 December 2007) shall apply.
 - iii. In cases where an area of high potential for aquaculture overlaps with the PUA for the protection of biodiversity, its impact on the MPA concerned shall be analysed. The marine strategy compatibility reports shall verify that the developer has provided such justification, without prejudice to what is established by the managing body of the site.
 - iv. In cases where an area of high potential for aggregate extraction for coastal protection overlaps with the PUA for the protection of biodiversity, justification shall be provided that there are no other suitable sites for the coastal section concerned outside those areas, and their impact on the marine protected areas shall be analysed. The marine strategy compatibility reports shall verify that such justification exists, without prejudice to what is established by the managing body of the site. It should be also mentioned, that in Spain extraction of aggregates is only allowed for coastal protection.
 - v. Where an area of high potential for OWF overlaps with the PUA for the protection of biodiversity, the impact on the marine protected areas concerned shall be analysed. The marine strategy compatibility reports shall verify that the developer has provided such justification, without prejudice to what is established by the managing body of the site.
- ✓ Criteria applied for the identification of HPA for biodiversity conservation: They have been identified as high value areas for benthic habitats, high value areas for birds and cetaceans, high value areas for species of Community interest and high value areas for cetaceans including:
 - i. Areas that have been identified in the framework of a process for the determination of Natura 2000 network gaps as areas of interest for species (birds, cetaceans and turtles) or marine habitats for possible designation as a protected area.
 - ii. Areas being studied in the framework of a biodiversity project (as, for instance, LIFE IP PAF INTEMARES project in Spain) to be declared in the near future as SPAs or proposed as SCIs.
 - iii. Areas identified as areas of interest for cetaceans in the framework of international bodies, such as the CCH (Critical Cetacean Habitats) of ACCOBAMS.
 - iv. In the context of the environmental assessment of projects, plans and programmes, they should be considered as areas of high potential for the conservation of biodiversity and therefore the effects of uses and activities on them should be adequately analysed.

VALUABLE PRACTICE: Exploring potential for allocation of offshore aquaculture areas and their integration in MSP

Description

Marine aquaculture is one of the important key sectors for the Blue economy. The recently published study "Access to space and water for marine aquaculture" (European Commission, 2023) identifies although this activity was integrated into MSPs through different types of zones (exclusive or flexible ones), there are needs for improvements in regard to allocation of space and water. Also, the new production models for aquaculture (e.g., offshore aquaculture, seaweed production) and their associated needs regarding space allocation, are not sufficiently considered within the MSPs. As the climate has become more variable, offshore farms have become more common.

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 2023, 28 aquaculture farms were registered (coastal and coastal lakes): 20 farms for black mussels, 1 fish cage farm, 1 oysters & black mussels, 1 for rainbow trout, 1 for black mussels & shrimps and 4 for marine worms.

The Bulgarian MSP Plan integrates existing zones with aquaculture farms (within 1 NM) and developed recommendations to reduce their environmental impacts and conflicts with other coastal and maritime uses.

Practice typology

(i) Measures + (iv) zoning

Topics addressed

Main	C. Sustainable sea-food production [C.2 Sustainable aquaculture and shellfish production (C.2.1 Development of marine aquaculture installations; C.2.4 Multi-use of the sea space: combinations including marine aquaculture)].
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Sectors/Activity involved

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

Stakeholders involved

Consultations with administrative (military, maritime administration) and private stakeholders at national and subnational level on the permission of licensing for aquaculture farms.

Monitoring: At regional and national level the implementation and monitoring is provided by the Executive Agency of Fisheries and Aquaculture to the Ministry of Agriculture, Food and Forests.

Geographical scope

The analysis for this zoning has been applied to internal waters of Bulgaria (1 NM) (Figure 1).

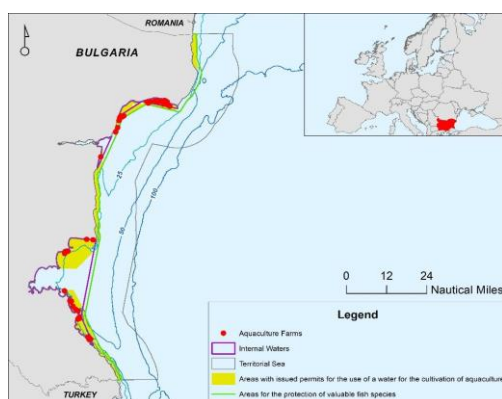


Figure 1. Area for potential location of offshore aquaculture in Bulgaria.

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, Food and Forestry of Bulgaria through its Executive Agency of Fishery 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).
- ✓ MSP plan does not envisage suitable areas allocated for new onshore or offshore farms, as it is a strategic document, also the offshore farming technology is still under development. The competent MSP authority is the Bulgarian Ministry of Regional Development and Public Works (MRDPW).

The development of marine aquaculture is highly dependent on the good quality of the sea water and the impacts of land-based human pressures. In particular, shellfish farming requires high water quality to minimise food safety risks and associated producer costs (e.g., depuration). Locating marine aquaculture production close to the shore therefore requires a constant monitoring of water quality and a reduction of these pressures. The good ecological and environmental status of sea waters is provided by the provisions of the MSFD and WFD and the national Marine Strategy and Programme of Measures implemented by the Black Sea Basin Directorate (to the MOEW) and fully integrated in the Plan.

How this MSP practice can support the EU Green Deal

The aspect on which this practice 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 in MSP.

The Plan has Specific objective 2.4. Sustainable development of the Fisheries and Aquaculture sector. It provides general recommendations for sustainable aquaculture development, the keys 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 onshore areas of Bulgarian maritime space are overcrowded by different human uses, in particular the two large bays of Varna and Burgas and there is higher risk of conflicts with other activities. Inshore waters are also more vulnerable to eutrophication from agricultural run-off and tend to have more dynamic and changeable



VALUABLE PRACTICE: Exploring potential for allocation of offshore aquaculture areas and their integration in MSP

environmental conditions. On the other side, offshore areas are also more stable in terms of changes of salinity, seawater temperature and seawater are clearer. Zones for shipping do not overlap with aquaculture zones, where shellfish farming is mainly carried out. The indirect impact is similar to that on the environment, as farmed shellfish accumulate pollutants during seawater filtration, which can make them unsafe for human consumption. The mussel farms in the Burgas Bay area may be the most affected due to the spatial proximity of the shipping areas.

Challenges/gaps/inconsistencies still to be addressed

- ✓ Challenges: lack of well protected bays, seawater temperature variations, climate change impacts, land-based pollution;
- ✓ Competition for space with coastal tourism, port activities, maritime transport, non-living resources (offshore oil and gas) and fishing;
- ✓ Synergies may exist with offshore wind farms (e.g. multi-use platforms) and mix interactions with coastal tourism.

The scenarios of the Plan 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) zones for offshore aquaculture that might overlap with newly designated or extended MPAs. The Plan does not provide cumulative impact assessment to its EIA report and these aspects could risk the objectives of the EGD and related policies regarding D. Biodiversity and ecosystem protection and restoration. Currently the existing aquaculture zones 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).

Climate change issues are only generally considered in the MSP Plan and its EIA report, with regards to the potential negative impacts on aquaculture. Also, the EIA is not implemented for marine aquaculture production. Some mitigation actions can include:

- (i) a change in cultivated species (e.g., acidification can be a boost for sea algae production)
- (ii) the identification of new areas for marine aquaculture (e.g., areas with natural protection for farms and structures against extreme events), (in line with B. Climate change adaptation (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.).

There is a risk of policy inconsistency and conflict due to the diversity in the institutional structure for aquaculture and national MSP. The licensing and permitting of aquaculture generally remain solely in the field of the fisheries sector management and the Black Sea Basin Directorate, both at national and local levels. The Plan integrates the existing aquaculture zones/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.

The Ordinance for authorisation/licensing for aquaculture farms is up to date and does not include the permissions for development of offshore aquaculture. This imposes updates of the regulation and policy reforms.

In conclusion, there is a need to move to offshore aquaculture to avoid the crowded coastal and onshore space and to capitalise on more stable, albeit exposed conditions away from the coast. This is likely to bring aquaculture out of local planning into national MSP and present a new set of challenges in terms of coexistence with other offshore activities.

Replicability /Elements which can be capitalised

- ✓ Aquaculture is well considered in the national MSP plan and it is recognised as one of the key blue economy sectors;
- ✓ General consideration for synergies with other sectors can also be capitalised: how co-location opportunities can be maximised; multi-use concept should be encouraged in MSP to provide better visibility on spatial synergies between existing/potential maritime activities;
- ✓ Opportunities exist for aquaculture to share landside facilities and infrastructure (e.g., quay space, bunkering) with other marine economic activities (e.g., aquaculture has potential synergies with offshore energy, capture fisheries, tourism and environmental conservation) to foster the efficient use of maritime and coastal space. These synergies can be highlighted by the identification and promotion of opportunities for flexible co-development / co-location and sharing of common resources and facilities across different sectors;
- ✓ Results from interviews with MSP authority conducted in Task 2.2 showed recommendation on new requirements regarding the aquaculture zones in the revisions of the plan, that may result also in adjusting the national normative regulations to reach the EGD objectives (as pointed above);
- ✓ The aquaculture is still developed in the onshore areas and does not benefit from dedicated areas offshore, rather than is encouraged through multi-use areas. The operationalising of these areas in the Plan implementation is not clear yet;
- ✓ MSP Plan has an essential role in addressing many of these challenges, especially given the expansion of aquaculture offshore will often bring it under national rather than local jurisdiction. This might include:
 - spatial zoning for particular types of aquaculture systems
 - integration of models for wave climate, storm frequency, current and wind speeds that will facilitate the development of offshore aquaculture
 - identification of spatial synergies with other uses for co-development or land-sea access integration (e.g., ports, maintenance trips, etc.).
- ✓ Allocated zones for aquaculture (AZAs). Allocation of space offshore needs to be considered in accordance with the sector's interest (i.e., investors) and the existing or targeted production and markets (local, national or regional scale).

VALUABLE PRACTICE: Multifunctional zones and multi-use of the sea space

Description

The MSP Plan includes zoning of the sea space. It is indicative (i.e. possible direction of development = "this can come here") zoning, e.g. list of allowed uses, prioritisation of uses, not-allowed uses, etc. The grouping of functions and uses are into four types of zones, namely: i) restricted zones for use; ii) zones with a specific conservation regime; iii) multifunctional zones; and iv) areas for future use.

Multi-functional zones have been defined in the MSP Plan aimed at reducing conflicts, supporting the efficient use of the sea space and better coordinating sectoral maritime policies. The Plan states that currently any combinations are possible except those with specific legally regulated restrictions or bans. However, there are still some barriers for co-existence related to policy, legislation and single sector development.

The Plan includes some examples of multi-use combinations: maritime transport and fishing - it complies with the requirements of the United Nations Convention on maritime law, of the Maritime Spaces, Inland Waterways and the Ports of the Republic of Bulgaria Act, the limitations of the Separate System movement, the Fisheries and Aquaculture Act. Fishing is carried out in a way to ensure the conservation of biodiversity and fisheries resources and compliance with the rules for recreational fishing, fish farming activities and breeding aquaculture. Maritime transport, fishing and tourism, environmental protection, fish resources, and at the same time, finding a balance between these activities for their long-term sustainable development and diversification of tourism activities. Tourism and underwater cultural heritage - this combination includes co-existence between the cultural values and compliance with tourist safety rules. Scientific research, underwater cultural heritage and MPAs - this combination implies synergies and integration of financial sources and resources for conducting scientific research in areas being subject to different types of protection. Another example of multi-use can be a combination of marine aquaculture and nature conservation which can be combined by developing aquaculture activities in marine protected areas.

Practice typology

(iv) zoning

Topics addressed

Main	A. Climate change mitigation [A.1 Renewable energy production, storage and transportation (A.1.4 Multi-use of the sea space: combination including energy installations)].
	C. Sustainable sea-food production [C.1 Sustainable fisheries: sustainable fisheries management, including area and time-based measures (C.1.6 Multi-use of the sea space: combination including fisheries) and C.2 Sustainable aquaculture and shellfish production (C.2.4 Multi-use of the sea space: combinations including marine aquaculture)].
	D. Biodiversity and ecosystem protection and restoration [D.1 A coherent network of marine protected areas (D.1.5 Multi-use of the sea space: combination including biodiversity and ecosystem protection)].

Sectors/Activity involved

Aquaculture and fisheries, maritime transport, coastal and maritime tourism; maritime defence, nature protection, landscape protection, scientific research, underwater cultural heritage, marine

industry (e.g., blue bioeconomy and biotechnology); and multisector.

Stakeholders involved

Competent MSP Authority, all ministries, executive sectoral agencies, relevant stakeholders, etc. Consultation and implementation. National scale.

Geographical scope

The analysis for this zoning has been applied for the territorial sea of Bulgaria (12 NM).

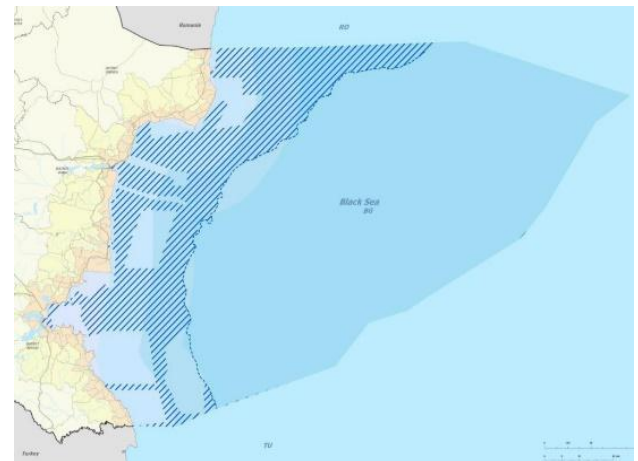


Figure 1. Area for multifunctional zones and multiuse in Bulgaria.

Governance context

Currently, the Bulgarian sea space combines several functions/uses among sectors, except for zones with restricted access, mainly related to military exercises. Many combinations are possible except those with specific legal regulations and restrictions, including those mentioned above. For multifunctional zones and its regulation, the Plan refers to the shared different competences of the EU and national legal frameworks, not clear yet how these multifunctional zones will be operationalised in practice during the Plan implementation.

How this MSP practice can support the EU Green Deal

The aspect on which this practice mainly supports the EGD is in A.1.4 Multi-use of the sea space: combination including energy installations; C.1.6 Multi-use of the sea space: combination including fisheries; C.2.4 Multi-use of the sea space: combinations including marine aquaculture; D.1.5 Multi-use of the sea space: combination including biodiversity and ecosystem protection.

The Plan does promote synergies between economic sectors through the foreseen multifunctional zones, based on the Multi-Use (MU) concept. The main goal is combination of compatible functions for more efficient use of maritime spaces; achieving synergy and economy of space and scale; and improved coordination of maritime sectoral policies. The Bulgarian MSP Plan presents generally some potential opportunities of combining functions/activities at sea or in specific areas.

MSP can directly support MU by indicating preference for joint uses as opposed to single uses and through the imposition of certain conditions for the developers during the permitting process. Furthermore, MSP is useful in identifying knowledge gaps and informing future agendas (e.g. cumulative and in-combination impacts of the MU) as well as helping to clarify potential legislation and efficient practices for combining different uses in marine areas.



VALUABLE PRACTICE: Multifunctional zones and multi-use of the sea space

Challenges/gaps/inconsistencies still to be addressed

The scientific rationale for the Plan is provided under the EMFF MARSPLAN-BS II project (2019-2021), that supported MSP process in Bulgaria, and the elaborated Multi-Use case study on Tourism, Underwater Cultural Heritage and Environmental protection (Source: Stancheva *et al.*, 2022 <https://www.sciencedirect.com/science/article/abs/pii/S0308597X21005388>), however, this research rational/methodology was not included in the plan.

Limitations towards the achievement of EGD objectives:

- ✓ While competing needs for sea space can result in conflicts, they may also lead to mutual benefits for different sectors, when sustainable combinations are properly foreseen in MSP.
- ✓ Depending on the planning approach of a given country, the MU concept can be supported by MSP through various ways as, for example, in the planning stage via the identification of strategic and specific objectives that focus on the MU development, not just delimitation of the zones suitable for MU. Together with stakeholders, to identify suitable areas and comprehensive policies promoting MU, especially for new joint developments. In the planning phase, MSP must prevent conflicts among those sectors that are already present in the sea and between uses and environmental components, as well as plan for conflicts that may arise among new and emerging sectors.
- ✓ The Bulgarian MSP Plan integrates a delimitation of such multifunctional zones at its preparation and planning phase, and some preliminary multifunctional combinations are generally described. However, no methodological justification/rational was conducted (i.e., just spatial delimitation without analysed in depth socio-economic and environmental benefits). The Plan does not include in-depth analysis of the potential of multi-use combinations and the evaluation of overall MU effects/added values or multiple barriers for transfer of the MU from concept to practical implementation. Also, no consultations with stakeholders on their MU perception were conducted in the Plan.

