MSP GREEN

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DELIVERABLE N°2.1.

The Green Deal component of the EU MSP Plans

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List of Abbreviations

AIS	Automatic Identification System
ATBAs	Areas To Be Avoided
AZA	Allocated Zones for Aquaculture (Italy)
BMU	Federal Ministry for the Environment (Germany)
BMWSB	Federal Ministry for Housing, Urban Development and Building (Germany)
BNatSchG	Federal Nature Conservation Act (Germany)
BPZs	Biological Protection Zones
BSH	Federal Maritime and Hydrographic Agency (Germany)
CBD	Convention on Biological Diversity
CCS	Carbon Capture and Storage
CFP	Common Fisheries Policy
CMF	*Façade* Maritime Councils (France)
CNML	National council for the sea and the coast (France)
DIRM	Interregional Directorates for the Sea (France)
DSF	*Façade* Strategic documents (France)
DST	Decision Support System
EC	European Commission
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitats
EGD	European Green Deal
EIA	Environmental Impact Assessment
EMFF	European Maritime and Fisheries Fund
EMODnet	European Marine Observation and Data Network
EMS	Environmental Management System
EU	European Union
FAO	Food and Agriculture Organisation
FLAGs	Fisheries Local Action Groups
FRAs	Fisheries Restricted Areas
GES	Good Environmental Status
GHG	Greenhouse Gas
GFCM	General Fisheries Commission for the Mediterranean
GIS	Geographic Information System
GT-OEM	MSP Working Group (Spain)
HELCOM	Baltic Marine Environment Protection Commission
HR	Human Resources
ILO	International Convention on Labour
IMO	International Maritime Organisation
IUU	Illegal Unreported, Unregulated (Fishing)
LNG	Liquefied Natural Gas
MARPOL	International Convention for the Prevention of Pollution from Ships
MASE	Ministry of the Environment and Energy Security (Italy)
MEP	Multiannual energy plan (France)
MIT	Ministry of Infrastructure and Transport (Italy)
MITECO	Ministry for the Ecological Transition and the Demographic Challenge (Spain)
MGI	Marine Green Infrastructure
MoEPRD	Ministry of Environmental Protection and Regional

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	Development of the Republic of Latvia
MPAs	Marine Protected Areas
MSEG	Member States Expert Group
MSFD	Marine Strategy Framework Directive
MSPD	Maritime Spatial Planning Directive
MSP	Maritime Spatial Planning
MRDPW	Ministry of Regional Development and Public Works (Bulgaria)
Mtoe	Million tons of oil equivalent
MOEW	Ministry of Environment and Water (Bulgaria)
NBS	Nature Based Solution
NGOs	Non-Governmental Organisations
NM	Nautical Miles
NSSC	National Strategy for Sea and Coast (France)
N2K	Natura 2000
OECMs	Other Effective area-based Conservation Measures
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
ORE	Offshore Renewable Energy
PERS	Port Environmental Review System
POEM	Maritime Spatial Planning Plans (Spain)
PSSAs	Particularly Sensitive Sea Areas
OWF	Offshore Wind Farms
RESs	Renewable Energy Sources
R&D	Research & Development
ROG	Federal Spatial Planning Act (Germany)
SDAGE	Master plan for water development and management (France)
SGDs	United Nations Sustainable Development Goals
SEA	Strategic Environmental Assessment
SMEs	Small and Medium-sized Enterprises
SPA	Strictly Protected Areas
SSF	Small-Scale Fisheries
TTSs	Temporary Threshold Shifts
UNCLOS	United Nations Convention on the Law of the Sea
VMS	Vessel Monitoring Systems
WFD	Water Framework Directive
ZIA	Areas of Interest for aquaculture (Spain)
ZICM	Areas of Interest for aquaculture marine cultures (Spain)

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Introduction

Project overview

The MSP-GREEN project runs from 2022 to 2024 and contributes to align 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.

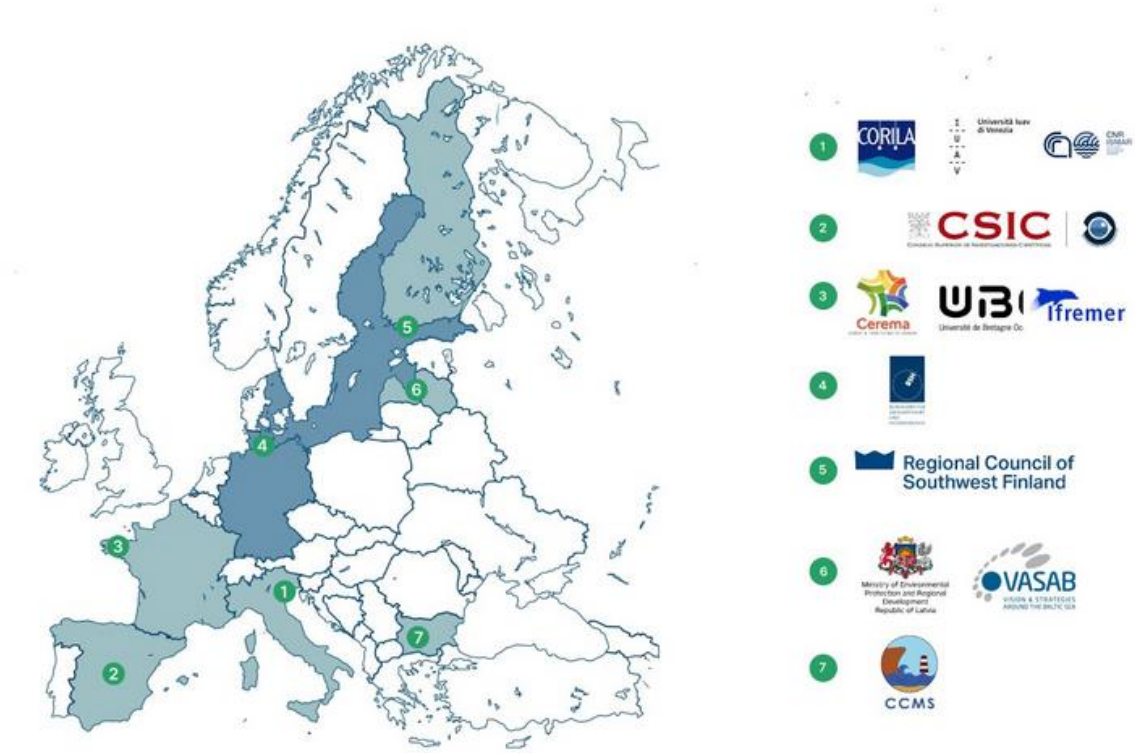

Figure 1. MSP-GREEN partners and affiliated entities

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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

Report objectives

In the framework of MSP-GREEN Work Package 2, partners assess whether and how their national MSP plans have considered the EGD objectives and identify which are the major gaps, the challenges encountered, and the trade-offs accepted in mainstreaming EGD into MSP.

To achieve these objectives, the partners analysed their national MSP plans and identified the components in line with the various elements of the EGD actions.

Plans from Bulgaria, Finland, France, Italy, Germany, Latvia, and Spain have been analysed.

The multidimensional analysis captures the diversity of the analysed plans, resulting from, in particular, the spatial and non-spatial planning approaches as well as planning contexts. It takes into consideration the organisation of MSP governance from national to local level, the structuring of economic sectors and stakeholders, and the various status of planning tools (from strategic to prescriptive) used in MSP.

Report methodology, structure and source documents

First, a common methodology was co-constructed by project partners to establish a framework for data collection and analysis (see Appendix 1). Thematic fact sheets were produced to guide and structure the data collection process. The common methodology identifies a list of EGD “core elements” derived from a set of selected EGD documents (see Appendix 1) and related sub-topics

Each partner performed data collection on their own national MSP plan(s) based on desk analysis and semi-structured interviews.

Country	MSP plan documents	Date of adoption
Bulgaria	Maritime Spatial Plan of the Republic of Bulgaria 2021-2035 (The Black Sea - an open door to the world, the Bulgarian Black Sea coast - our responsibility and common heritage)	11 May 2023

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Finland	The Maritime Spatial Plan for Finland 2030	15 December 2020
France	Façade Strategic Documents (Documents Stratégiques de Façade – DSF) for - MEMN: Eastern Channel – North Sea (Hauts-de-France and Normandy regions) - NAMO: Northern Atlantic – Western Channel (Brittany and Pays de la Loire regions) - SA: South Atlantic (Nouvelle-Aquitaine regions) - MED: Mediterranean (Occitanie, Provence-Alpes-Côte d'Azur regions and Corsica)	DSF NAMO: - Sea basin Strategy: 24 September 2019 - Monitoring mechanism: 18 November 2021 - Action Plan: 06 May 2022 DSF MEMN: - Sea basin Strategy: 25 September 2019 - Monitoring mechanism: 21 October 2021 - Action Plan: 12 May 2022 DSF SA: - Sea basin Strategy: 14 October 2019 - Monitoring mechanism: 28 October 2021 - Action Plan : 4 May 2022 DSM MED: - Sea Basin Strategy: 4 October 2019 - Monitoring Mechanism: 20 October 2021 - Action Plan: 28 April 2022
Germany	Spatial plan for the German Exclusive Economic Zone in the North Sea and in the Baltic Sea	1 September 2021
Italy	Italian Maritime Spatial Plans “Tyrrhenian - Western Mediterranean" maritime area Italian Maritime Spatial Plans “Ionian - Central Mediterranean" maritime area Italian Maritime Spatial Plans “Adriatic" maritime area	Draft Plans under finalisation based on the results of the Public consultation and the Strategic Environmental Assessment consultation
Latvia	"The Maritime Spatial Plan for the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia" - Maritime Spatial Plan 2030: National level long-term spatial development planning document	21 May 2019
Spain	Planes de Ordenación del Espacio Martítimo (POEM): Royal Decree of the approval of the POEM and the assessment of the 5 marine demarcations: - North-Atlantic - South-Atlantic - Levantine-Balearic	28 February 2023

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	- Strait and Alboran Sea - Canary	

Table 1. MSP-GREEN source documents

A two-day workshop on exchanging results from the analysis of the Green Deal component of MSP plans was then held involving all project partners. The workshop took place in Turku, Finland, from 19 to 20 June 2023. The workshop report is included as Appendix 2.