Despite a number of good international examples of successfully applied multi-uses, the MU concept is still novel for Bulgaria, its decision-makers, spatial planners and stakeholders. These actors must adjust policy, planning, consenting and management reform in order to advance synergies between maritime uses that are usually managed under different sectoral institutions and owners.

Replicability /Elements which can be capitalised

- ✓ MSP is still the main process providing the policy framework needed to overcome the multiple barriers to MU development;
- ✓ MSP can act as a transparent tool for communication with stakeholders in the early stages, which can then result in more sustainable solutions on MUs (that indeed requires the engagement of different typologies of stakeholders, not accustomed to working together). Continuous engagement between stakeholders from different sectors to learn more about their different ways of thinking and to find common solutions at different levels is especially useful for MU combinations.
- ✓ Advancing the development of multifunctional zones implies a radical change from single use to co-existence and thus requiring a willingness of policy makers, governmental authorities, businesses, investors and other actors, as well as adjusting policy changes.
- ✓ It is important that specific capacity needs (including know-how, training, finance, logistics and public awareness) are provided

for actors to boost and advance MU development.

- ✓ Capacity building is a priority especially for fishery, aquaculture, and UCH related MU.
- ✓ The Plan includes multifunctional zoning; however, its operationalisation is not clear yet: there is a need of comprehensive legal framework and to adapt the MU methodology tested under the MARSPLAN-BS II project, with focus on the environmental impacts (EU Biodiversity Strategy 2030 targets for MPAs) and socio-economic benefits.

VALUABLE PRACTICE: Pollution prevention from land-based activities and sources

Description

The EGD element F.1 Pollution prevention (F.1.5 Measures related to other land-based activities) is pointed out as a cross-cutting topic in the MSP Plan and indirectly reflected in its objectives and measures, mainly through the provisions and implementation of the WFD and the MSFD and Programme of Measures. The Plan highlighted the need for construction and modernisation of the existing wastewater treatment plants (WWTP) and sewage systems, and the inclusion of all coastal settlements and resort sites to them.

There are still hot spots of disposal of poorly treated and untreated domestic wastewater in the sea. The practice of discharging untreated or insufficiently treated domestic wastewaters into the coastal sea waters continues. Six sewage systems along the south Bulgarian coast have been identified as "hot spots" with a significant negative impact on the quality of sea waters - the towns of Sozopol, Ahtopol and Chernomorets; complex Sarafovo - Burgas; villages of Varvara and Sinemorets. Construction and modernisation of treatment sewage plants will help to reduce the pollution from population areas, resorts and industry. The development of ecological agriculture in the adjacent territories reduces the degree of anthropogenic eutrophication and pesticide pollution of coastal waters. Some of the existing wastewater treatment plants are insufficient by degree of purification. The deep-water discharge could be a one way to reduce pollution to inshore waters and bathing areas, but it pollutes the offshore sea waters. There is a need for more effective farming practices to reduce water and wind erosion of the watershed, and these are provided in the River Basin Management Plan and its update (2016-2021) to which the Plan refers.

Practice typology

(i) Measures

Topics addressed

Main	F. Zero pollution [F.1 Pollution prevention (F.1.5 Measures related to other land-based activities)].
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Sectors/Activity involved

Coastal and maritime tourism, recreation, maritime transport, marine aquaculture, nature protection and restoration.

Stakeholders involved

Type: Private, Administrative.

Scale: Subnational, regional.

Purpose: Consultation, implementation, monitoring etc.

Geographical scope

Coastal areas, internal waters and territorial sea (Figure 1).

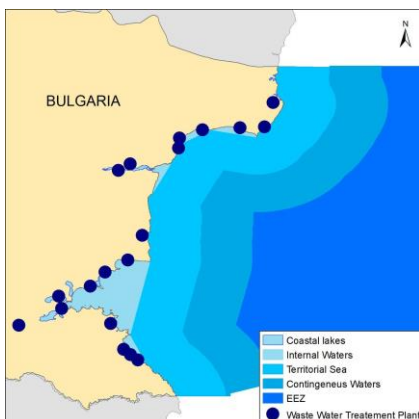


Figure 1. Area of the location to pollution prevention from land-based activities and sources in Bulgaria.

Governance context

- ✓ The Council of Ministers determines the state policy for the water supply and sanitation sector. Adopts a Strategy for the development and management of water supply and sewage in Bulgaria for a period of not less than 10 years;
- ✓ Ministry of Regional Development and Public Works is responsible for state policy, related to the activities of operation, construction, reconstruction and modernisation of water management systems and facilities (i.e. sewage systems and facilities in populated areas);
- ✓ Ministry of Environment and Water manages water monitoring; defines vulnerable sea zones to pollution with nitrates from agricultural sources; determines the sensitive areas for water protection from contamination with biogenic elements; determines the list of priority and priority dangerous substances;
- ✓ The Environment Executive Agency to the Ministry of Environment and Water conducts laboratory and field research to determine the state of the waters; conducts water monitoring at the national level;
- ✓ Regional Environment and Water Inspections to the Ministry of Environment and Water conduct wastewater monitoring; control the treatment plants of the settlements, wastewater keeps up-to-date the lists of objects that form emissions of priority and priority hazardous substances, general and specific pollutants;
- ✓ Black Sea Basin Directorate-Varna to the Ministry of Environment and Water implements the state policy for water management at the basin level. Develops the river basin management plan; coordinates sea water monitoring for Good Environmental Status (GES); develops programmes of measures to improve, protect and maintain the water quality; defines the waters for the habitat of fish and shellfish; checks the readings of the measuring devices of the wastewater discharge facilities;
- ✓ Municipal Councils - adopt programmes for the development of water supply and sewage on the territory of the Black Sea municipalities.
- ✓ The MSP Plan and its EIA Report do not have the remit to coordinate this practice, however both documents make a general analysis on the pollutions from the land-based sources, in particular from WWTP and sewage systems in coastal areas and take into consideration these issues through the provisions of the MSFD and the WFD fully integrated in the plan. For instance, the River Basin Management Plan (2016-2021) provides measures for completion of sewage systems, construction of new WWTPs and reconstruction of the existing ones.

How this MSP practice can support the EU Green Deal

The context on which this practice mainly supports the EGD is F. Zero pollution, *F.1 Pollution prevention (F.1.5 Measures related to other land-based activities)*, more specifically to pollution prevention from WWTP and sewage systems.

The MSP Plan reflects indirect pollution issues in its measures and recommends reducing the levels of all types of pollutants to values that are not harmful to marine ecosystems. This could be done through accident prevention, coherent and effective management of land-based sources of pollution and industrial activities in coastal areas. The measures include effective control and/or sanctioning of the activity of objects outside the scope of constructed sewage systems or without adequately functioning own treatment facilities, as well as introducing innovative sanitary solutions within the boundaries of the beaches outside the concession area; significant reduction of the amount of waste entering or present in the sea through effective control on the waste production in the sea and

VALUABLE PRACTICE: Pollution prevention from land-based activities and sources

along the coast.

Challenges/gaps/inconsistencies still to be addressed

The main challenges to be addressed in the Plan's implementation are:

- ✓ Coastal areas with unsecured wastewater removal and treatment;
- ✓ Existence of settlements and small resorts with sewage, but without WWTPs (in particular tourism sector adversely impacts the environment due to the seasonal peak in population size, that leads to increased production of waste, and the local infrastructure in coastal municipalities is not able to face this enormous pollution);
- ✓ The existed old sewage networks are overloaded by new constructions and developments;
- ✓ Existence of WWTPs without tertiary stage, as well as those with amortised treatment facilities at all stages;
- ✓ Unregulated discharges of waste waters.

The Plan does not conduct Cumulative Impact Assessment on the land-based sources of pollution in its EIA Report, and just generally addresses this issue. Shared competences among responsible authorities and lack of funding programmes for the local population to install WWTP are also major challenges.

Replicability /Elements which can be capitalised

- ✓ Pollution reduction measures/recommendations (from urban wastewater treatment plants, industrial plants) although indirectly reflected in the Plan's objectives and its EIA Report could be replicated (through the implementation of the MSFD (Programme of Measures) and the WFD).
- ✓ Another insight is that even the MSP would probably do little to relieve impact of the dominating pressures, as they relate mostly to emissions from land (runoff, point source pollution and domestic), the Plan may still make an important guiding and enhanced coordination to improving ecological conditions by limiting the cumulative impact from additional pressures on sensitive species and habitats in particular areas.
- ✓ Land-Sea Interactions, although generally taken into account in the scenarios for future development of the MSP Plan, can also be replicated.



VALUABLE PRACTICE: From energy transition to spatial reconfiguration into ports

Description

As logistical hubs, ports play an important role in achieving the EGD’s offshore energy targets. For instance, they can serve as hubs for storage and pre-assembly of wind turbine components, or as a base for construction and maintenance ships. In turn, this means that ports need to find space to support the ORE sector’s growth. In La Rochelle, the "Port Horizon 2025" planning document strongly reflects the spatial prioritisation given to ORE as an emerging sector. It foresees the creation of a new terminal capable of handling heavy goods, explicitly meant to meet development needs from ORE. It also plans for a new logistical hub that should similarly support ORE.

The prioritisation of investments in ORE infrastructures also feeds into a logic of transitioning away from the port’s reliance on activities related to fossil fuels. In 2020, petroleum products still represented 30% of the port’s traffic. The 2020-2024 Port’s strategy anticipates that the energy sectors currently operating in the port will be strongly impacted by the ecological and energy transitions. In practice, La Rochelle seeks to address the risks faced by oil-dependent ports such as stranded assets (e.g. oil storage infrastructures, terminals or pipelines) and decrease in revenues. However, the 2020-2024 strategy of the GPM of La Rochelle also acknowledges that the immediate proximity of the city limits and close sensitive marine areas are constraints for the development of new industrial port activities such as ORE. To overcome such a challenge and reinforce its position in the growing ORE market, a complementary strategy from the Port consists in planning outwards and partnering with other ports in the South Atlantic basin. This is in line with measure 03-POR-A03 from the French South Atlantic MSP plan.

In fact, the port played a key role in ensuring the creation the association « Aquitania Ports Links ». The creation of the association expressly originated from the objective of jointly applying for a call for expressions of interest launched by the French Agency for Ecological Transition (ADEME) on port infrastructures for offshore floating wind farms. The four associated ports aim to create synergies and leverage complementarities in their existing and planned infrastructures. Key activities have already been distributed between ports based on their comparative advantages to offer an attractive and integrated logistical chain. For instance, La Rochelle capitalises on natural assets such as its deep-water bathymetry and a location that gives easy access to the whole Atlantic sea basin, as well as the experience gained in participating to the construction of a previous offshore wind farm, the ability to handle heavy loads, and the construction of new berths dedicated to ORE. Together, the four ports can cover all needed elements to deploy offshore wind farms in South Atlantic Sea basin.

The cooperation strategy is already proving successful, since in 2023, all four ports were successfully included in the winners of the ADEME call.

Practice typology

(iii) Process-related practice

Topics addressed

Main	A. Climate change mitigation [A.1. Renewable energy production, storage and transportation (A.1.1. Development of marine renewable energy installations and A.1.7. Coordinated, transboundary initiatives); A.2. Clean energy transition in maritime sectors and A.3. Transformations in ports]
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Sectors/Activity involved

Ports activities, offshore renewable energies.

Stakeholders involved

At a local scale, the Grand Port Maritime (GPM) of La Rochelle is a public body. The GPM of La Rochelle is the only deep-water port in the French South Atlantic basin.

At a regional scale, « Aquitania Ports Links » is an association that brings together the Nouvelle-Aquitaine Region, the Trade and Industry Chamber of Nouvelle-Aquitaine, and the four commercial ports of the region – the Grand Port Maritime de La Rochelle, the Charente Atlantique port, the Grand Port Maritime de Bordeaux and the port of Bayonne.

Geographical scope

Grand Port Maritime (GPM) of La Rochelle, and by extension, the South Atlantic Sea Basin.

Governance context

The port of La Rochelle is a «Grand Port Maritime» (GPM). It is a public body under the direct supervision of the State (Ministry of Ecological Transition - Directorate-General for Infrastructure, Transport and the Sea - DGITM).

The GPM implements its own strategy (currently the 2020-2024 port strategy and the project « Port Horizon 2025 »). As a member of the Façade (Sea basin) Maritime Council (CMF), it is involved in the definition and implementation of the French South Atlantic MSP strategy. At a national level, it is represented towards the State by the national port association (Union des Ports de France) and should also contribute to the implementation of the National Port Strategy.

«Aquitania Ports Links» is an association that brings together ports with various administrative status:

- Grands Ports Maritime of La Rochelle and Bordeaux: direct supervision from the State.
- Port of Bayonne: owned by the Region Nouvelle Aquitaine, managed by the Trade and Industry Chamber of Bayonne Pays Basque.
- Charente Atlantique port: owned by the Charente-Maritime Department, managed by the Syndicat mixte (mixed economy company) of the Rochefort/Tonnay-Charente trade port.

The national port and energy policies are managed by two distinct directorates within the same ministry (Ministry for Ecological Transition: DGITM and DGEC). Also relevant is the national strategy for the sea and coast, which is led by a DG shared by the Secretariat of State for the Sea and the Ministry of Agriculture (DGAMPA).

Private stakeholders from the ORE sector and other activities involved in the port area often are companies operating at a national or international scale.

How this MSP practice can support the EU Green Deal

The GPM’s planning strategy anticipates shifts in future energy trades by moving out from oil related activities while prioritizing emerging greener sectors such as ORE. The port’s proactive transformation directly supports the EGD targets both on ORE development and phasing out from fossil fuels. It is estimated that the port generates about 16,400 jobs. A forward-looking transformation of the port therefore also supports the sustainability its hinterland. Planning such a transformation will act as a driving force towards greener activities and jobs for many other sectors gravitating around the port.

To face spatial limitation in the port area and remain competitive in



VALUABLE PRACTICE: From energy transition to spatial reconfiguration into ports

ORE logistics market, La Rochelle looks outward by means of a formal association with other ports in the South Atlantic. By turning comparative advantages into articulated complementarities, associated ports not only distribute spatial pressure from ORE growth but also create integrated logistical chains at a sea basin level. This provides concrete support to the EGD by ensuring that future offshore wind farms projects in the South Atlantic basin will benefit from competitive and adequate logistical support infrastructures.

Both practices illustrate how the EGD's offshore energy targets can lead to reorganisation of space not only at sea but at the land-sea interface with ports and their hinterland. They show the added value of a sea basin level approach when planning for ORE and port transformations.

Challenges/gaps/inconsistencies still to be addressed

"Aquitania Ports Link" was foreseen in the French South Atlantic MSP document's action plan. Action "03-POR-A03: Promote synergies between ports in the region and the link with their territory" includes a sub-action 1 "Strengthen cooperation and synergy between the ports of the facade by creating a regional space for dialogue permanent between the ports of the façade", which mentions the creation of a formal association. However, action 03-POR-A03 refers to a study that had already been conducted when the action plan was drafted. Likewise, the action plan only refers to the "validation" of the principle of a future association of ports and remains vague in terms of future concrete steps. The added value of the MSP process in the concrete establishment and functioning of the ports' synergy remains unclear. It seems the action plan might have only taken stock of ongoing initiatives rather than catalysed it or planned new ones.

Adopting an industrial ecosystem approach, the next MSP cycle could work on better integrating new offshore wind energy targets with sectors such as ports at a sea basin scale. It should assess the needs stemming from offshore energy targets, including in terms of port infrastructures needed, and could deepen the complementarity analysis already initiated by « Aquitania Port Links ». MSP could also be used to ensure coherence at a sea basin scale between the ports' strategies and other relevant planning documents. The next MSP plan should also reflect newly available information, with regards to what the anticipated quantitative targets for offshore energy production in the South Atlantic basin and the technology to be favoured (e.g. floating) mean in terms of port infrastructure offer in the sea basin.

It is also worth noting that the National Port Strategy does not consider MSP and DSF at all, nor does it refer to the National Strategy for the Sea and Coasts, including in the governance section. Better integration of port, energy and MSP policies could also be explored at a national level.

Replicability /Elements which can be capitalised

Ports that still rely on fossil fuels should prepare for shifts in demand and related activities, and therefore anticipate decrease in revenues and risks of stranded assets. Such ports would benefit from analysing which are the emerging green sectors they could favour (for instance ORE but also blue circular economy sectors). Identifying the most promising sectors for port investments should be done beyond the port area, i.e considering the surrounding economic and industrial environment and relevant planning documents at multiple scales.

Identifying possible synergies and complementarities with other ports can help guiding investments and reinforce competitiveness. Cooperation between ports at sea basin level to propose integrated

logistical chain can be replicated elsewhere. This will also help with addressing the challenge relating to finding space for ORE-related activities by distributing industrial and logistic infrastructures in multiple locations.

VALUABLE PRACTICE: Development of Marines cultures (shellfish and algae)

Description

A common legal frame regulates the access to the public maritime domain for all marine cultures/farming: shellfish, algae and fish farming (only few fish units exist in France). In order to develop new aquaculture farms, it is necessary to follow the procedures defined by the Rural and Fisheries Act (2010).