The report synthesises the data collected in the factsheets but also provides a framework for further analysis of the collected information presenting the results in an integrated manner. The country chapters' present a section investigating the effects of the national context on enabling the EGD in MSP, followed by a section presenting EGD-based thematic analyses, and close with a section examining key obstacles and challenges. The structure of the summary chapter mirrors that of country chapters.

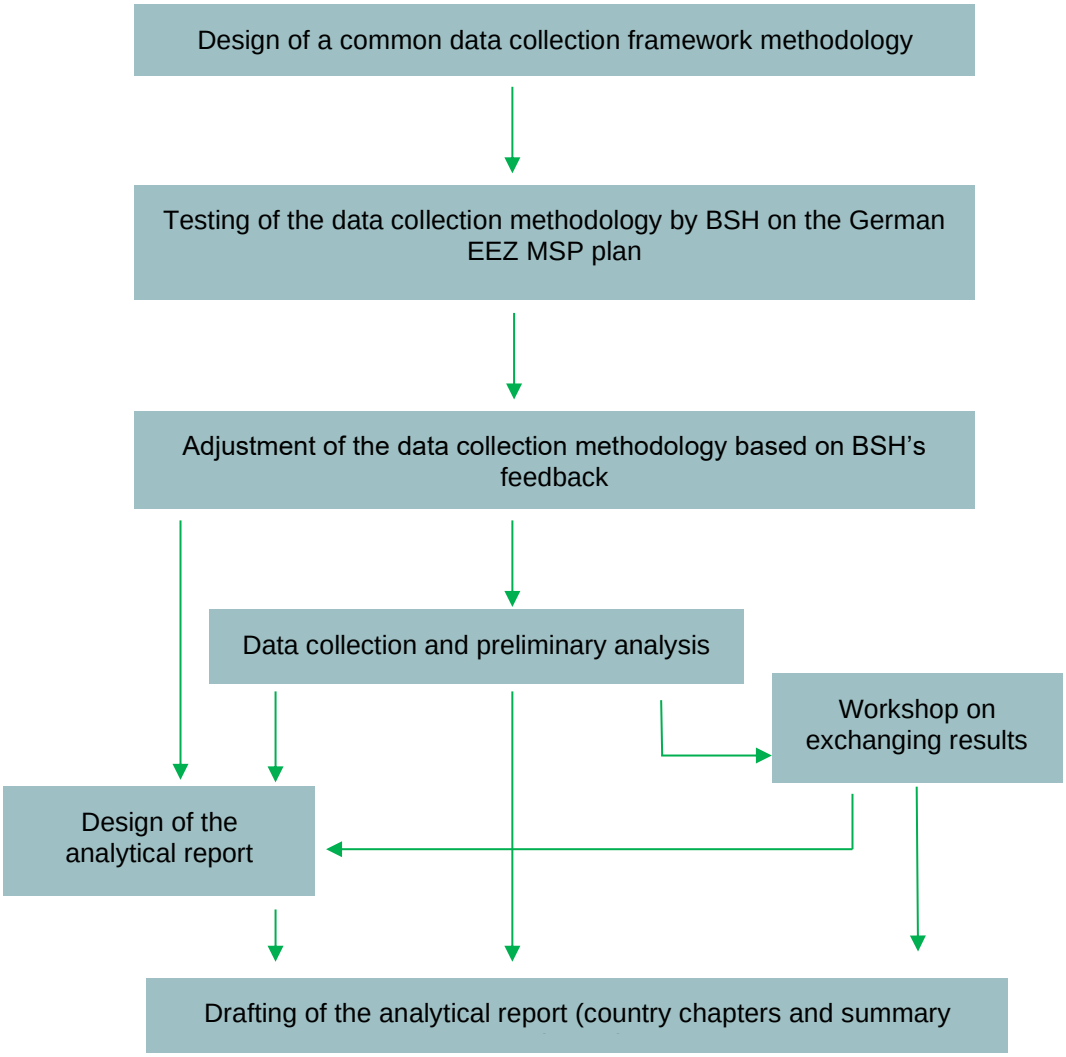

Figure 2. Report preparation workflow

The analytical report drafting process was approached as a collaborative exercise. Based on the factsheets and semi-structured interviews, partners were responsible for preparing their own country chapters as well as a 1-page summary of their key findings (see Appendix 4). Chapter 1 proposes a cross-country comparative analysis drawing

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from country chapters and the workshop report.

The report then presents one chapter per country:

- Chapter 2. Bulgaria
- Chapter 3. Finland
- Chapter 4. France
- Chapter 5. Germany
- Chapter 6. Italy
- Chapter 7. Latvia
- Chapter 8. Spain

In addition, this report includes the following appendices:

- Appendix 1 – Common framework methodology
- Appendix 2 – Workshop on exchanging results report
- Appendix 3 – Infographic with synthetic elements
- Appendix 4 – Summaries of key findings at country level.