Despite the available legal frame only few new aquaculture offshore projects (mussels and algae) were successful. This case study will present the legal process (including spatial planning) as well as the reasons that have prevented the development of new aquaculture farms since 2010. This factsheet will also develop how the current situation can be improved through MSP plans.

Practice typology

(iii) Process-related practice + (iv) zoning

Topics addressed

Main	C. Sustainable sea-food production [C.2. Sustainable aquaculture and shellfish production (C.2.1. Development of marine aquaculture installations) and C.3. Sustainable algae production (C.3.1. Development of marine algae production)]
Secondary	G. Fair and just transition [G.1. Stakeholder participation and G.2. Representativeness of diversity of stakeholders at different levels]

Sectors/Activity involved

Aquaculture (finfish, shellfish and algae).

Stakeholders involved

National level State authorities:

- General Directorate of Fisheries and Aquaculture.
- National Committee of Shellfish farming.
- National Committee for Fisheries and Marines Cultures.

Purposes: regulation (formulation of rules and conditions to the development of marine cultures farms).

Regional level and district level:

Decentralise State authorities

- Interregional Division of the Sea (DIRM).
- Departmental Division of the Territories and the Sea (DDTM).
- Maritime Prefecture (seafront level).

Industry Organisations

- Regional Committee of Shellfish Farming (CRC).
- Regional Committee of Fisheries and Marine Cultures (CRPMEM).
- Departmental Committee of Fisheries and Marines Cultures (CDPMEM).

Purposes: Implementation; management; monitoring (compliance). Regional/district level State authorities determine the creation of marine cultures farms.

- Environmental NGO's.

Purposes: consultation; advice formulations.

Scientific advisers

- IFREMER for shellfish farming.
- CNRS for algae.

All new projects have to receive a positive advice before to be examined by the "Marines Culture Commission" of DDTM at district level.

Geographical scope

Although the same frame and processes are applicable in other regions, this factsheet will focus on the region of Bretagne as it is the place where an important number of new marines' cultures projects have failed.



Brittany map: [source](#)

Governance context

The Rural and Fisheries Act (2010) regulates and defines the process to develop new marine cultures farms. According to this law, new applications for concession leases are submitted to fisheries district administrations called Departmental Divisions of the Territories and the Sea (DDTM). Marine Cultures Commission (MCC) is responsible for examining concession leases applications under the DDTM responsibility. MCC gives an advice and the final decision is under the authority of the Maritime Prefect (representative of the State) at regional level. The MCC is composed by different district administrations (fisheries, environment, animal and human health); territorial authorities and shellfish farming industry representatives (CRC and individual farmers). Scientific institutes, users of the sea, NGOs and MPA managers (e.g. N2000 network) are participating in MCC with an advisory role. The MCC is chaired by the Maritime Prefect.

The Departmental Structure Scheme (DSS) provides guidelines and maps for appropriate aquaculture areas, including those within marine protected areas (MPAs). It is realised in common with all stakeholders under the DDTM authorities. The Regional Committee of Shellfish Farming realised a collective environmental impact assessment carried out by consultants for all species (including algae) that can be farmed in these areas. The environmental impact assessments are submitted and validated by State authorities at district level.

Aquaculture current and suitable areas at regional level are mapped by the regional authorities representing the state (DIRM) in a document called Regional Development of Marine Aquaculture Scheme (SRDAM) and includes also those within Natura 2000 sites. This document is realised through a consultation process that includes firstly all State services and then territorial authorities and others users. This document considers all others planning documents (Sea Enhancement Scheme (SMVM); Territorial Coherence Scheme (SCOTT); Local Land-use (urbanism) plan (PLU)).

The research and planning institutes are consulted for their opinion before SRDAM validation by the regional Maritime Prefecture. Both documents are submitted for a public online consultation. In theory, the SRDAM should be integrated in French MSP documents



VALUABLE PRACTICE: Development of Marines cultures (shellfish and algae)

(Documents Stratégiques de Façade (DSF)). However, it is only briefly referenced in the description of existing public policies.

How this MSP practice can support the EU Green Deal

The aspect in which this practice mainly supports EGD is in C.2.1. Development of marine aquaculture installations and C.3.1. Development of marine algae production. It also supports EGD in G.1. Stakeholder participation and G.2. Representativeness of diversity of stakeholders at different levels through the consultation processes for the development of marine cultures farms.

In some French regions like Bretagne, the disposals of the Rural and Fisheries Act of 2010 couldn't facilitate the development of this industry. Despite the introduction of a more participatory and inclusive system to designate aquaculture suitable areas, new farm developers failed to convince local communities of the importance of their projects. Usually, such projects are already predefined and pre-established when they are submitted for consultation. Planning of such important projects in economic and spatial terms needs to be discussed and build commonly between local communities, authorities and developers. According to the results of different research projects, realised in Bretagne, the economic development of communities to be acceptable it should be based on choices made from the communities and other local stakeholders and not only from public authorities and private sector. Projects that are not socially acceptable to local residents and citizens lead to inequitable governance systems that prioritize the most powerful interests. Local urbanism plans (municipality's) that are based on participatory choices should be generalized and integrated directly into the DSF.

Challenges/gaps/inconsistencies still to be addressed

The main challenge lies in the harmonization of different policies in order to strengthen marine cultures development by creating a single mapping of suitable areas. This mapping should be created commonly between all stakeholders at the beginning of the projects proposals. Regarding the current planning tools. MSP should help to facilitate the discussions and inclusion of all stakeholders, including local citizens, in order to help the acceptability of new project requests by the creation of local areas.

Replicability /Elements which can be capitalised

A single MSP document in order to avoid confusions and inconsistencies between the different orientations and schemes. In areas where big new projects will take place, regular deliberative areas should be created with the aim to share visions between all interested stakeholders and citizens about the future development strategy and spatial planning of the area. Such areas will allow all stakeholders to express their opinions and contribute to build new projects together instead of only being consulted/informed once the project is already pre-established and decided by local authorities. Sharing the power between economic sectors, territorial and State authorities, recreational activities and citizens, will prevent hegemonic power from influencing decision making and probably facilitate the acceptance of new big projects locally.

VALUABLE PRACTICE: Public debates on offshore wind farms planning and MSP

Description

Public participation processes were initially conducted in parallel for OWF planning and MSP. Over the last ten years, the legal framework in France has evolved considerably to accelerate the development of OWF and to improve public participation in consultation processes.

OWF planning was roughly included in the first MSP plans, with the definition of large areas dedicated to various uses, including OWF. The consultation process on the MSP plans includes all relevant stakeholders in each sea basin council, but local citizens and local stakeholders were excluded. Consultation on OWF planning was carried out in parallel with the online national consultation on energy policy and a local public debate in relation to each OWF project. As a result of the new legislations (2018, 2020, 2023), local stakeholders and citizens should be involved in the planning of OWF in MSP plans through a single, joint public debate at a regional scale (sea basin - "maritime façade").

This public debate will take place in autumn 2023 and will provide a vision of OWF development over the next 10 years in terms of location and installed capacity (number of GW per sea basin). The social acceptability of OWF development is not guaranteed despite the improvement in public participation in OWF planning. A participatory process at regional level is not enough. Local deliberative arenas are still lacking to build the energy transition with local stakeholders and citizens.

Practice typology

(iii) Process-related practice + (iv) zoning

Topics addressed

Main	G. Fair and just transition [G.1. Stakeholder participation and G.2. Representativeness of diversity of stakeholders at different levels]
Secondary	A. Climate change mitigation [A.1. Renewable energy production, storage and transportation (A.1.1 Development of marine renewable energy installations)]

Sectors/Activity involved

Offshore renewable energy

Stakeholders involved

The stakeholders involved in the OWF planning are as follow:

National level

State authorities:

- Ministry of environment (General Directorate of Water and Climate): regulation, definition of installed capacity targets for each sea basin ("façade"), launch of calls for tenders, in charge of OWF planning
- Ministry of the Sea (General Directorate of Fisheries and Aquaculture): regulation, in charge of marine spatial planning

Independent authority:

- National and local commission dedicated to public debate: in charge of organising the public debate at national and local scale

State public institutions:

- CEREMA: in charge of assessing offshore wind energy potential at a national level (mapping, etc.), contribution to public debate with mapping inputs
- RTE (public industrial operator in charge of energy transportation in France): contributing in public debate as project owner; implementation (responsible for connecting OWF to onshore electricity transmission networks).

State research institutes:

- Ocean renewable energy developers (EDF, Iberdrola, etc.): contribution to public debate as project owner.

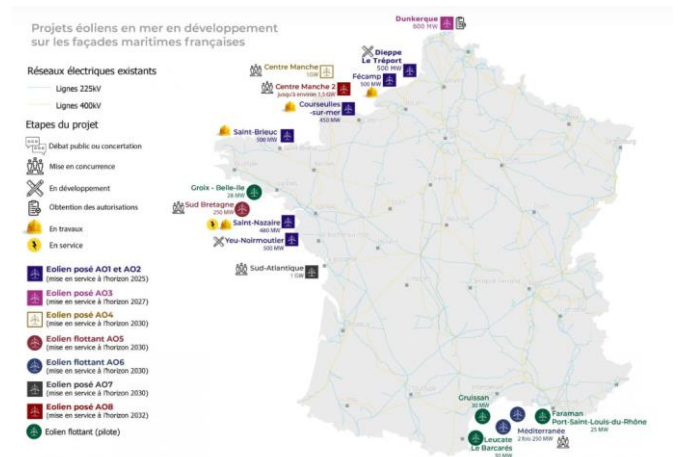
Regional level

- Maritime Sea basins Councils: consultation institution dedicated to the MSP process, bringing together stakeholders from the maritime economy sector (public agencies, professional stakeholders (fisheries, energy, etc.), trade unions, environmental NGOs).
- Regional municipalities: political lobby in public debate.
- DREAL (regional environmental authority): contribution to the public debate with environmental input, assessment of EIA carried out by OWF project owner.

Local level

- Local municipalities: political lobby in public debate.
- Citizens: consultation.
- NGOs: consultation.

Geographical scope



Map of OWF projects in the 4 French Sea Basins [Source](#)

Governance context

The first public debates on OWF projects were heavily criticised by stakeholders and local citizens: (i) lack of long-term planning for offshore wind energy (site-by-site planning), (ii) OWF projects are already pre-defined and pre-established (the public debate took place after the OWF developer had been selected, with no possibility of changing the location), (iii) lack of environmental data on the environmental impacts of OWF projects, (iv) lack of a participatory process for involving the local public in energy policy choices.

In response to these criticisms, three laws came out. The first in 2018 (ESSOC law) modified the place of the public debate in the process of implementation OWF projects. Public consultation must take place before the selection of OWF developer. As a result, the projects discussed in public debate are less predefined and less mature than before. The other two laws have enabled a shared and joint public debate between OWF planning and MSP: (i) the ASAP law (2020) allows for public consultation to define multiple OWF location on a regional scale ("maritime façade" - sea basin); the APER law (2023) allows for a single public debate on a regional scale for OWF planning in MSP, as part of the ongoing review of MSP plans.

Nowadays the consultation processes for OWF planning and MSP have been brought together in a single public debate. According to the new laws, local stakeholders and citizens should be involved in the planning of OWF in MSP plans through a single, joint public



VALUABLE PRACTICE: Public debates on offshore wind farms planning and MSP

debate at regional scale (sea basin - "maritime façade"). This public debate will take place between December 2023 and June 2024.

How this MSP practice can support the EU Green Deal

This practice supports the following aspects of EGD:

- A.1. Development of marine renewable energy installations by the acceleration of OWF deployment and through the adaptation of the legal framework in order to promote the implementation and acceptability of this new industry.
- G. Fair and just transition objectives such as G.1. Stakeholder participation and
- G.2. Representativeness of diversity of stakeholders at different levels.

This case study provides an overview of changes in consultation processes about OWF in France during the last 10 years. The forthcoming public debate on OWF planning into the MSP is expected to give local stakeholders and citizens more visibility at a regional level on the development of OWF over the next 10 years. During the debate, public is invited to express their visions on the precise location of offshore wind farms. The recent legislative developments have as main objective to increase the social acceptability of OWF, in order to meet national and European objectives concerning energy transition.

Challenges/gaps/inconsistencies still to be addressed

Despite the alignment of public participation between wind OWF planning and MSP plans, challenges remain in terms of public inclusion. The next ten years of OWF planning have only one public debate scheduled thus there is no new public debate for each OWF project. This is questionable in terms of local citizens and stakeholders inclusion in project. In addition, a common criticism raised during every OWF public debate still goes unanswered: is the lack of local public participation in the area of energy policy. The track of public debates since the beginning of the history of OWF in France shows that local stakeholders and local citizens want to discuss their energy future locally (what type of energy sources? where?) but that such local arenas for discussion do not exist. It could be useful to create such deliberative arenas in which the future of local energy will co-decide between local community and public authorities, in relation to MSP and land use planning.

Replicability /Elements which can be capitalised

- ✓ A participatory online mapping tool: In order to feed discussions and promote the inclusion of all stakeholders in debates, public agencies (e.g. CEREMA) have developed an online mapping platform for public debates as part of the development of an OWF project in the Normandie region (<https://cerema.maps.arcgis.com/apps/MapJournal/index.html?appid=199c7945c2154a24bfd8a28ee3bbd254>). Using this tool, participants into public debate defined scenarios for the location of OWF sites and OWF-free zoning, based on real data (maritime traffic, fishing zones, environmental data, etc.).

Pros: Building capacity of participants into public debate; as participants become the planners and have to deal with constraints.
Cons: non-use or limited use of the results of participatory mapping in decision-making.

- ✓ An example of public consultation in Mediterranean: Since 2013, EDF (a public electricity production company) has been developing a floating OWF project (Provence Grand Large), without having a pre-defined project by State's authorities nor a call for tenders. In the first stage of the project, EDF initiated a 2-year consultation process during which stakeholders and developers co-decided the perimeter of the OWF site (even if

the fishers had the strongest opinion on the subject). The stakeholders involved were citizens, NGOs, State authorities, fishers (and their representatives), MPA managers, ports, etc.

Pros: This public consultation is a good example for the inclusion of stakeholders from the very early stage of OWF project. It has created an arena that brings together stakeholders who were not previously talking to each other. The debate/exchanges conducted between stakeholders, reduced the conflicts and allowed everyone's opinions to be considered thus simplifying project development.

Cons: This type of consultation demands substantial human and financial resources and takes a long time to carry out. Planning aims to improve and to streamline consultation processes.

Despite the contribution of this consultation process, the acceptability of OWF projects on the Mediterranean sea basin remains a challenge, as the choice of OWF in energy policy has not been discussed locally.



VALUABLE PRACTICE: An example of a cross-border MPA (Natura2000 site)

Description

This case study concerns two marine Natura2000 sites located in Bay of Chingoudy, right on the Atlantic border between France and Spain: a Special Area of Conservation (SAC) site classified under the Birds EU Directive (2009/147/EEC), and a Special Protection Area (SPA) site classified under the Habitats EU Directive (92/43/EEC). The bay is surrounding three cities: Irun (SP), Fuenterrabia (SP), and Hendaye (FR). Despite a long collaboration between the two countries on environmental projects and the fact that the bay has the same/similar environmental characteristics across the border, these N2000 sites are managed only by the French administration. On this matter, the EU's plans call for a joint management of cross-border MPAs and promotes "cooperation in the framework of already existing tools within the European framework, such as the Natura2000 network" (AEBR and EU, 2021).

Different maritime activities take place in the bay, resulting in a complex governance structure characterized by many stakeholders and administrative and institutional differences in each country. The roadmap for these 2 sites is under preparation by the French Biodiversity Office (OFB) and a Steering Committee (SC) has just been set up. It is composed mainly by French stakeholders (local/national authorities, NGOs, users' organizations, research institutes, etc) and the two local Spanish surrounding municipalities, and will eventually include other local Spanish stakeholders. Lack of inter-state cooperation in N2000 policy and administrative & jurisdictional differences between the two Member States (MS) makes the bilateral management of the two sites quite difficult. Communication difficulties between equivalent State institutions/bodies across the border is another reason. Thus, the management of these N2000 sites is based on French mechanisms and regulations, despite the desire for cooperation from the local community (i.e. municipalities, local authorities, etc.) and local State's management bodies (OFB) and the inclusion of Spanish stakeholders in the consultations.

According to our field observations, recreational fisheries in the area are regulated through a local co-management approach based on the historic Treaty of the Pyrenees, (1659). The treaty grants historical fishing and mooring rights to the inhabitants of the 3 cross-border municipalities. In a case of implementation of regulatory measures within the perimeter of these sites, it is important to consider that this Treaty still has importance to the local community which could interfere with N2000 policy.

Practice typology

(iii) Process-related practice + (iv) zoning

Topics addressed

Main	D. Biodiversity and ecosystem protection and restoration [D.1. A coherent network of marine protected areas (D.1.5. Multi-use of sea space: combination including biodiversity and ecosystem protection and D.1.6. Coordinated, transboundary initiatives)]
Secondary	A. Climate change mitigation [A.4. Blue carbon sinks - <i>Zostera noltii</i> seagrass (A.4.1. Preserving and restoring coastal vegetation systems as tidal marshes and seagrasses accumulating "blue carbon")]
	B. Climate change adaptation [B.2 Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes]
	G. Fair and just transition [G.1. Stakeholder participation and G.2. Representativeness of diversity of stakeholders at different levels]

Sectors/Activity involved

Coastal and maritime tourism, recreational and port activities, nature protection and restoration (biodiversity), multisector and others (cross-border cooperation).

Stakeholders involved

Different groups of stakeholders are involved in the area. Management of marine N2000 sites in France is a national competency delegated to the Maritime Prefecture, representing the State at regional sea level. The implementation at regional/local level is in the hands of decentralized State authorities.

French side

Local level: territorial authorities (3 cross-border municipalities; CAPB: representative of local municipalities and current facilitator of marine N2000 sites in the area); Groups/NGOs and local research institutes are consulted and participate to the SC meetings.

Regional/county level: Decentralized State authorities coordinate the implementation of N2000 policy at a regional/county level and have main role in the decision-making processes and the co-definition of the practice (Maritime Prefecture, DDTM, DREAL); Regional research institutes are consulted for the monitoring of species and habitats.

National level: National authorities and agencies (Ministry of the environment, French Biodiversity Office (OFB) (public government body and national scientific and technical coordinator for the implementation of N2000 policy. The OFB is the main manager of these N2000 sites and is in charge of drafting the sites roadmap, implementation and regulation); IFREMER (National research center and scientific coordinator (jointly with OFB) for the implementation of N2000 marine policy).

Spanish side

Local potential stakeholders: Recreational fishing and sports association (consultation); ecological park located in Irun (monitoring, consultation); Basque research institute (AZTI) (monitoring, consultation)

National and Regional stakeholders: Ministry for the ecological transition (MITECO); Coastal demarcations (coordinates the implementation of marine N2000 policy in Spain at a national level: decision-making body, consultation).

Geographical scope

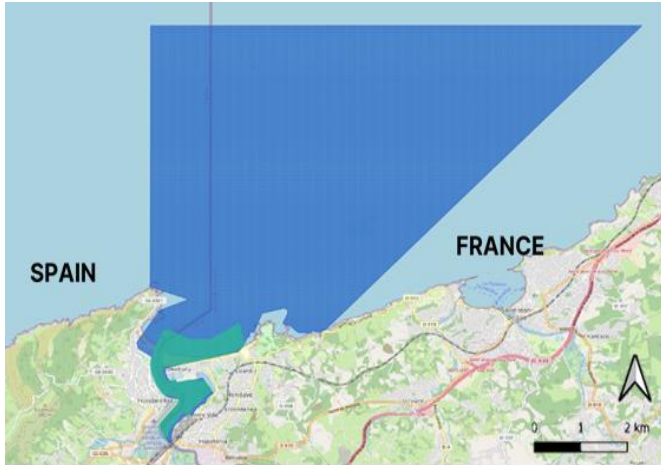
The area is located at the West Spanish-French border (Basque Country region, South-Atlantic marine sub-region) and covers two French Natura2000 MPAs:

-“Bay of Chingoudy” (342 ha): Special Protection Area, Habitats EU Directive - FR7200774.

-“Bidassoa estuary and Bay of Fuenterrabia” (9.457 ha): Special Area of Conservation, Birds EU Directive - FR7212013

Total surface: 9.799 ha.

VALUABLE PRACTICE: An example of a cross-border MPA (Natura2000 site)



©UBO

Green area: Special Protection Area;

Blue area: Special Area of Conservation

Purple line: Marine border between Spain and France.

Governance context

In France, N2000 sites are under the responsibility of the Ministry of the environment (MTES). This responsibility is delegated at regional and local levels to decentralize State authorities. All rely on the OFB (governmental body) for implementing the N2000 policy (drafting of roadmaps, site management...).

In Spain, regarding MPAs management in marine and coastal domains, there is a distinction between internal waters (competency of Autonomous Communities) and external waters (competency of the Central government). Precisely, the management of coastal MPAs can be carried out either by the Central government (centralized by the Ministry of the Ecological Transition (MITECO) through the Coastal Demarcations or the Autonomous Communities, whether the MPA constitutes a geological or ecological extension of a terrestrial protected area or is located in internal waters.

Unlike in France, marine N2000 sites are not necessarily managed at local or regional levels. Different types of stakeholders can participate and manage N2000 sites, as such as territorial and district authorities, State authorities, fishers organizations or NGO's. Preparation of the roadmaps and management of the N2000 request the participation of all of them as they share a common area.

How this MSP practice can support the EU Green Deal

The aspects in which this practice mainly supports EGD are D. Biodiversity and ecosystem protection and restoration through *D.1 A coherent network of marine protected areas* and *D.1.6 Coordinated, transboundary initiatives* through the will to protect habitats and species across the border. There is a logic behind having a co-managed protected area that focuses on environmental aspects and marine connectivity rather than borders, even though this is still difficult today. It also supports *D.1.5. Multi-use of the sea space, combination including biodiversity and ecosystem protection* through the management of marine activities in order to ensure a low environmental impact on habitats and species in the area. Additionally, *B.2. Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes* through the preservation of *Zostera noltii* seagrasses, considered to be blue carbon sinks (Sousa A.I. et al, 2019).

This is an example of a cross-border MPA in which, despite the existing collaboration between two EU MS on environmental

matters, it is still difficult to achieve a joint management of a marine N2000 sites. Administrative and jurisdictional differences and basically divergent approaches prevent an effective common management. The achievement of a joint management of cross-border valuable ecological sites seems to request the definition of a shared mechanism and the common designation of valuable ecological sites based on shared environmental aspects.

Challenges/gaps/inconsistencies still to be addressed

Limitations identified in the practice towards the achievement of EGD objectives:

- ✓ Taking the cross-border and transboundary initiatives element of the EGD: it is difficult to ensure inter-state management of MPAs as there are few examples of marine N2000 cross-border sites in the EU. National administrative systems, legislations and competencies of governance bodies vary between countries and make common management of MPA's complicated.
- ✓ Taking the Just and inclusive transition element of the EGD: Although there is a willingness of the French Administration to include and consult all relevant Spanish stakeholders, they have not been yet involved in the management process of the sites. There is still a lack of communication between local administrations and the difficulty lies mainly in finding the right interlocutors and defining which role they will play in the management process.
- ✓ Taking the multi-use of sea space element of the EGD: The presence of many activities (shipping, recreational and professional fishing, sports, ...) implies that regulations are different according to national jurisdictions. However, a good practice of common and shared management in this area is the Treaty of Pyrenees, that allows joint management of recreational fishing activities across the border.

Replicability /Elements which can be capitalised

This example illustrates the difficulties met by the two EU MS to cooperate for the protection of marine biodiversity at a cross-border level. The lack of cooperation is probably due to a misunderstanding of the administrative systems and mechanisms of each MS. Understanding these mechanisms and the governance structures of MS in order to create links between both countries' administrations is necessary. In Spain, marine biodiversity protection and MSP competences belong to a national level administration, while in France these responsibilities are decentralized through regional and local States authorities. In order to achieve a common management of these cross-border valuable ecological sites, a shared mechanism is needed. A common definition of the perimeter of the N2000 sites by French and Spanish national authorities would have allowed a country-to-country cooperation and a better co-management of the sites. To request the participation of MS at the appropriate scale level is important for the success of cross-border projects. The creation of a common Steering Committee from the beginning of the practice is also a basis for a cooperative process promoting joint cross-border consultations and concrete actions. The Treaty of the Pyrenees could lead the path to national French and Spanish authorities to implement and continue ongoing collaborations regarding marine N2000 policy.



VALUABLE PRACTICE: MPA and Fisheries activity

Description

In France, the term “Marine Protected Area” includes: national parks, natural reserves, biotope protected areas, Natura 2000 (N2000) network, Natural Marine Parks (NMP) and the areas managed under the responsibility of the Coastal heritage organisation (Conservatoire du Littoral). Natural marine parks are the most recent tool (2016) in France. France is engaged to declare 10% of its Exclusive Economic Zone (EEZ) as strictly protected Marine Protected Areas (MPA) in 2030. The transformation of the current MPAs, already mapped in the ongoing MSP documents (called Documents Stratégiques de Façade (DSF)), to strictly protecting will should appear in the future MSP documents and plans. The new strictly protected Marine Protected Areas are targeting habitats and species (such as dolphins or birds) protection from extractive activities such as trawling or longlines fishing. These strictly MPA will reduce considerably the fishing areas and fisheries industry reacted to this new decision by demanding to participate into decision making and their management.

Practice typology

(ii) Monitoring, assessment and evaluation + (iii) Process-related practice + (iv) zoning

Topics addressed

Main	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 and C.1.6 Multi-use of the sea space: combination including fisheries)].
Secondary	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.1.4. Elements that improve marine connectivity (i.e. submarine canyons, artificial reef, etc.) and D.1.5. Multi-use of the sea space: combination including biodiversity and ecosystem protection)].

Sectors/Activity involved

Fishing and nature protection and restoration.

Stakeholders involved

Related to biodiversity protection:

EU level

- DG Environment.
- DG MARE.

National level

- Ministry of Environment and ecological transition.
- General Secretariat of the Sea (under the authority of Prime Minister): it leads and coordinates the development of Government's maritime policy, proposes the decisions and ensures the implementation of the policy.
- French Biodiversity Office (public governmental body and national scientific and technical coordinator for the implementation of N2000 policy).
- National Network of managers of all type of MPA's: Capacity building of managers through the organisation of regular national meetings.
- National NGO's (e.g. France Nature Environnement).

Regional/Local levels

- Seafront (Façade) Maritime Councils
- Natural Marine Parks management councils
- Other MPA managers
- Territorial authorities
- NGO's
- Recreational activities representatives

Related to fisheries:

European level - DG MARE.

National level - Ministry of Agriculture; Secretariat of the Sea; Directorate-General for Maritime Affairs; Directorate-General for Fisheries and Aquaculture (DGAMPA); National Fisheries committee

Regional and Local level - Regional Fisheries Committees (CRPMEM); Departmental Fisheries Committees (CDPMEM); DIRM; DREAL (coordinates the implementation of N2000 policy in France at a regional scale); DDTM (coordinates the implementation of N2000 policy in France at a county scale); fishers

EU and National policies are resulting from the signature of different international or regional conventions such Ramsar, OSPAR Convention, Barcelona Convention, CBD 1992.

Geographical scope

French EEZ.

Governance context

EU legal frame - 2020: " Biodiversity Strategy 2030 - Bringing nature back into our lives" has an ambitious objective to declare 30% of EU EEZ as MPA and 10% of it as strict protected areas.

National legal frame - Two main laws (both updated regularly):

- The Act of Environment (2010).
- The Rural and fisheries act (2010).

2006: The law of National Park, Natural Marine Park and Natural Regional Parks

2021: National Strategy of Biodiversity 2030 and National Strategy for protected areas 2030.

France has 564 MPAs including overseas and 9 of them are Natural Marine Parks (MNP), all represent and important surface (3.4 million km²) and cover 33% of the French EEZ which exceeds the initial objective of the country. However, the type of biodiversity protection is not identical in all MPAs. For example, MNP allows the practice of different extractive activities like fisheries. This is also the case for N2000 sites if an environmental impact assessment study is realised. Only 1% of these MPAs are strictly protected. Following strong pressures from EU, International or national institutions and NGO's, France has to classify 10% of its EEZ as strictly protected MPAs by 2030. This decision was presented and discussed during a symposium of all EU LIFE projects, organised in France under the umbrella of OFB in 2022. During the meeting, open to all users of the sea, fishers didn't hesitate to manifest their opposition to such classification. Through the Seafront/façades Strategic Committees, fishers organisations claimed for participation to decisions impacting fishing activities. It should be noticed that fisheries organisations, thanks to their participation in the management councils of NMP, strength their ability to participate into deliberative arenas. These councils are perceived as “micro parliaments of the sea” as during meetings members share, discuss and decide about the future of the NPM concerning biodiversity, maritime heritage, culture values protection, humans activities and economic development. French NMP are giving the same attention to natural and human dimensions as their aim is to avoid conflictual situations. For example, in the Iroise Sea (Brittany region), NMP management council is seating together States' decentralised authorities, regional



VALUABLE PRACTICE: MPA and Fisheries activity

and district authorities, mayors of municipalities surrounding the park, agriculture and fisheries industries, recreative activities (divers, fishers, boats sailors), the Chamber of Commerce, the Union of seaweed processors, local and regional environmental NGO's and scientists. Decentralized administration and scientists are excluded from the vote as their role is either informative or advisory. Another reason that is motivating fishers organisations to claim is the fact that, since Natura 2000 policy has been granted with a management authority, fishermen's organizations have taken on this role. The last and not the least is fishers important capacity of nuisance. In France, fishers showed their dissatisfaction towards restrictive rules by occupying roads, harbours or administrative buildings. They always use the argument "we provide fish to feed the society" to convince the society that their actions are just.

How this MSP practice can support the EU Green Deal

The aspects in which this practice mainly supports EGD are:

D.1.5. Multi-use of the sea space: combination including biodiversity and ecosystem protection and through C.1.6 Multi-use of the sea space: combination including fisheries. The definition of MPAs locations and, if possible, of fishing areas in the 4 MSP documents will contribute to the protection of biodiversity and ensure fisheries activity and food security. Fishers organisations are mapping fishing areas to prevent grasping from other users. These mapping is realised through a national project called VALPENA coordinated by the National Scientific Research Center (CNRS) and supported by the FEAMPA. Another fishing areas mapping is realised with the use of Vessel Monitoring Systems (VMS) data. Both maps are still not yet included in the four MPS documents.

This practice also supports EGD through D.1.1. Establishment of new or enlargement of strictly marine protected areas (10% target) and definition of strict protection. The designation of the 10% of strictly protected MPAs to protect vulnerable species such as dauphin or birds, and to fulfill the objectives of the National Biodiversity Strategy 2030, avoid accidental catches and bycatch. From the beginning of the designation process fishers take a dim view of this new protection. In parallel, environmental NGOs claimed for the realisation of French commitments concerning the strictly MPAs. The integration of fishing areas into MSP documents will recognized its presence and sustain the activity.

Challenges/gaps/inconsistencies still to be addressed

Natura 2000 network and other tools targeting the protection of biodiversity are already represented in MSP documents. For some other stakeholders and sectors (eg., harbour authorities), this integration facilitated the negotiation process for the designation of vocational areas (zoning perspective of French MSP plans, including priority areas) during the first cycle of MSP documents, as many conflictual issues were discussed and solved within the NMP management councils. Fishers are supporting the implementation of MPA's and Natura 2000 because they contribute to restore the marine ecosystem and support marine resources status and often they are managers of N2000 sites. Fishing areas are unfortunately not appearing in MSP documents despite the different available maps and fishers are fearing their appropriation from others users.

Transformation of N2000, until now targeting conservation of biodiversity and practice of fisheries activity, to strictly MPAs, will create tensions with the fishing industry. For instance, the transformation of a portion of N2000 site called "Celtic Seas-Talus du Golfe de Gascogne", located on the limit of French EEZ in Bay of Biscay, to a strictly protected MPA. This future strictly protected MPA targets the protection of birds and bottlenose dolphins (*Delphinus truncatus*) overwintering in the area with the objective to avoid accidental catches. This future strictly protected area should

be validated in the next French MSP documents and maps of two seafronts (South Atlantic and North Atlantic-West Channel façades). This means the end of fishing activities in that portion of the N2000 site which will impact on French, Spanish, Irish, Belgium and other fleets. The question here is to know how this decision will be legitimated towards French fishers and how this French decision will be accepted by Member States fleets. Which deliberative arena will be used: OSPAR, NEAFCA or fisheries Advisories Councils? Which other fleets will be impacted with the deployment of French fleet into others areas of French EEZ, as they are not delimited in the MSP plans?

Replicability /Elements which can be capitalised

- ✓ 10 % of strictly protected MPAs should be discussed within deliberative arenas, taking the example of Marine Natural Parks (MNP) management councils to be accepted by all. This example can be replicated in other management councils regarding MPAs.
- ✓ The transnational MPA should find the best deliverative arena in a way to convince all users to comply on measure taken by one MS
- ✓ The example of the crossboarding Natura 2000 (see Fact Sheet) illustrates well the difficulties to manage in common protected areas.
- ✓ Is North East Atlantic Fisheries Commission (Regional Fisheries Organisation) or the Advisory Councils of fisheries (North West Atlantic and Atlantic) the best place to share information and convince the fleet of other EU MS to comply to the rules applied by France?