Reader instructions

MSP-GREEN partners put a lot of effort in co-creating a common methodology for the collection and analysis of information on EGD integration into national MSP plans. Actually, the development and sharing of an innovative and comprehensive methodology (Appendix 1) for the analysis of the EGD-MSP nexus is one of the objectives of MSP-GREEN, with the auspices that this will be applied in other contexts, eventually with refinements and customisations. The report reflects the diversity of contexts analysed and the related MSP processes, bringing some heterogeneity in the application of such methodology and in the development of the country-based chapters. Indeed, the analysis of such variability enabled the partners to identify common elements and country-based specificities as reflected in chapter 1.

It shall be also noted that the common methodology was designed to collect and process data on MSP for the whole MSP GREEN project, and not solely to feed into the present report. As such, not all the information collected using this methodology is featured and commented in the report. Other data will be exploited in the next phases of the project.

MSP-GREEN proposes a factual study of EGD-related elements that can, or cannot be, found in national MSP plans, aiming at identifying commonalities and differences among plans as well as at discussing challenges to integration of EGD into MSP. In such sense, the work undertaken does not aim at providing an evaluation of the quality of the considered MSP plans and contextual information is provided with a view to support the understanding of the country-based analysis. Data and information presented in this report should not be extracted and isolated from the overall analysis and contextual information provided to avoid any misinterpretation.

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Chapter 1

Maritime Spatial Planning and the Green Deal: A comparative analysis across 7 European MSP plans

This chapter sets out a comparative analysis of how the seven EU MSP plans addressed by MSP-GREEN have considered the EGD objectives and mainstreamed their implementation. It offers an overview of key commonalities and differences between the seven MSP plans assessed. In turn, the identification of key commonalities and differences allows to derive additional findings about the integration of the EGD in plans and MSP in general.

The analysis presented in this chapter is based on the findings described in chapters 2 to 8, which examine the occurrence of the EGD components in MSP plans of Bulgaria, Finland, France, Italy, Germany, Latvia, and Spain. It also draws from the conclusions presented in the report on the workshop on exchanging results (Appendix 2). Section 1.0 shares introductive background elements regarding the assessment of MSP plans. Section 1.1 assesses the effect of national contexts on enabling EGD in MSP. Section 1.2. examines how key EGD components are tackled across the 7 plans. Section 1.3. especially investigates the fair and just transition dimension. Section 1.4. identifies key challenges to be tackled to strengthen the role of MSP as a key enabler of the EGD's marine components. Section 1.5. offers synthetic considerations and presents key takeaway findings from the report.

1.0. Background on assessments of MSP plans

MSP plans are overarching tools for ocean governance and, as such, they are considered as powerful instruments to achieve different and sometimes contrasting objectives, from the sustainable development of maritime sectors, including new, innovative ones, to marine conservation. In consideration of this, EU MSP plans have already been assessed under different perspectives, e.g. by EC[1] and WWF.[2]

For the objectives of the present study, the report prepared by EC in 2022 is of particular interest. It aimed at understanding how the MSP Directive 2014/89/EU can contribute to the achievement of the EU's objectives under the European Green Deal and related relevant legislation. The report analysed the maritime spatial plans developed by European Member States and complemented it with a review of scientific publications, as well as with exchanges with planners and experts via several

[1] European Commission, European Climate, Infrastructure and Environment Executive Agency, Burg, S., Chouchane, H., Kraan, M. et al., *Assessment of the relevance and effect of the Maritime Spatial Planning Directive in the context of the European Green Deal – Final report*, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2926/911941

[2] See WWF, *Ecosystem-based Maritime Spatial Planning in Europe and how to assess it*, 2021, https://wwfeu.awsassets.panda.org/downloads/wwf_eb_maritime_spatial_planning_guidance_paper_march_2021.pdf and the associated WWF reports *Maritime Spatial Planning in the Baltic* (2022), *North Sea* (2022), *North-Sea Atlantic* (2022) and *Mediterranean Sea* (2023), available online at https://www.wwf.eu/what_we_do/oceans/planning_for_sustainable_seas/

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engagement methods. The results of that report show that the European Green Deal is mentioned in approximately half of the maritime spatial plans in the North-East Atlantic and the Mediterranean Sea, while only in one maritime spatial plan in the Baltic Sea. The report recognizes that many countries had already finished their maritime spatial plans before the Green Deal was published and consequently such countries have no explicit reference to EGD objectives. Notwithstanding this, some partners confirmed that the EGD objectives have influenced their national MSP plan in some way, or that the key sectors central for EGD have been considered (i.e. wind energy), in relation with previous policies and strategies.

The objective of the present study is to prepare an in-depth analysis about whether and how MSP plans have taken EGD objectives and contents on board, referring specifically to the marine/maritime components of this package of policies. The previously mentioned report assessed the following main questions: i) Is the European Green Deal mentioned? ii) Are other European Green Deal elements mentioned? iii) Is there an action plan to implement the European Green Deal?. The common methodological framework defined within MPS-GREEN (Annex 1) aims to structure a more detailed assessment of the considered plans to respond to the project objectives, thus contributing to tackle some of the final recommendations from the EC study, such as the need of highlighting good practices and develop a comprehensive approach to align with European Green Deal objectives, as well as paying greater attention to equity, well-being and community benefit sharing in implementing Directive 2014/89/EU.