5.3. Annex III. Report of the workshop on the exchange of valuable practises



MILESTONE 7

Workshop on the exchange of valuable practices





Table of content

- List of Abbreviations** 3
- List of Tables** 3
- 1. Introduction** 4
- 2. Structure/methodology of the workshop** 4
- 3. Description of the action** 5
 - 3.1 Welcome and workshop opening 5
 - 3.2 Working sessions 5
 - 3.2.1 Session 1: Valuable Practices in Sustainable sea-food production 5
 - 3.2.2 Session 2: Valuable Practices in Biodiversity and ecosystem protection and restoration ... 7
 - 3.2.3 Session 3: Valuable Practices in Climate change mitigation 8
 - 3.2.4 Session 4: Valuable Practices in Fair and Just Transition 9
 - 3.2.5 Session 5: Valuable Practices in other topics 11
 - 3.2.6 Session 6: Challenging practices 12
 - 3.3 Concluding remarks 13
- Annex I – Agenda of the event** 14
- Annex II – Presentations** 19
- Annex III – List of participants** 56



List of Abbreviations

EGD	European Green Deal
EMMA	Ecologically significant marine underwater areas
GIS	Geographic Information System
HPA	High Potential Areas
MGI	Marine Green Infrastructure
MPAs	Marine Protected Areas
MSFD	Marine Strategy Framework Directive
MSP	Marine/Maritime Spatial Planning
NGOs	Non-Governmental Organizations
N2K	Natura 2000 network
OECM	Other Effective area-based Conservation Measure
OWF	Offshore Wind Farms
POEM	Spanish Maritime Spatial Planning Plans (for its initials in Spanish)
PSSA	Particularly Sensitive Sea Area
SECA	Sulphur Emission Control Area
VPs	Valuable practices
WP	Work Package

List of Tables

Table 1. Information summarized from post-it notes during Session 1.	6
Table 2. Information summarized from post-it notes during Session 2.	7
Table 3. Information summarized from post-it notes during Session 3.	8
Table 4. Information summarized from post-it notes during Session 4.	10
Table 5. Information summarized from post-it notes during Session 5.	11
Table 6. Information summarized from post-it notes during Session 6.	13

1. Introduction

Within the framework of Task T3.1 *Sharing valuable practices about MSP-EGD integration* (WP3), aimed at achieving the exchange of lessons learned on the integration of different aspects of the European Green Deal (EGD) in each of the Maritime Spatial Planning (MSP) plans of the project consortium countries, a workshop has been conducted to share valuable practices (VPs) among partners. This workshop on the exchange of valuable practices aimed to explore and identify VPs in the different member countries of the project, facilitating collaborative discussions among the team partners.

In addition, this event was also used as an opportunity to hold the 3rd Steering Committee meeting of the project on the 24th November.

This report presents in a descriptive way the actions conducted during the workshop on exchange on valuable practices and share obtained preliminary results. The processed results are included in the main body of the deliverable 3.1 as part of the analytical content.

2. Structure/methodology of the workshop

The workshop was planned as a full working day including dynamic sessions about different EGD topics. Each session was led by partners who had not specifically developed the VPs presented in the respective topics. This approach aimed to foster in depth analysis of the VPs from other countries, enhancing a more efficient and diverse discussion among participants.

The methodology of the workshop involved short presentations (10-15 minutes) followed by interactive discussions (45-50 minutes) motivated by the use of post-it notes to answer specific questions such as "*How is this EGD topic addressed in your country?*", "*Can these VPs be complementary?*", and "*Challenges/gaps still to be solved*". This approach allowed partners to contribute their thoughts, experiences, and insights effectively, stimulating comprehensive discussions and an active exchange of ideas.

The seminar was structured into six working sessions, five of them focused on different EGD topics and a final session focused on challenging practices:

- Session 1: Valuable Practices in Sustainable sea-food production
- Session 2: Valuable Practices in Biodiversity and ecosystem protection and restoration
- Session 3: Valuable Practices in Climate change mitigation
- Session 4: Valuable Practices in Fair and Just Transition
- Session 5: Valuable Practices in other topics
- Session 6: Challenging practices

The sessions dedicated to different EGD elements aimed to facilitate comparisons among the valuable practices focused on the same topic, as it was more relevant than conducting comparisons based on individual countries. Throughout each session, the presentation covered a set of components, including: comprehensive cross analyses of valuable practices, methodologies employed, the relationship of these practices to the MSP process, planning phase insights, identified challenges, and considerations regarding replicability and country-specific aspects.

The session on challenging practices aimed to further understand VPs that were more difficult to categorize under the topics of the previous sessions as they presented experiences showcasing practices that “have not worked” as expected, thus setting the basis for the design of new actions within the MSP framework.

The agenda of the event and the different presentations of the sessions are available in [Annex I](#) and [Annex II](#), respectively, while the list of participants can be consulted in [Annex III](#).

3. Description of the action

3.1 Welcome and workshop opening

During the welcome and workshop opening, María del Carmen García Martínez, Director of the Oceanographic Center of Malaga of the Spanish Institute of Oceanography (IEO-CSIC), extended a warm welcome to all participants.

3.2 Working sessions

3.2.1 Session 1: Valuable Practices in Sustainable sea-food production

The initial session was presented by the Finish partner centered on defining cross analyses of three valuable practices:

- *Coordinating zoning for aquaculture areas and MSP-Italy;*
- *Exploring potential for allocation of offshore aquaculture areas and their integration in MSP-Bulgaria; and*
- *High Potential Areas (HPA) for aquaculture-Spain.*

Results of the post-its session can be seen in Table 1.

Table 1. Information summarized from post-it notes during Session 1.

Session 1 - Valuable Practices in Sustainable sea-food production				
How is this addressed in your country?				
Latvia		France		
Incorporates data on crucial fishing areas to design other sea uses in the Latvian MSP. Lacks zoning for aquaculture but offers a list of conditions and recommendations.		Integrates existing aquaculture units into MSP plans. Integrates local planning tools for potential aquaculture areas, including environmental assessments (e.g. Natura 2000).		
Can these VPs be complementary?				
Latvia		France		
In the 2 nd cycle of MSP, Latvia plans to suggest aquaculture zoning, with potential development also in other areas.		Examines compatibility between uses and potential learning opportunities. Considers multiple governance levels. Considers scale for action as a planning entry point. Explores synergies between fishing/aquaculture and Natura 2000 (N2K) network. Considers technology and interconnected themes.		
Gaps and challenges				
Aquaculture				
Latvia	France	Finland	Bulgaria	Spain
Concerns about pollution. Sensitive areas to pollution coinciding with suitable aquaculture zones.	Complex multi-level governance.	From regional to national levels: will, zonation, shared responsibility. Need for start-ups and value-chain development. Absence of a "nutrient compensation" system due to legislation gaps.	Assessment of preconditions for new zone allocation. Use of modeling approaches and new technologies. Early involvement of sea users. Overlaps with Marine Protected Areas (MPAs). Lack of high-resolution geospatial data.	Complex zoning into a unified framework. Limited participation at local scales.
Fishing				
France		Italy		
Variability in definitions at different administrative levels.		Undefined sustainable fisheries and value chain. Lack of guidance for fishery compatibility with nature protection (N2K). Limited knowledge on small-scale and spatial distribution of recreational fisheries. Limited capacity of MSP plans to address sustainable fisheries.		

3.2.2 Session 2: Valuable Practices in Biodiversity and ecosystem protection and restoration

The subsequent session focused on analyzing other three valuable practices by the Latvian partner on:

- *Prioritizing marine areas for nature protection-Italy;*
- *Delineation of ecologically significant marine underwater areas (EMMA) in the Finnish MSP plan-Finland; and*
- *Zoning for biodiversity conservation-Spain.*

Results of the post-its session can be seen in Table 2.

Table 2. Information summarized from post-it notes during Session 2.

Session 2 - Valuable Practices in Biodiversity and ecosystem protection and restoration				
How is this addressed in your country?				
France				
Mapping "environmental important areas" based on Marine Strategy Framework Directive (MSFD) and MPAs reflected in MSP plans.				
Can these VPs be complementary?				
Italy				
Identified practices are seen as complementary tools to strengthen natural conservation in MSP. Opportunity: definition of shared criteria to identify "areas of attention" for nature protection within MSP.				
Gaps and challenges				
Competences				
Latvia	Italy	Finland	Bulgaria	Spain
MSP does not establish MPAs but offers suggestions for possible extensions but studies are needed.	Lack of integration MPA- Other Effective area-based Conservation Measure (OECM) designation- MSP.	Role of MSP in defining MPAs. Unclear governance structures.	No allocation of new or extended MPAs in MSP.	MSP lacks competence to declare MPAs.
Research				
Latvia	Italy			
5 priority nature investigation zones restricting activities until studies completed LIFE REEF project for MPAs.	Limited spatial coverage of data.	No mandate to fund research for MPA designation (permanent programs needed).		
Management				
Latvia	France			
Relies on EU Marine Strategy as primary knowledge source.	MPAs as management tools beyond sensitive areas, requiring ecological/socio-economic data.	MSP plan to incorporate new MPAs but lacks clarity on compensations for existing or emerging sectors.		

Table 2. (continued).

Stakeholders
Finland
Discussing protection goals and engaging stakeholders within MSP. Focusing on underwater nature values at local and regional levels to integrate these values into all actions with systemic thinking.

3.2.3 Session 3: Valuable Practices in Climate change mitigation

This session involved a comprehensive exploration of four valuable practices by the colleagues from Bulgaria about:

- *Delineation of potential areas for offshore wind farm development in the Finnish MSP plan-Finland;*
- *ELWIND offshore wind park development - experience about off-shore wind energy project implementation in cooperation with Estonia-Latvia;*
- *Definition of High Potential Areas for Offshore Wind Farms (OWF) in Spanish MSP-Spain; and*
- *From energy transition to spatial reconfiguration into ports-France.*

Results of the post-its session can be seen in Table 3.

Table 3. Information summarized from post-it notes during Session 3.

Session 3 - Valuable Practices in Climate change mitigation		
How is this addressed in your country?		
Latvia	France	Italy
MSP plans consider five energy zones for Offshore Wind Farms.	OWF are a primary focus of MSP. A joint public debate between OWF and MSP is planned in the new MSP process at a sea basin level.	Energy efficiency in ports, maritime transport and fishing boats included in MSP plans as measures. OWF are not yet addressed but are part of the ongoing process.
Can these VPs be complementary? Opportunities for replicability?		
Italy		
Practices appear complementary; the possibility of defining common criteria for OWF needs further study.		

Table 3. (continued)

Gaps and challenges					
Latvia	France	Italy	Finland	Bulgaria	Spain
Land-sea interactions in wind farm zones and landscapes. Technological progress affecting criteria. There are no specific criteria for the total size of the area where OWF could be located or for the amount of energy that should be generated in the offshore area.	Space limitation within ports for OWF. Overlooking safety and shipping issues. Interaction between OWF and military areas outside MSP scope.	Lack of fair institutional dialogue.	Evaluation of cumulative impacts including cross-border dimension. Connectivity and land-sea interactions. Role of MSP in hydrogen production/transport solutions. Capacity of ports in relation to OWF. Representing energy production in MSP plans.	Lack of legislation and infrastructures. No planned zones for future wind farms. Competition for space (Multi-use?).	Role of MSP competent authority. Lack of proper legislation and implementation. Absence of trade-off assessment and compensation methods. Lack of criteria for multi-use management. Limited stakeholder involvement. Data quality issues.

3.2.4 Session 4: Valuable Practices in Fair and Just Transition

In the fourth session, the Italian partners presented three valuable practices:

- *Public debates on offshore wind farms planning and MSP-France;*
- *Co-creation of scenarios for the future of maritime areas (together with stakeholders)-Finland;* and
- *Balancing social, economic and environment interests in offshore wind park development-Latvia.*

Results of the post-its session can be seen in Table 4.

Table 4. Information summarized from post-it notes during Session 4.

Session 4 - Valuable Practices in Fair and Just Transition				
Have any of these elements been considered in your country?				
Latvia	France	Italy	Finland	Spain
Establishment of a Maritime and Coastal Spatial Planning Coordination Group for stakeholder engagement.	Objective of public participation in all MSP plans. Initiative in the South Atlantic MSP to encourage diversity in maritime professions.	Need for socio-economic impact assessment in MSP plans. Consistency in planning approach and level of detail. Involvement of regions due to governance and legal provisions.	MSP as a tool engages the wider public. Regional Councils involved in MSP bring out the regional interests.	Development of the public Geographic Information System (GIS) portal INFOMAR. Stakeholder participation through informal consultation processes, although Maritime Spatial Planning Plans (POEM) measures include stakeholder engagement.
Opportunities for transferability and improvement in the ongoing MSP process?				
Latvia	France	Italy	Finland	Spain
Structured and regular communication improvement in the Maritime and Coastal Spatial Planning Coordination Group.	Non-spatial approach in MSP for gender fairness. Considering training skills and planning for the maritime community.	Promotion of fair and just transition in maritime industry. Development of mutual citizens/state trust. Scenario analysis for MSP.	Methods of engagement: compared to who is engaged (which can change nationally).	Adaptation of scenarios from Finland as a good approach but there are limitations in human resources and budget.
Areas of fair and just transition not covered yet by our MSP plans				
Latvia	France	Italy	Finland	Spain
For now, there is concentration on different government levels, sectors, Non-Governmental Organizations (NGOs) without attention to stakeholder gender, age, or similar aspects.	Intergenerational justice. Youth participation without involvement of future generations.	Incomplete alignment between vision/strategic objectives with measures.	Comprehensive evaluation of impacts on all stakeholders. Evaluation of gender and age balance. Systematic assessment of capacity of planning to influence decision-making.	Gender balance considerations, questioning the adequacy of the framework and scale for strategic provisions.

Table 4. (continued).

Gaps and challenges					
Latvia	France	Italy	Finland	Bulgaria	Spain
Reaching interested stakeholders. Information exchange.	Inclusivity improvement. Scale determination. Gender equity integration in MSP.	Limited stakeholder engagement. Need for understanding stakeholder mapping.	Engagement of young professionals. Lack of wider media recognition of MSP.	Incomplete stakeholder engagement. No gender balance consideration. Lack of proper articulation of the MSP role.	Late stakeholder inclusion in advanced process.

3.2.5 Session 5: Valuable Practices in other topics

This session was dedicated to four valuable practices on various topics presented by Spanish partners:

- *Zoning sources and sinks of sands in MSP: a need for climate change adaptation-Italy and*
- *Definition of elements that conform the Marine Green Infrastructure (MGI) in the POEM-Spain about Climate change adaptation;*
- *Pollution prevention from land-based activities and sources-Bulgaria on Zero pollution; and*
- *Multifunctional zones and multi-use of the sea space-Bulgaria regarding the Multi-use of space.*

Results of the post-its session can be seen in Table 5.

Table 5. Information summarized from post-it notes during Session 5.

Session 5 - Valuable Practices in other topics		
Are there any other VPs?		
Climate change adaptation		
Latvia	France	Finland
Consideration of climate-sensitive biodiversity and ecosystems protection measures for high erosion risk in MSP.	Emphasis on coastline management and erosion. Anticipation of fish stocks distribution and future diseases due to climate change.	Focus on ecological connections, land-sea interactions, EMMA support.
Multi-use of space		
France	Italy	Finland
Emphasis on synergies between users and sectors in MSP plans. References to multi-use vision and actions in MSP plans.	Addressing multi-use between fisheries, aquaculture, tourism, OWF in MSP plans.	Qualitative criteria promotion for multi-use in OWF auctioning. Transition from passive to active promotion of multi-use (future VP under Task 3.2).

Table 5. (continued).

Zero pollution		
Latvia	France	Italy
MSP highlights the need to reduce nitrogen and phosphorus load in the Gulf of Riga. Strict recommendations for aquaculture in the area.	Focused on preventing pollution at the source. Citizen science initiatives for pollution remediation. Governments agreed to the Establishment of Sulphur Emission Control Area (SECA) in the Mediterranean.	Studies on maritime transport impact and spatial measures. Measures to reduce pollution and waste collection in ports. Regional beach clean-up efforts. Marine litter pollution prevention.
Circular economy		
France	Italy	
Measures related to vessels dismantling and dredging sediment recycling.	Measures related to ship and boat repairing, fishing, aquaculture gears.	
Why do we not have a VP in...?		
Climate change adaptation		
Latvia	Finland	Bulgaria
Knowledge gap in elements considered under climate change adaptation.	Not presented as a central topic during the first planning cycle.	No areas identified for future climate change impacts in MSP.
Multi-use of space		
Latvia		
Lack of appropriate regulations for multi-use development.		
Zero pollution		
Finland	Bulgaria	Spain
Limited tools to include it within MSP scope. Integration with MSFD in the future.	Lack of funding for small coastal municipalities to install wastewater treatment plans.	Out of the MSP scope. Regulating wastewater treatment considered but only descriptively.
Circular economy		
Finland	Spain	
MSP only addresses it on a general objective level.	Out of the MSP scope. Limited competences in sector regulations.	

3.2.6 Session 6: Challenging practices

The final session included a review of two valuable practices identified by French colleagues as practices that did not have the expected results and from which, lessons learnt can be extracted. The rationale behind this consideration is to learn from them and set the basis for the design of new actions (related to Task 3.2.). These valuable practices presented by the French partners were:

- *Development of Marine cultures (shellfish and algae); and*
- *An example of a marine MPA (Natura 2000 site) in a cross-border area.*

Results of the post-its session can be seen in Table 6.