The assessment of MSP plans undertaken by WWF for the Baltic (2022) and the Mediterranean Sea (2023) also provides some interesting elements to structure the MSP-GREEN analysis of MSP plans, by identifying categories such as Inclusion of nature, Socio-economic indicators, Good ocean governance, Comprehensiveness of the complete MSP process. These categories have informed some of the elements of the Common framework methodology and the MSP-EGD taxonomy defined therein (Appendix 1). Differently from that approach, the assessment presented in this report, aims to identify and valorise all EGD marine elements already present in the considered country MSP plans, and to inform the identification and exchange of good practices among the analysed countries to be undertaken under WP3 of MSP-GREEN.

The report does not aim to provide a comparison among the assessed countries: similarities and differences are identified and valorised to facilitate mutual exchange and transferability of good and critical discussion on bad experiences, with the aim of making the best use possible of the plans in place and address their improvement on the occasion of their mid-term assessment (if so) and next revision.

1.1. The effect of national contexts on including EGD in MSP

National policy timelines play a role in whether MSP plans explicitly accounted for the EGD (1.1.1.). However, explicit textual references and links to the EGD only offered limited insights as to whether plans practically enabled the EGD objectives (1.1.2.). In fact, due to the EGD being largely based on pre-existing policies, it was necessary to go beyond the mere “EGD reference” indicator and look into how plans accounted for a number of policies that had preceded the EGD (1.1.3.) and target the same or similar objectives. Results found that countries’ approaches to MSP and what mandate they give to it (1.1.4.), and geographical and biophysical features (1.1.5.) are key components of the national context, contributing to the degree of incorporation of EGD related

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elements into MSP plans.

1.1.1. National policy timelines play a role

National policy timelines play a key role in explaining whether MSP plans explicitly refer to the EGD package. The Communication on the European Green Deal (COM (2019) 640) was published in December 2019. EGD policies on specific topics (Biodiversity Strategy, Offshore Renewable Energy Strategy, Farm to Fork Strategy, etc.) were published from 2020 onwards. Countries that had already adopted or were finalising their maritime spatial plans when the EGD was published (Finland, France, Latvia) do not make explicit reference to the EGD. The EGD is explicitly referred to in plans initiated, drafted, adopted, or revised after its publication (Bulgaria, Germany, Italy, Spain). Whether links were made in those plans with specific EGD policies varies from country to country, and within countries, from one EGD policy to another. In Bulgaria for example, although the EGD is reflected in the Specific objective 2.1. "Coordination of sectoral policies in the maritime economy in support of the Green Deal", only the Biodiversity Strategy was specifically referred to in the plan. In Italy, numerous EGD policies such as the Sustainable Blue Economy communication, the Offshore Renewable Energy Strategy, the EU Strategy on Climate Change Adaptation, the Biodiversity Strategy, the Farm to Fork Strategy were explicitly linked to the plans, while others such as the European Climate Law or the Strategy towards zero pollution were not. The Spanish plan considers the Biodiversity Strategy, the Offshore renewable energy, and the Strategic guidelines for a more sustainable and competitive EU aquaculture. On blue economy, it still refers to the 2012 Communication regarding Blue Growth and acknowledges the May Council Conclusions on a Sustainable Blue Economy that welcomes the Communication on a new approach for a sustainable blue economy in the EU, both published in 2021.

1.1.2. Direct reference to the EGD only provides limited insights

Explicit reference and links to the EGD only offer limited insights regarding the extent to which plans actually enable the EGD. On the one hand, it is not enough for the MSP plans to only mention the EGD and its associated policies. Content wise, it requires that they translate the objectives and targets set up by EGD policies into components of the MSP plans (e.g. planning objectives, zoning, measures, etc.) and explain how they aim to achieve them. For instance, the Bulgarian plan refers to the Biodiversity Strategy and 30% protection target by 2030 but as it is a strategic document, does not provide details about how the target will be practically delivered. On the other hand, plans may not explicitly refer to an EGD policy, but still reflect its objectives and targets. For example, the Italian plans do not include direct reference to the European Climate Law or the previous COM (2020) 562 but clearly refer to the intermediate EU greenhouse gas emission reduction target set by the law.

1.1.3. Enabling the EGD relies on implementing pre-EGD policies

The effects of national MSP timelines are only partially relevant because the EGD package is not only about setting up new policy objectives. It also calls for the full and/or better implementation of several pre-existing policies relevant to MSP such as the Marine Strategy Framework Directive (MSFD), the Common Fisheries Policy (CFP) and the Birds and Habitats Directives. When plans contribute to implementing those policies, they also enable the EGD. For instance, the Biodiversity Strategy states that full

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implementation of the MSFD including achieving the objective of Good Environmental Status (GES) of EU waters is essential. The MSFD and/or GES are considered in all analysed plans. Some plans, such as the French and Spanish ones, even go as far as fully integrating the implementation of the MSPD and MSFD. In such a situation, MSP enables the EGD insofar as it contributes to the full implementation of the MSFD and achieving GES, as required by the EU Biodiversity Strategy.

1.1.4. Approaches and mandates to MSP need to be accounted for

The EGD "blue" dimension features a great variety of spatial and non-spatial, environmental, and socio-economic objectives, mobilising multiple maritime or land-based sectors, and dealing with the whole maritime space from coasts to offshore areas. On the other hand, approaches to MSP vary from country to country. Some countries adopt prescriptive and space-based planning approaches, while others see MSP more as a strategic and/or indicative process and/or feature non-spatial measures. Across the spectrum, some countries adopt mixed approaches. EU countries also attribute different geographic or legal mandates and purposes to their MSP plans.

EGD objectives may or may not have been considered in or implemented through a national MSP plan due to the mandate attributed to MSP. For instance, the very broad scope of French MSP plans is a direct consequence of the transversality of the National Strategy for the Sea and Coast they derive from. In Italy the MSP mandate is also broad in scope, however the Zero pollution Strategy (COM (2021) 400 final) is not directly referenced to in the draft plans because the topic of pollution prevention is targeted under other strategies and plans (e.g., River Basin Management Plans under the Water Framework Directive (WFD), the Marine Strategy Framework Directive), which are recalled by the MSP plans. In other countries, the role attributed to MSP can be more targeted. For example, in Germany, fisheries and the circular economy have not been included in the MSP plan because MSP has no remit for those sectors. Finland uses a mixed approach to the mandate of MSP. While the Land Use and Building Act defines which sectors MSP needs to consider, others can be added based on the planners' decisions. Therefore, no sectors are in principle out of the scope of MSP and new themes can and will be considered in the second cycle of planning. The geographic scope of MSP also plays a role. For instance, due to its geographical delimitation, the German EEZ plan does not directly address issues relevant to coasts, such as coastal protection or port development.

Whenever plans are analysed, it is necessary to keep in mind that there are multiple national approaches to MSP, which are enshrined in wider institutional, political, legal, and most likely cultural, historical, or sociological differences between countries.

1.1.5. Geographical and biophysical features of marine areas can affect how EDG is considered by MSP plans

The ocean is a dynamic and open environment. Planning at sea is very different compared to planning at land. The ocean biophysical context of countries influences their MSP plans. For instance, some countries are exposed to strong seasonal changes in how the sea is used: in Finland, the winter sea ice conditions affect the routes of maritime transportation which needs to be considered when planning other actions at sea such as the placement of offshore wind energy production. In turn, issues such as competition for access to sea space for sectors and uses, including those relevant to

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the EGD, may vary across time. Likewise, the physical environment of countries influences their exposition to EGD challenges. For instance, countries with coasts, islands, and archipelagos highly vulnerable to marine risks (like coastal erosion, storm surges and related flooding) may be keener to include climate change adaptation in their MSP plans.

Countries with bigger sea areas may have more space and options available to achieve some of the EGD objectives and manage possible related conflicts. For instance, in Spain, the polygons designated in the POEM for the development of the offshore renewable energy production will be located away from the coast and based on floating wind turbines because of the small continental shelf, especially in the Mediterranean, thus reducing conflicts with activities and habitats closer to the coasts. Countries located in closed seas such as the Baltic and the Black Sea are likely to be more impacted by issues such as eutrophication; in turn, this may push in favour of considering issues such as pollution and land-sea interactions in MSP plans. Elements such as tides, currents, wind characteristics, or bathymetry must also be accounted for by planners. The biophysical environment influences whether specific uses and activities can be developed or not (e.g. fisheries, aquaculture, marine renewable energy production, etc.), whether specific technologies can be used in some sectors such as offshore energy (e.g. bottom fixed or floating turbines), how costly it would be to operate in some areas, and whether it would be possible to consider alternative locations for uses such as shipping lanes, etc. In turn, this can impact the capacity of planners to enable some of the EGD objectives.

1.2. The EGD components in the MSP plans

1.2.1. Climate change mitigation

All assessed plans include elements on climate change mitigation. The topic is mainly approached from the perspective of the energy transition at sea. Energy transition in the maritime sectors is subject to strong societal and political pressures. Such pressures were increased due to the recent geopolitical evolutions, especially considerations relating to energy security in the wake of the Russian war of aggression against Ukraine.[3]

Overall, the development of offshore renewable energy production appears as one of the main actions at sea to tackle climate change mitigation. More specifically, and additionally fuelled by concerns related to energy independence and national strategies for hydrogen production offshore wind is a key driver of space allocation in the plans and seemed to reinforce the relevance and role of MSP for many actors. Approaches to offshore renewables development vary between plans, especially whether they include spatial provisions and energy production targets. Some plans include only energy production targets but no spatial provisions (France, Italy) while others only incorporate spatial provisions, but no energy production targets (Finland, Latvia, Spain). One plan presents both (Germany), one none (Bulgaria).

The German EEZ MSP plan has both zoning provisions and energy production targets,

[3] See for instance European Commission, Press Release, EU-NATO Task Force: Final assessment report on strengthening our resilience and protection of critical infrastructure, 29 June 2023. https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3564

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as it designates priority and reservation areas for offshore wind, in line with the federal government's quantitative expansion targets for offshore wind energy (20 GW by 2030 and 40 GW by 2040). The Bulgarian plan points to the potential for developing renewable energy production, including offshore wind energy, but does not formulate an explicit quantitative objective or zones allocated for offshore renewable energy development.