Table 6. Information summarized from post-it notes during Session 6.

Session 6 – Challenging practices
Gaps and challenges
France
Maritime transport International regulations “Limits” of MSP tools for the or the Strait of Bonifacio as Particularly Sensitive Sea Area (PSSA)

3.3 Concluding remarks

The discussions centered around focal questions addressing the potential implementation in each country. These questions included how the practices were addressed in their respective countries, the potential complementarity of these practices, an examination of what generally works and can be streamlined, and finally, a round of answers/reflections and open discussions. This structured approach ensured detailed and comprehensive exploration of valuable practices across different dimensions while facilitating a deep understanding of country-specific perspectives and insights.

The use of the post-it notes in each session significantly aided in collecting and organizing collective thoughts and highlighted key aspects, enhancing the productivity and outcome of the discussions.



Annex I – Agenda of the event

MSP-GREEN

MS7 Workshop on the exchange of valuable practices - Málaga, Spain, 22nd to 24th of November 2023

The workshop focuses on the results of the task on “Exchanges of valuable practices” (Task 3.1), which aims to exchange lessons learned on the integration of different aspects of the EGD in each of the MSP plans. The results of the workshop will be added to the deliverable (D3.1) and the final report will be presented as Annex to such deliverable.

Program:

Wednesday 22nd of November - Arrival and informal dinner

20:00 Self-paid informal dinner (reservation for those who wish to participate according to the response in the Google Form) at [Batik](#) at Alcazabilla, 12.

Thursday 23rd of November - Workshop at [Colegio Oficial de Arquitectos de Málaga](#) at Palmeras del Limonar, 31.



08:30 - 09:00 Registration

09:00 - 09:15 Workshop Opening and Welcome Address

Dr. María del Carmen García Martínez- Director of the Oceanographic Center of Malaga.
María Gómez-Ballesteros, Technical and Advising Deputy Director, IEO, CSIC.

WORKING SESSIONS

09:15 - 10:15 Session 1: Valuable Practises in Sustainable sea-food production

VPs: I2, B1, SP3

Chair: Vesa Arki, Regional council of Southwest Finland, Finland

- Presentation (10')
- Discussion – post-it (50')

10:15 - 11:15 Session 2: Valuable Practises in Biodiversity and ecosystem protection and restoration

VPs: F1, I1, SP4

Chair: Marta Štuba, Ministry of Environmental Protection and Regional Development (MoEPRD), Latvia

- Presentation (10')
- Discussion – post-it (50')

11:15 - 11:35 Coffee break

11:35 - 12:35 Session 3: Valuable Practises in Climate change mitigation

VPs: L1, F2, SP1, FR1

Chair: Margarita Stancheva, Center for Coastal and Marine Studies, (CCMS), Bulgaria

- Presentation (10')
- Discussion – post-it (50')

12:35 - 13:35 Session 4: Valuable Practises in Fair and just transition

VPs: L3, FR3, F3

Chair: Fabio Carella, Università di Venezia (Iuav), Italy

- Presentation (10')
- Discussion – post-it (50')

14:00 - 15:00 Lunch break

15:00 - 16:00 Session 5: Valuable Practises in other topics – Climate change adaptation, Zero pollution, Multi-use of space

VPs: I3, B2, B3, SP2

Chair: M. Rosario Martín-Hervás, Spanish Institute of Oceanography (IEO, CSIC), Spain

- Presentation (15')
- Discussion – post-it (45')

16:00 - 17:00 Session 6: Challenging practises – *Setting the basis for the design of new actions (related to task 3.2.)*

VPs: FR2, FR4

Chair: Katia Frangoudes, Université de Bretagne Occidentale (UBO), France

- Presentation (10')
- Discussion – post-it (50')

17:00 - 17:20 Coffee break

17:20 - 18:30 Time reserved for WP coordination:

- Discussion regarding the structure and contents of the index D3.1.
- Discussion regarding task 3.2.

20:30 Organised dinner at [Bodega Bar-El Pimpi](#) at Granada, 62.

Friday 24th of November – Steering committee and field trip

09:00 - 11:00 3rd Steering Committee Meeting - [link](#) to the meeting

The 3rd Steering Committee is organized by CORILA and IUAV in Malaga, back to back with MS7 Workshop on the exchange of valuable practises. The meeting is called to verify the good advancement of the project and if variation in action or budget are needed.

Floor coordinator: Folco Soffiatti IUAV

CORILA: Greetings and general updates

WP1 Advancement

Pierpaolo Campostrini - Barbara Giuponi - Martina Bocci

WP2 Advancement

Alexandre Cornet - Vesa Arki - Martina Bocci

WP3 Advancement

Cristina Cervera Núñez

WP4 Advancement

Emiliano Ramieri – Martina Bocci

WP5 Advancement

Annija Daneberga - Folco Soffietti

Comments from Advisory Board

Budget aspects

Next steps, recap of calendar

11:00 - 11:20 Coffee break

12:00 - 15:00 Field Trip

Guided tour of:

- The Port of Malaga. Meeting point: entrance of the [Port Authority](#) at Av. Manuel Agustín Heredia, 2.
- The Oceanographic Center of Malaga.

Locations

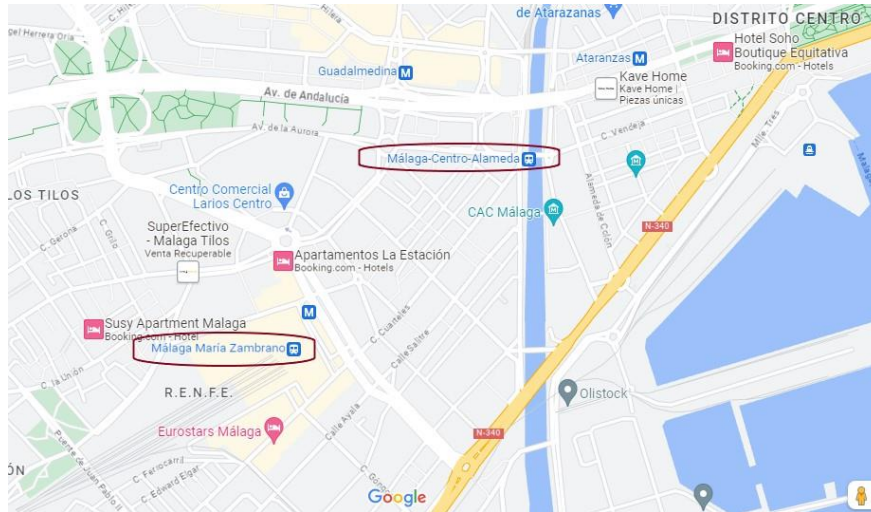
To see the whole map of locations, [click on this link](#).

Travel in Spain

➤ [To Malaga city center](#)

- If you arrive at Malaga airport you will need to either take the [suburban train C1-line](#) which takes about 30 minutes, or take the [bus line A](#) to the city center which is a slower option, about 45 minutes.
- If you decided to take the suburban train in Malaga, you can find the schedule here: <https://www.renfe.com/es/en/suburban/suburban-malaga/timetables>

You need to get a ticket at the self-service machines that will be near the suburban train station at the airport. You can choose the ticket to Málaga María Zambrano or Málaga-Centro-Alameda as per your convenience:



You can also find a map of the suburban train stops here: <https://www.renfe.com/content/dam/renfe/es/Viajeros/Secciones/Cercanias/Mapas/pdf/malaga-2023.pdf>

If you decided to take the bus, you can find the schedule and a map here (choosing “line A: Paseo del Parque – Aeropuerto-Express” option): <https://www.emtmalaga.es/emt-classic/home.html?lang=en>

Alternatively, you can take a taxi from the airport to the city center, which takes approximately 20-40 minutes (depending on traffic), and costs around 25-30 euros.

➤ To workshop venue

- To arrive at the workshop venue (Colegio Oficial de Arquitectos de Málaga), **bus line 32** provides the closest option. To view the stops for line 32, the round-trip route in the map and its schedule, please click here: <https://www.emtmalaga.es/emt-mobile/informacionLinea.html?codLinea=32.0&sentido=1>
- Additionally, there are other bus lines connecting from the city center, which you can explore by clicking here: <https://www.emtmalaga.es/emt-mobile/home.html>
- Alternatively, you can choose to take a taxi, which will take approximately 5 minutes from the city center.

Nevertheless, if you require assistance in selecting the option that best suits your needs, please do not hesitate to let us know.

Annex II – Presentations



Session 1

Sustainable seafood production

Vesa Arki, Mari Pohja-Mykrä,
Regional council of Southwest Finland

MARITIME SPATIAL PLANNING



Regional Council of Southwest Finland





Co-funded by the European Union

Session 1: Valuable practices in Sustainable seafood production

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
Coordinating zoning for aquaculture areas and MSP - Italy	Measures + Zoning <ul style="list-style-type: none"> Biodiversity and ecosystem protection and restoration Multi-use & Sustainable Blue Economy 	<p style="text-align: center;">Yes,</p> Aquaculture priority areas from regional Allocated Zones for Aquaculture (AZA) plans. Ongoing regional AZA process integrated in future MSP cycles.	Coastal regions are responsible for the identification of AZAs (following national guidelines) MSPs objective "promoting high quality aquaculture, and sustaining the process of AZAs identification" (+ other).	How the selection of AZAs will be "integrated" within MSP plans.
Exploring potential for allocation of offshore aquaculture areas and their integration in MSP - Bulgaria	Measures + Zoning <ul style="list-style-type: none"> Multi-use & Sustainable Blue Economy WFD and MSFD 	<p style="text-align: center;">No (Yes for process?),</p> The plan provides recommendations for sustainable aquaculture development. No area allocation for new onshore or offshore farms (strategic document). Case study of future potential: suitable areas for offshore aquaculture (principles for defining)	The aquaculture zoning is the responsibility of other authorities at local and national levels. Its is not clear what will be coordinated with the MSP process (not the responsible authority).	Competition for space (inc. nature), lack of knowledge on multi-use, location settings and changes in it, lack of scientific specificity The unclear role of the MSP plan in guiding aquaculture
High Potential Areas for aquaculture - Spain	Measures + Process-related practice + Zoning <ul style="list-style-type: none"> Climate change adaptation Biodiversity and ecosystem protection and restoration Multi-use & Sustainable Blue Economy 	<p style="text-align: center;">Yes,</p> High potential areas (HPA) for aquaculture development identified and designated in the POEM → Guiding location planning in the regions (also outside HPAs) Criteria to address interactions with other sea uses (from POEMs?)	Planning and management is the responsibility of the Autonomous Communities (following national guidelines) Responsible ministry in charge of regulating aquaculture at the strategic level.	Homogeneity in the ways the regions zone the ZICM / ZIA Integration of ZICM and ZIA into a common framework and common categories at the national level (HPA).

Five points from the comparisons of valuable practices

1. Aquaculture (fish, mussel, seaweed farming) **and Fishing**
2. Governance structure: National guidelines and regional/local management
→ The role of MSP in this process (strategic objective setting and/or measures for integrating regional work?)
3. Definition of the criteria and method for identifying priority areas for sustainable development of aquaculture.
4. Multi-use and aquacultures interaction with other sea uses and the environment (onshore and offshore)
5. Stakeholder engagement (from national agency to aquaculture developers)
→ Involvement in the planning process / MSP as a forum for discussion: who, when, how?



Countries whose VPs have been presented, could provide more information or make comments to the presenters interpretation of the VP



How this EGD topic is addressed in MSP in your country?

Aquaculture (fish farming)

Potential areas for fish farming with a generalised strategic map marking. Suitable areas can also be located outside of the indicated areas.

- National guidelines, objective setting and permitting by other authorities
- Areas derived from national location optimization analysis

The starting point: the potential burden on the sea and marine environment is as minimal as possible

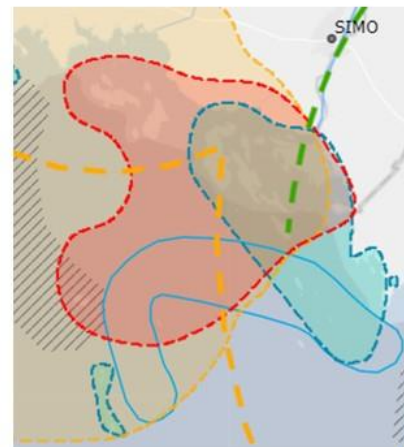
- Eutrophication → objectives and measures related to fish farming as a point source of nutrients.
- Conflict in objectives: eutrophication vs increasing production



AQUACULTURE



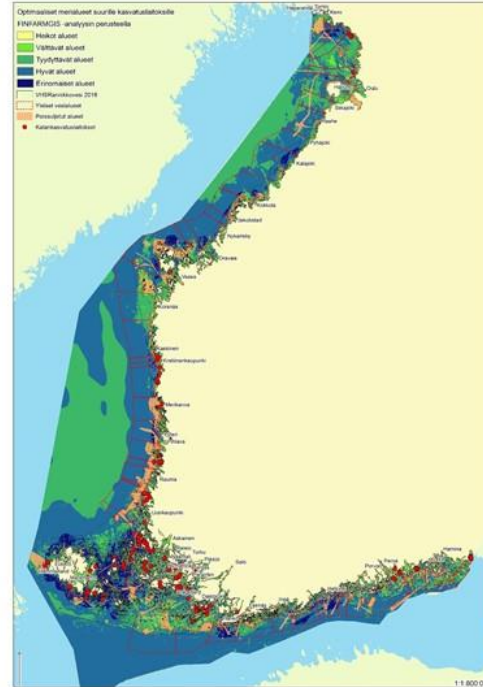
- The marking indicates the potential areas for further fish farming development. The modeling (FINFARMGIS) produced by the Natural Resources Institute Finland has been utilised when identifying areas.



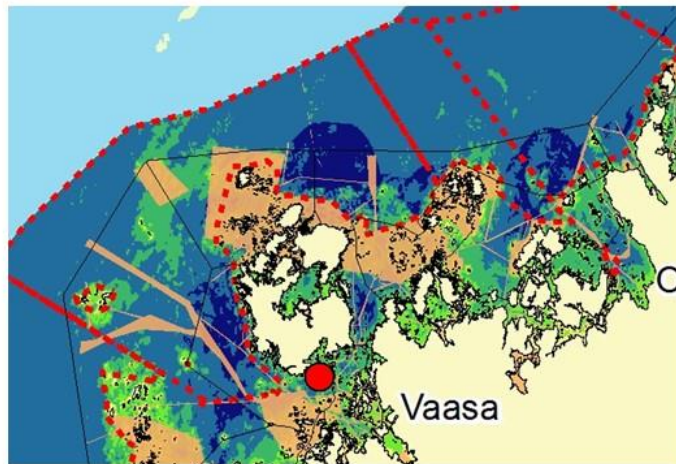
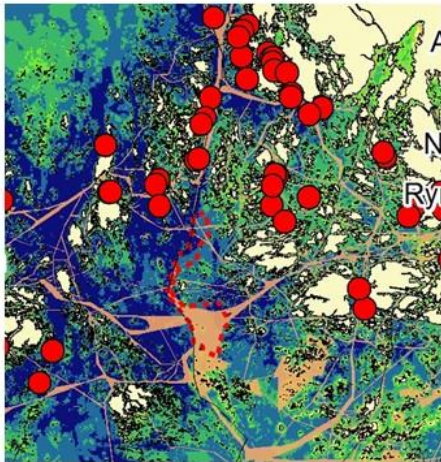
The FINFARMGIS model

Location optimization takes the following criteria into account

1. **Exclusive criteria:** fairways, military areas, national parks, wrecks, cables, private and state nature reserves
2. **Ecological guiding criteria:** Natura SPA areas, Natura SCA areas, sea area openness, ocean current, ecological status classification, depth, underwater nature peak areas (a-chlorophyll, other fish farms load)
3. **Social guiding criteria:** recreational facilities (recreational areas and fishing areas)
4. **Criteria that guide the economy:** distance from the shore (high-efficiency production areas, estimate of sustainable production, fish disease risk)



Free and open data for commercial and non-commercial use



Which could be the barriers when trying to implement any of these VPs in your country?

Why aquaculture is presented as it is in the Finnish MSP?

Natural limitations and challenges

- The Finnish sea area is naturally diverse with different conditions (ice coverage, island and islets, salinity, shallowness, land uplift coast)

Planning and politics

- The Finnish MSP is accepted by eight Regional Assemblies: Regions can have different agendas and values (prioritization and harmonization). Planners work in collaboration has some effect.

Authorities' influence

- Relationships to the authorities, different interpretation of the permitting process, values and attitudes toward different sectors



How this EGD topic is addressed in MSP in your country?