French and Italian plans refer to national energy policies and include renewable energy production targets, but do not include spatial provisions. In France, analysed plans reflect the 2019-2028 Multiannual energy plan (MEP), which aims to reach an installed capacity of 2.4 GW of offshore wind power by 2023 and around 5.2-6.2GW by 2028. Some of the sub-planning units ("vocation zone") make offshore renewable energy a generic priority, but without identifying specific areas for their development. While Italian plans do not establish a specific energy production target for offshore renewable energy, they state that Italy intends to pursue a target of covering, in 2030, 30% of the gross final consumption of energy from renewable sources in general, with a final gross consumption from those sources amounting to about 33 million tons of oil equivalent (Mtoe).

On the other hand, assessed plans from Finland, Latvia and Spain do not include targets for offshore renewable energy production, but propose various forms of spatial provisions. In Finland, the plan identifies potential areas for energy production by OWF, covering approximately 4.4 % of the total plan area. They do not define where OWF needs to be located and suitable locations can also be located outside of the indicated areas. Latvian MSP considers five offshore wind farm energy zones with a total area 1649 km^2 (6% of total MSP area) but does not indicate how much energy those areas are supposed to produce. Spanish plans include an analysis of the suitable areas for the development of offshore wind farms. They identify "High Potential Areas" for the development of wind energy, amounting to 0.46% of the total planning area of the plans.

Beyond zoning and energy production targets, some plans (e.g. the Italian ones) include measures specifically targeting offshore renewable energy, i.e.: the development of guidelines for the detailed identification of suitable sites for offshore renewables and the development of a Decision Support System (DST) to support the sector (from planning, to design, implementation and monitoring) including elements related to social acceptability, minimisation of conflicts with other uses and impacts of environmental components. Within MSP plans the focus is mainly on offshore wind energy. Other renewable sources of energy (wave, solar, current, tide) are poorly considered and mainly from a research and innovation perspective (e.g. through dedicated measures), reflecting the limited technological advancement for the proper exploitation of these resources (if compared to offshore wind energy).

From our analysis, offshore energy production is often outside of the regulatory scope of MSP. This means that the role of MSP in allocating space to offshore renewables is often also limited in practice. Sometimes, offshore renewable energy spatial planning is done in a silo and outside of the MSP process, for instance due to calendar mismatch or reflecting a lack of coordination between energy and MSP authorities. In such situations, MSP can only account for the sectoral energy spatial planning. In France, the MSP legal basis was recently amended to include the designation of potential zones for offshore wind development within the scope of MSP, to try to better integrate energy spatial planning and MSP. Similarly, France decided to run parallel public consultations for MSP plans and the designation of offshore renewable energy areas. Spain linked

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MSP to the national Roadmap of offshore wind and marine energy development.[4] In fact, the Roadmap explicitly states that MSP will define the High Potential Areas for offshore wind farm development. One important consideration is that the Ministry that holds the competences in MSP also holds the ones in Energy and Biodiversity, which worked together in the definition of the high potential areas for the offshore wind energy development approved in the POEM.

Offshore renewable energy requires space to unfold. As a new space user, the sector was confronted with the issue of a lack of available space at sea and exposed to debate about access to sea space with "traditional" users, such as shipping or fishing. Therefore, the multi-use of sea space and coastal areas were identified as relevant issues for offshore wind energy. Some plans identified multi-use as an overarching principle for the entire MSP process, others integrated the principles of multi-use into energy production and in some cases the principles of multi-use were just starting to be considered in MSP. With regards to energy transportation from offshore production sites, grids and landing sites were considered in some but not all plans.

The energy transition was also approached by some plans from the perspective of promoting new fuels in the maritime sectors and ports, for instance through electrification for ships at berth. Likewise, the improvement of energy efficiency in maritime sectors such as shipping or fishing was promoted by some plans. On these topics, plans seem to generally limit to high level and generic objectives.

Blue carbon and the role of ecosystems in climate change mitigation does not seem to have been addressed by the plans assessed. One plan (Bulgaria) states that it will apply an ecosystem approach to utilise the carbon storage in coastal and marine ecosystems contributing to mitigate climate change but does not set up any associated objective. Blue carbon is limitedly considered also in the Italian plans; these include a measure aiming at developing a detailed study on the contribution of MSP plans to the achievement of national climate change reduction and carbon neutrality targets, considering both the role of maritime sectors and that of the protection and restoration of blue carbon ecosystems. The Italian plans also deal with carbon capture and storage (CCS) from a geological perspective, highlighting the need for a detailed identification of exhausted hydrocarbon deposits which can potentially be used for this scope.

1.2.2. Climate change adaptation

Climate change adaptation is included in all analysed plans. However, it is often addressed indirectly. Some plans refer to specific climate change adaptation policies outside of MSP. Likewise, provisions for the protection and improvement of marine environmental status such as the identification of proposals for new marine protected areas were considered as indirectly contributing to climate change adaptation objectives. However, such provisions were often not explicitly formulated with climate change adaptation as a goal in the plans. Addressing physical landscape evolutions and risks such as coastal erosion and evolution or floods seemed to be considered the most prominent climate change adaptation topic addressed by MSP plans. In France, plans even explicitly assumed such a narrow approach, and deferred it to future MSP cycles to enrich how climate change mitigation is dealt with in plans. The objective to use

[4] Ministerio para la Transición Ecológica y el Reto Demográfico (MITECO), Hoja de Ruta para el desarrollo de la Eólica Marina y de las Energías del Mar, 2021, https://www.miteco.gob.es/es/ministerio/planes-estrategias/desarrollo-eolica-marina-energias.html

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marine green infrastructures and nature-based solutions for climate change adaptation purposes was observed in some of the plans (France, Italy, Spain).