Fishing

- Potential areas for coastal net fishing and open sea trawl fishing in terms of professional fishing (how about recreational fishing?) → From data to area delimitation (inc. generalization)
- Objectives for supporting sustainable fishing, protection of breeding areas, continuity of the fishing profession among other issues.
- Use and management plans related to the fishery areas produced by other authorities, which include more specific regulations and restrictions for the areas.
- Annual and seasonal changes and the impacts of climate change



COLLABORATION WITH FISHERS

New stakeholder group for MSP planners: how to support the well-being of the sector

Regional and national actors were easy to reach and involve. A previously invisible sector became very visible in the plan.

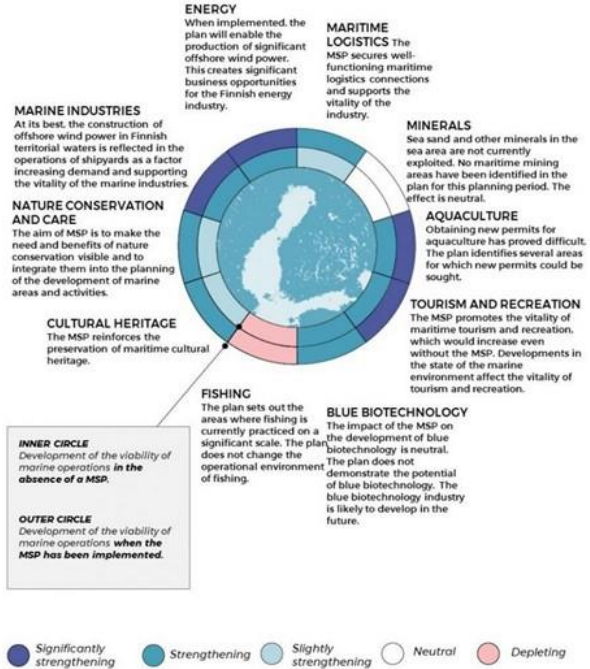
The impact assessment shows that the Plan does not support the development vision of the fishing sector →

Case study: Engaging local fishermen. We measured the level of motivation and trust of fishing stakeholders at the beginning of the MSP cooperation process. And then again after the plan was approved. Is it worthwhile to implement a collaboration process with local people?

Advanced spatial economic modelling is needed, taking into account value chains. And to highlight the links with other maritime sectors, such as cultural heritage, tourism and recreation.



Case study: Meetings with local-level fish-stakeholders to collect and validate fishing data in Satakunta Region in 2019.



Participatory session

Group discussion (by countries) to answer the questions (10') – writing post-its

- How this EGD topic is addressed in MSP in your country?
- Can the VPs be complementary?
- Which could be the barriers when trying to implement any of these VPs in your country?

Participatory session

Exchange with the plenary – stick post-its in the panels (40')

- Governance structure and the role of MSP
- Multi-use and interaction with other sea uses (inc. nature)
- Definition of potential/suitable areas for aquaculture
- Stakeholder interaction
- What to do with fishing?
- Something we missed?

 MSP
GREEN **The Sea horizon, is green.**

Let's exchange on how this can be!



Session 2

Biodiversity and ecosystem protection and restoration

Marta Štuba, Ministry of Environmental Protection and Regional Development of Latvia



Session 2: Valuable practices in Biodiversity and ecosystem protection and restoration

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
Ecologically significant marine underwater areas (EMMA) in Finland	Zoning			
Zoning areas for environmental and natural resources protection (Italy)	Zoning			
Zoning for biodiversity conservation (Spain)	Measure; Process - related practice (i.e. creation of working groups); Zoning			



**Session 2:
Valuable practices in Biodiversity and ecosystem protection and restoration**

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
Ecologically significant marine underwater areas (EMMA) in Finland	Zoning	Data collection; Identification of areas with significant underwater natural values (EMMAs; National and regional workshops. VP - part of the 1st cycle of MSP.	MSP in Finland does not have the mandate to set up new protected areas. The existing areas are shown in the background information of the plan.	The approach is heavily dependent on the field data. Only areas where sufficient field observations were available could be defined as EMMAs. The analysis is done at the national scale, which can leave out local level details and important areas.
Finland				



**Session 2:
Valuable practices in Biodiversity and ecosystem protection and restoration**

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
Zoning areas for environmental and natural resources protection (Italy)	Zoning	Identification of planning units (PUs) with a process called <i>zoning</i> where, in several cases, specific uses (economic sectors or other activities such as marine protection) are prioritized. VP – part of Italian MSP draft plans.	Marine protected areas can be established starting from a list of candidate areas which is provided by law. Priority within 12NM have been identified by the competent coastal regions, but the ones identified in the offshore areas have been designed at national level.	Prioritization of marine conservation in a sea area poses issues of compatibility with other marine uses already in place or with future ones. There is the need to identify a number on measures to enhance the environmental compatibility of economic sectors, in order to ensure co-existence with nature conservation objectives.
Italy				



**Session 2:
Valuable practices in Biodiversity and ecosystem protection and restoration**

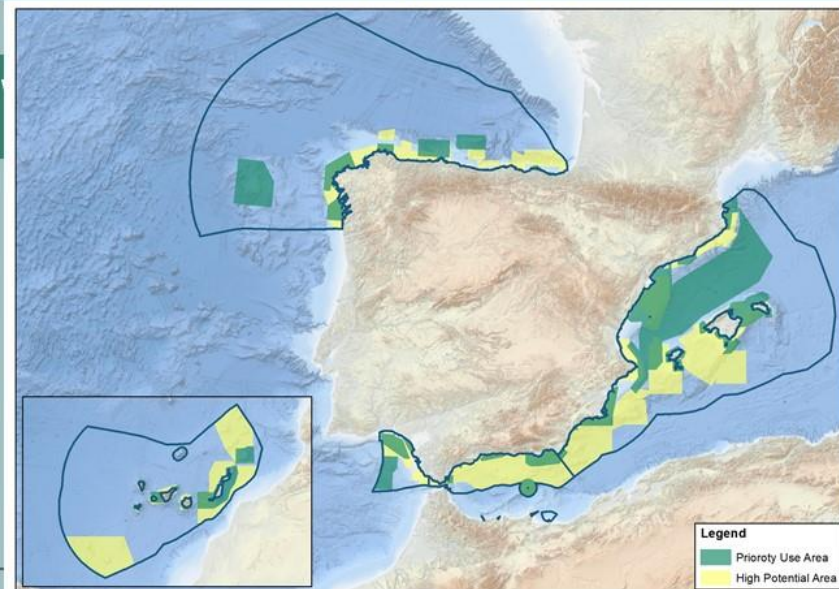
Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
Zoning for biodiversity conservation (Spain) Spain	Measure; Process - related practice (i.e. creation of working groups); Zoning	Identification and designation of: Priority Use Areas (PUA) - defined to integrate all Marine Protected Areas (MPA) established by different protecting tools existing in national or regional policies.	Regarding MPA in the marine and coastal domains, there is distinction between internal waters (competency of the CCAA - Autonomous Communities) and external waters (normally competency of the central government).	Major challenges: Overlaps between PUA and HPA for biodiversity conservation. Leaving the assessment of potential impacts to the project level, without setting specific criteria or thresholds.
		High Potential Areas (HPA) - The HPA include areas considered to be of high value for the protection of biodiversity due to the presence of habitats and/or species of high conservation value, and which are not currently included in any figure of protection, but could be in the near future.		

**Session 2:
Valuable practices in Biodiversity and ecosystem protection and restoration**

Title and country

Zoning for biodiversity conservation (Spain)

Spain



Questions for each country

Countries whose VP have been presented, could provide more information or make comments to the presenters interpretation of the VP



- How this EGD topic is addressed in MSP in your country?
- Which could be the barriers when trying to implement any of these VPs in your country?



How this EGD topic is addressed in MSP in your country?

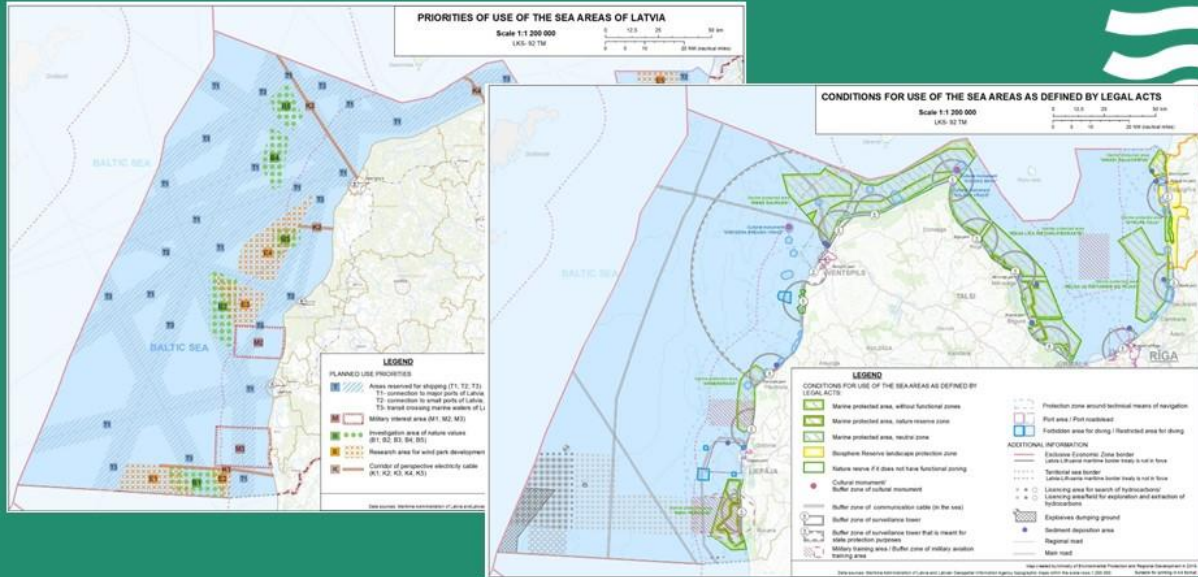
In Latvia conceptually similar practice to the Spanish and Italian examples:

- Territories of marine protected areas (MPA) are included in the MSP as **conditions for sea use from the general legislation.**
- Currently the total area of marine protected areas in the MPS territory of Latvia is 15,4%. In addition, **there are 5 nature investigation zones designed in the MSP of Latvia** 4,8%. But it is not enough to meet the 30% target set out in the EU Biodiversity Strategy for 2030.

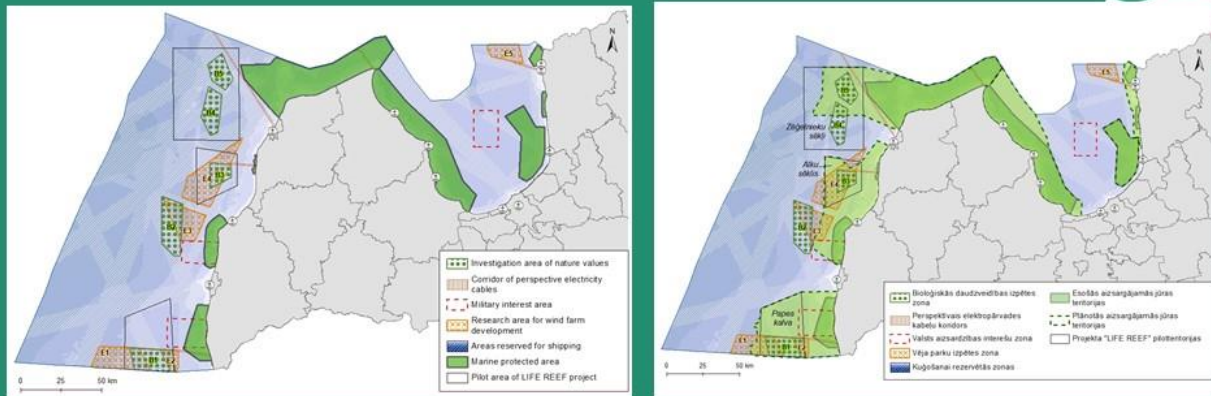
The ongoing LIFE REEF project is essential to address the 30% target and study 4 of 5 nature investigation zones of MSP.

One of three Latvian MSP strategic objectives: SO2 «The marine ecosystem and its ability to regenerate is preserved, ensuring the protection of biological diversity and averting excessive pressure from economic activities.»

How this EGD topic is addressed in MSP in your country?



How this EGD topic is addressed in MSP in your country?



Which could be the barriers when trying to implement any of these VPs in your country?

To apply some of VPs it is important to consider, that the approaches might be dependent on the data collected. If similar data is not available, the implementation of the process would require substantial investments into data collection.

Participatory session

- **Group discussion (by countries) to answer the questions (10') – writing post-its**
- **Exchange with the plenary – stick post its in the panels (40')**

Let's exchange on how this can be!



Session 3

EGD Element: Climate Change mitigation

Margarita Stancheva, CCMS



Co-funded by the European Union

Session 1: Valuable practices in Climate Change Mitigation

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
VP1: ELWIND offshore wind park development (Latvia)	(i) Measure (v) Others (implementation of the maritime spatial plan – OWF development in foreseen zoning)	Joint Estonian-Latvian state-run cross-border offshore wind project to increase energy production. Creation of 2 new OWFs and an interconnection between Estonia and Latvia, (zoning prescribed by both country MSPs), directly support the EGD implementation. Implementation/MSP process.	Main sector is energy, also shipping, tourism, fishing, defence. EIA for biodiversity conservation. Involvement of general public in formal consultations.	<ul style="list-style-type: none"> - Lack of data and data quality variations in Estonia and Latvia; - Not all stakeholders consulted at an early stage e.g. local governments, small businesses in coastal areas and relevant NGOs; - Deeper analysis of costs and benefits, visibility (of OWF) and compensatory mechanisms are needed.



Session 1: Valuable practices in Climate Change Mitigation

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
VP2: Delineation of potential areas for offshore wind farm development in the Finnish MSP plan (Offshore wind farm location optimization) (Finland)	(iv) zoning	Evaluation of suitability (entire sea area) for OWF development on a 100 m resolution using a geospatial zoning analysis (SmartSea project). Planning/ part of first MSP cycle and second one started, currently information is gaining on actual impact of VP through the strategic MSP plan.	- MSP authorities – not responsible for OWF; - Strategic MSP-collaborative platform for detailed legally binding planning; - Regional planning guides the OWF development in the territorial waters (responsible authority for natural resource management).	- Cumulative effects are not considered; - Suitable areas for OWF located outside of delimited MSP areas – lost of knowledge base; - Seasonal changes in using sea areas - better consideration; - Modelling approach does not consider OWF connections to power grid nor possible impacts of cables; - Define distribution of responsibilities for OWF development in EEZ (regional planning and strategic MSP).



Session 1: Valuable practices in Climate Change Mitigation

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
VP3: Definition of High Potential Areas for Offshore Wind Farms in Spanish MSP (Spain)	(i) Measure + (iii) Process-related practice (i.e. creation of working groups) + (iv) zoning Secondary: D. Biodiversity and ecosystem protection and restoration. G. Fair and just transition	Development of methodological guide to assess impact and conflicts with other sectors (fishery). Planning/ part of MSP	Public and private stakeholders involved in co-defining the HPAs (as part of MSP). Governance of Energy and Biodiversity Protection – same Ministry also for MSP, Fishery - another Ministry.	- Not clear quantity for HPA production of energy; - Lack of appropriate CIA; - Private stakeholders (fishery) not involved early in the process (after the first draft of HPA); - Overlapping with MPAs and areas with aquaculture potential.



Session 1: Valuable practices in Climate Change Mitigation

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
<p>VP4: From energy transition to spatial reconfiguration into ports (France)</p>	<p>(iii) Process-related practice</p>	<p>- GPM's planning strategy anticipates shifts in future energy trades by moving out from oil related activities to ORE; - Association Aquitania Ports Links - to create synergies and complementarities in infrastructures. Planning/? Part of MSP</p>	<p>- National port and energy policies are managed by two distinct directorates within the same ministry (Ministry for Ecological Transition: DGITM and DGEC). - Private stakeholders – companies at national and international scale</p>	<p>- Adopting an industrial ecosystem approach, next MSP cycle could work on better integrating new offshore wind energy targets with sectors such as ports at a sea basin scale; - Assess the needs stemming from offshore energy targets, also port infrastructures needed, and deepen the complementarity analysis; - Reflect newly available information.</p>



Commonalities in challenges/issues



- Not clear distribution of governance responsibilities (overlapping of mandates) and role/mandate of MSP?
- Private stakeholders and local communities not involved at early stage of OWF development projects.
- Need of high-quality data, deeper analysis of preconditions, trade-offs and possible impacts on marine ecosystems.
- Cumulative impact effects are not or not sufficiently considered in the phase of planning.



Replicabilities

- Formal and informal cooperation and stakeholder involvement (Latvia).
 - The process can be replicated in other countries. However, it is important to consider that the analysis can only consider factors where suitable data is available (Finland).
 - Cooperation between ports at sea basin level to propose integrated logistical chain can be replicated elsewhere (France).
- The co-design process at the administrative level can be replicated itself (Spain). The list of criteria that was used to define the HPA. This list can be used as preliminary criteria to start a similar process in another country, obviously adapting it to its particular characteristics, using the co-design process mentioned before: wind conditions, depth, protected areas, navigation safety criteria.

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Questions for each country

Countries whose VP have been presented, could provide more information or make comments to the presenters interpretation of the VP

- How this EGD topic is addressed in MSP in your country?
- Which could be the barriers when trying to implement any of these VPs in your country?
- What are opportunities for replicability in your country?

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How this EGD topic is addressed in MSP in your country?



Which could be the barriers when trying to implement any of these VPs in your country?



Participatory session

- Group discussion (by countries) to answer the questions (10') – writing post-its
- Exchange with the plenary – stick post its in the panels (40')



 MSP
GREEN The Sea horizon, is green.



Let's exchange on how this can be!



Session 4

EGD Element: Fair and Just Transition

Fabio Carella, Iuav University








Co-funded by
the European Union

Session 4: Valuable practices in Fair and Just Transition



Latvia: Balancing social, economic and environment interests in offshore wind park development

What is this practice about?¹	<p>(ii) Monitoring, assessment and evaluation (assessing existing zoning and drafting proposals for potential offshore wind energy); (v) Others (public participation).</p> <p>Where: Local case study in the Southwestern Kurzeme coast (10km inland) of Latvia and adjacent marine area.</p>
Methodology² & relation to MSP process	<p>Through stakeholder engagement to find land-use planning solutions that balance the national interest in offshore renewable energy development with the interests of local communities in coastal landscape conservation and tourism development.</p> <p>Main purpose – stakeholders (local authorities, national and regional environmental authorities, tourism and renewable energy production sectors representatives) are involved in the co-design process of the future sustainable development strategy for the coastal area</p> <p>Ongoing process that will be considered when amending the MSP by 2027.</p>
Governance specificities³	<p>Main sectors involved energy, environment and tourism governance at national level. However piloting shared competences (Horizontal - national level institutions, Vertical – sub-national level institutions) between sectorial policies. Led by Latvian Ministry of Environmental Protection and Regional Development as MSP Competent Authority</p>
Challenges⁴	<p>Lack of data and knowledge on structures and functions of marine ecosystems and limitation of knowledge of cumulative impacts of different pressures caused by construction of OWP.</p> <p>Assessment of the coastal inland landscapes and ecosystem services at the scale of landscape units require experts at the site, and systematic field surveys. Variability of parameters used might be inappropriate after some time</p>

Session 4: Valuable practices in Fair and Just Transition

France: Public debates on offshore wind farms planning and MSP

<p>What is this practice about?¹</p>	<p>(iii) Process-related practice (iv) Zoning Where: France at national level</p>
<p>Methodology² & relation to MSP process</p>	<p>OWF planning was roughly included in the first MSP plans. The consultation process on the MSP plans includes all relevant stakeholders in each sea basin council, but local citizens and local stakeholders were excluded. Result of the new legislations (2018, 2020, 2023), local stakeholders and citizens should be involved in the planning of OWF in MSP plans through a single, joint public debate at a regional scale. This public debate will take place in autumn 2023 and will provide a vision of OWF development over the next 10 years (next MSP cycle) in terms of location and installed capacity (number of GW per sea basin)</p>
<p>Governance specificities³</p>	<p>Public debates on OWF projects heavily criticised by stakeholders and local citizens. In response, three laws came out: 1) Public consultation must take place before the selection of OWF develop and 2) have a shared and joint public debate between OWF planning and MSP</p>
<p>Challenges⁴</p>	<p>Despite the alignment of public participation between wind OWF planning and MSP plans, challenges remain in terms of public inclusion. The next ten years of OWF planning have only one public debate scheduled thus there is no new public debate for each OWF project. This is questionable in terms of local citizens and stakeholders inclusion in project.</p>

Session 4: Valuable practices in Fair and Just Transition

Finland: Co-creation of scenarios for the future of maritime areas (together with stakeholders)

<p>What is this practice about?¹</p>	<p>(iii) Process-related practice (i.e. creation of working groups) Where: national (Finnish maritime area) and regional (three regional MSP areas) scales</p>
<p>Methodology² & relation to MSP process</p>	<p>The scenario phase of the first cycle of Finnish MSP legitimizing marine stakeholders knowledge and experience in decision-making. Phases: 1) the alternative future scenarios were drafted based on information collected in expert interviews. 2) Two workshops were organized in each of the planning regions (1st on scenarios from the regional perspective and 2nd on impacts). 3) The scenarios were finalized and presented in the draft of the MSP plan The approach provides an opportunity to combine existing ecological data with information collected from the stakeholders to produce socially acceptance.</p>
<p>Governance specificities³</p>	<p>The scenario work was organized as a part of the first planning cycle by the authorities responsible for the MSP in Finland (the eight coastal regional councils and the Ministry of the Environment) together with consulting firms Capful and WSP Finland.</p>
<p>Challenges⁴</p>	<p>The challenge in all participation is the ability to incentivize all significant stakeholder groups to engage into the co-creation process. The process was unable to engage stakeholders with significant decision making power such as politicians and the local public of coastal municipalities into the scenario planning process.</p>

Commonalities in challenges/issues

On Valuable Practices

- Challenges in having a constant and continuous process of involvement from the beginning of the process so as to build the expected results together with them (financial issue). Longer process times (and what result?).
- Difficulty in obtaining representatives for each sector involved given the multidisciplinary nature of the MSP. Role of the civil society?
- VPs implicitly show lack of effectiveness of engagement if at national scale, more results on regional/local scales.

About F&J Transition meaning

- "No one left behind", Does the Plan promote gender balance in maritime professions?
- What was the capacity of participants to influence planning decisions?
- How were the impacts of the planning decisions for different groups/communities evaluated?
- "Leave no place behind" How was the representation of all areas ensured in the participatory planning process?



Transferability

Participatory scenario building methods allow to explore different development alternatives and spatial options considering stakeholders views and local knowledge.

Co-creation approach to building futures scenarios is replicable to other countries without any significant challenges even though sufficient allocation of time and financial resources needs to be covered. (dedicated laws)

Definition of a strategy into the MSP development timeline, so that it best serves the whole planning process.

A participatory online mapping tool: In order to feed discussions and promote the inclusion of all stakeholders in debates, public agencies. Support building capacity of participants into public debate; as participants become the planners and have to deal with constraints



Questions for each country

Countries whose VP have been presented, could provide more information or make comments to the presenters interpretation of the VP



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- Have any of these elements been considered in your country?
- What are the challenges and gaps, related to the topic, you deal with in your country? (challenges and gaps)
- Are there any opportunities for transferability and improvement in the ongoing/following MSP process? (transferability and improvements)
- What are the areas of Fair and Just Transition not covered yet by our MSP Plans? ("Leave no place behind" and Accessibility and impacts of the plan)



Participatory session

- **Group discussion (by countries) to answer the questions (10') – writing post-its**
- **Exchange with the plenary – stick post its in the panels (40')**





Have any of these elements been considered in your country?



What are the challenges and gaps, related to the topic, you deal with in your country? (challenges and gaps)





Are there any opportunities for transferability and improvement in the ongoing/following MSP process? (transferability and improvements)



What are the areas of Fair and Just Transition not covered yet by our MSP Plans? (“Leave no place behind” and Accessibility and impacts of the plan)



Let's exchange on how this can be!



Session 5

Other EGD topics:
Climate change adaptation, Zero pollution, “Multi-use of space”

M. Rosario Martín-Hervás, IEO (CSIC)



Co-funded by
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Session 5: Valuable practices in other topics – Climate change adaptation

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
Zoning sources and sinks of sands in MSP: a need for climate change adaptation - Italy	<p>Sand deposits: <i>planning units</i> (zoning)</p> <ul style="list-style-type: none"> ✓ Erosion and rising sea levels <p>-Other EGD topics:</p> <ul style="list-style-type: none"> • CC mitigation • Biodiversity and ecosystem protection and restoration 	<p>MSP draft plans → two strategic measures between ministerial and regional entities with the support of a scientific team:</p> <ul style="list-style-type: none"> ✓ Value, management from the dredging activity, climate adaptation actions ✓ Regulations and speed up the coastal nourishment concessions and underwater sands interventions <p>MSP draft plans promote research to protect new sand deposit areas.</p>	<p>Regulatory framework to dredging activities of relict sands: partially in progress.</p> <p>Ministry of Environment (MASE), Ministry of Infrastructure (MSP CA), ISPRA, ARPA, the Region in which the activity take place</p>	<ul style="list-style-type: none"> - MSP plans not legally binding, not approved yet. - Availability of economic resources for the implementation of measures for coastal erosion. - Interventions for beach nourishment to prevent shoreline retreat or beach erosion. - The impact of sand extraction on coastal and seabed ecosystems. - Need for improved management for nonrenewable sand resources, requiring continuous monitoring as part of regional strategies. - Lack of meetings with stakeholders (in fisheries and transportation) impacting awareness.
Definition of elements that conform the Marine Green Infrastructures in the POEM - Spain	<p>MGI elements: selection of natural and seminatural elements (measure):</p> <ul style="list-style-type: none"> ✓ ecological connectivity and ecosystem functionality ✓ defragmentation ✓ restoration <p>-Other EGD topics:</p> <ul style="list-style-type: none"> • CC mitigation • Biodiversity and ecosystem protection and restoration. 	<p>Identification and mapping by the MSP CA (MITECO) for the 5 marine demarcations → factsheets within the diagnosis of each one.</p> <p>Implementation and update of the MGI elements → support of scientific institutions.</p> <p>Working groups → to address management issues, involving administrative stakeholders at the national, regional and local levels.</p>	<p>MGI framework → State Strategy for Green Infrastructure, Ecological Connectivity and Restoration of the Spanish territory by the same MSP CA (MITECO).</p>	<ul style="list-style-type: none"> - There is no homogeneity of data for all marine demarcations (discontinuity of cartographic layers, working scales and lack of information). - Limitation of some criteria to include MGI elements in the POEM. - Some MGI elements have no protection status unless they are as a MPA or are included in it.



Session 5: Valuable practices in other topics – Zero pollution

Pollution prevention from land-based activities and sources - Bulgaria

What is this practice about? ¹	<p>South Bulgarian coast → six sewage systems "hot spots" of disposal of poorly treated and untreated domestic wastewater in the sea. -No further EGD topics.</p> <p>MSP Plan (measures):</p> <ul style="list-style-type: none"> ✓ construction and modernisation of the wastewater treatment plants (WWTP) and sewage systems ✓ inclusion of coastal settlements and resort sites
Methodology² & relation to MSP process	<p>MSP Plan indirectly addresses pollution:</p> <ul style="list-style-type: none"> ✓ Pollutant reduction and waste control in coastal areas ✓ Effective control and/or sanctioning of the activity of objects outside the scope of sewage systems ✓ Introducing innovative sanitary solutions within the boundaries of the beaches <p>The River Basin Management Plan (2016-2021) → (measures) completion of sewage systems, reconstruction and construction of new WWTP</p>
Governance specificities³	<p>MSP Plan and its EIA Report do not coordinate this practice → general analysis on the pollutions through the provisions of MSFD and WFD.</p> <p>The Council of Ministers, Ministry of Regional Development and Public Works, Ministry of Environment and Water (Black Sea Basin Directorate-Varna, Environment Executive Agency, Regional Environment and Water Inspections) and Municipal Councils.</p>
Challenges⁴	<ul style="list-style-type: none"> - Coastal areas with unsecured wastewater removal and treatment (e.g. WWTPs without tertiary stage and with amortised treatment facilities at all stages) - Existence of settlements and resorts with sewage but without WWTP - Old sewage networks overloaded by new constructions - Unregulated discharges of waste waters - Lack of CIA regarding land-based pollution sources in its EIA Report - More effective farming practices to reduce water and wind erosion of the watershed - Shared competences among authorities and lack of funding programmes for the local population to install WWTP



Session 5: Valuable practices in other topics – “Multi-use of space”

Multifunctional zones and multi-use of the sea space - Bulgaria

What is this practice about? ¹	<p>Multifunctional zones (zoning):</p> <ul style="list-style-type: none"> ✓ reducing conflicts ✓ supporting the efficient use of sea space ✓ better coordinating sectoral maritime policies <p>Examples: Maritime transport, fishing and tourism, environmental protection and fish resources / Tourism and underwater cultural heritage / Aquaculture, nature conservation and MPA</p>	<p>-Other EGD topics:</p> <ul style="list-style-type: none"> • CC mitigation • Sustainable sea-food production • Biodiversity and ecosystem protection and restoration
Methodology² & relation to MSP process	<p>The MSP Plan:</p> <ul style="list-style-type: none"> ✓ Promotes synergies between economic sectors through planned multifunctional zones based on the Multi-Use (MU) concept → efficient use of maritime spaces and improved coordination of maritime sectoral policies ✓ Supports MU by preferring joint uses and imposing conditions during permitting ✓ Identifies knowledge gaps, informing future agendas and helping to clarify legislation and practices for combining different uses 	
Governance specificities³	<p>Implementation <u>still unclear</u> → MSP plan refers to shared competences of EU and national legal frameworks</p>	
Challenges⁴	<ul style="list-style-type: none"> - Despite the MSP plan being based on the EMFF MARSPLAN-BS II project, this methodology was not included in the plan - No methodological justification for the delimitation of multifunctional zones and no stakeholder involvement - The MU concept is still novel for decision-makers, spatial planners and stakeholders who need to modify policies to promote synergies among different maritime uses 	



Questions for each country

Countries whose VP have been presented, could provide more information or make comments to the presenters interpretation of the VP



- How these EGD topics are addressed in MSP in your country?
- Which could be the barriers when trying to implement any of these VPs in your country?



How these EGD topics are addressed in MSP in your country?

Climate change adaptation

- ✓ Measures → Protection of climate-sensitive marine and coastal biodiversity:
 - Improving coastal resilience:
 - *HPA and PUA for aggregate extraction* → Declaration of Reserves of deposits considered strategic for beaches (measure EA1) and geophysical studies and characterization of deposits (measure EA2).
 - *National Strategic Plan for the Protection of the Spanish Coast considering the Effects of Climate Change* (measure ITM1).
- X Specific and strategic objectives or zoning not included in the POEM.

Zero pollution

- X Strategic objectives, measures or zoning not included in the POEM.

"Multi-use of space"

General criteria are established to improve the coexistence of uses and activities while maintaining good environmental status.



Which could be the barriers when trying to implement any of these VPs in your country?

HPA and PUA for aggregate extraction for coastal protection



- Overlaps with PUA for biodiversity protection
- Affections to fishing, shellfishing and aquaculture areas
- Conducting environmental impact studies for long-term coastal protection

Pollution prevention from land-based activities and sources



- Coordination between maritime and land authorities → complex competence distributions between regional and national administrations
- Regulations and sanctions
- Funding and monitoring technologies
- Awareness and public participation

Multifunctional zones and multi-use of the sea space



- Limitation in the implementation → POEM maintain and incorporate restrictions on existing uses derived from sectoral and environmental regulations.



Participatory session

- Group discussion (by countries) to answer the questions (10') – writing post-its
- Exchange with the plenary – stick post its in the panels (35')





Let's exchange on how this can be!



Session 6

Challenging practices

Katia Frangoudes, UBO (France)



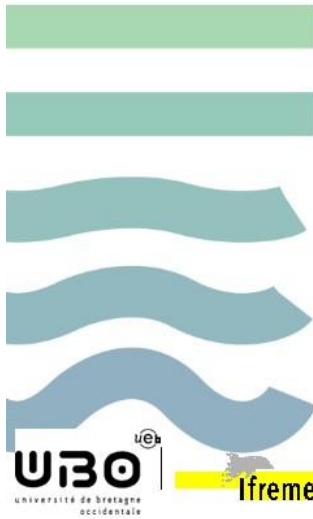
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Session 6: Valuable practices in challenging practices

Title and country	What is this practice about? ¹	Methodology ² & relation to MSP process	Governance specificities ³	Challenges ⁴
FR2	process-related practice zoning	Yes and but	Administrative "Mille-feuilles" Citizens contests	Deliberative arenas (which scale?)
FR4	process-related practice zoning	Yes and but	Cross-border area Customary agreements (recreational activities, mooring)	Lack of Cross-border cooperation /Joint management Which scale?



FR 2: Development of Marine cultures (shellfish and algae)



UBO université de Bretagne occidentale

Ifremer

Area: Historic Brittany



FR 4: An example of a MPA (Natura2000 site) in a cross-border area



UBO université de Bretagne occidentale

Ifremer

Area: South Atlantic
 Green area: Special Protection Area
 Blue area: Special Area of Conservation



Questions for each country

Countries whose VP have been presented, could provide more information or make comments to the presenters interpretation of the VP



- How this EGD topic/**challenge** is addressed in MSP in your country?
- Are you meeting similar challenges in your country?
How are they addressed?



How this EGD topic/**challenge** is addressed in MSP in your country?



Are you meeting similar challenges in your country?
How are they addressed?



Participatory session

- Group discussion (by countries) to answer the questions (10') – writing post-its
- Exchange with the plenary – stick post its in the panels (40')



Let's exchange on how this can be!