Other references to climate change adaptation were *ad hoc* and focused on very specific elements. For instance, one of the French plans mentions the adaptability of the fisheries sector to climate change as a challenge and highlights that climate change impacts could include development of toxic micro-algae, bacteria, and viruses. In Finland, a practical climate change adaptation measure consisted in the identification of significant underwater natural values, which are also considered key areas for the protection of coastal environments in the future. As far as anticipation is concerned, while the Finish MSP plan does not anticipate the climate change related effects, it includes many unplanned areas with no strategic objectives identified, leaving flexibility for future changes in activities. The Italian plans include a cross-cutting measure aiming to develop a study about the detailed assessment of impacts of climate change on the maritime spatial plans (considering aspects related to maritime sectors, coastal protection and improved protection of biodiversity and ecosystems) and the identification of related adaptation measures, to be considered in the revision of the plans. Several specific measures on improved coastal protection, also through nature-based solutions, are also provided by the Italian plans.

Taking stock of the limited number of provisions on climate change adaptation included in several of the assessed plans, it is worth recalling some of the reflections shared by project partners during the workshop based on their analysis of the plans (see Appendix 2). Some partners pointed out that the mid-term nature of the plans makes it more challenging to look some decades into the future and prepare for the long-term climate change impacts. Participants highlighted that climate change adaptation was considered mostly as a technical issue, while it shall also be seen as an important component of fair and just transition. Involvement of the coastal communities most vulnerable to the changes was promoted as a way to provide key information on expected changes in the environment and improve their capacity to adapt to the changes. The participants identified a need for capacity building and communication to support climate change adaptation actions within MSP in the future. The participants also thought that it is important to learn from success stories of nature-based solutions and identify where interventions may be targeted to restore habitats. The discussions identified that data and a more comprehensive understanding of the effects of climate change on marine nature and different marine sectors is needed to be able to plan such actions. Some participants argued that the prevailing challenge is that climate change is already altering local conditions and actions need to be carried out with an incomplete knowledge base, leading into post-normal science conditions.

1.2.3. Sustainable food production

Sustainable food production is a key EGD objective, as reflected in the Farm to Fork Strategy (COM/2020/381 final) or the upcoming proposal for an EU legislative framework for sustainable food systems.[5] Sustainable seafood production is well reflected in the plans. Achieving sustainable fisheries is mentioned in all MSP plans. From an operational perspective, a key differentiating element between assessed plans is the relationship between MSP and fisheries governance frameworks at a national level. Overall, it is possible to distinguish between two main approaches: some plans do

[5] See European Commission, Legislative framework for sustainable food systems, https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy/legislative-framework_en

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not regulate fisheries *per se* but include provisions aiming at supporting sustainable fisheries (Germany, Latvia, Spain, Finland), while other plans do include provisions more directly regulating fisheries (Bulgaria, France, Italy).

The Germany EEZ plan considers that fishing is not regulated by MSP, so the plan does not restrict fishing directly. Instead, the plan considers that MSP can ensure that areas important for fishery are kept free of incompatible uses. In the latter sense the plan for instance makes provisions for the Norway lobster fishery, with the aim of securing an area for this purpose and excluding incompatible uses such as offshore wind. In Latvia, one of the six priorities of MSP is sustainable fisheries. The plan however does not directly regulate fisheries activities themselves. Rather, the Latvian MSP plan assesses existing information on the most important fishing areas to consider and design other sea use zones. It also identifies fish nursery areas and spawning grounds and includes fish catch data (both statistics and spatial distribution even per species). Spanish MSP plans feature a sectoral objective calling to "achieve Maximum Sustainable Yield on stocks of commercial species and reduce the negative impact of fishing activities on biodiversity", but do not include strategic objectives nor measures directly regulating fisheries. However, Marine Fisheries Reserves (management fishing areas) are included in MSP as part of the Spanish MPAs network and included in the Priority Use Areas for biodiversity conservation. Likewise In Finland, the MSP plan does not regulate fishing, but its objectives define that fishing that has a positive impact on the status of the marine environment will be increased. It also identifies potential areas for coastal net fishing and open sea trawl fishing, which are all central areas in terms of professional fishing.

Plans from Bulgaria, France, and Italy include provisions and measures that more directly aim at regulating fishing activities. For instance, in line with the CFP implementation, the Bulgarian plan set up measures for effective control on fishing areas, science-based quotas for exploited species and control on unregulated fishing. French plans establish measures such as reducing bycatch reduction and the impact of fishing gears on marine species and habitats or improving regulations for instance on the requirements for fishing authorisations and licences. In Italy, the improvement of fishery sustainability is tackled within the MSP plans by means of an articulated package of measures, dealing with several aspects, i.e.: the reduction of the pressure on fish stocks and the promotion of their sustainable exploitation, the integrated evaluation of the status of Essential Fish Habitats (EFH) of main halieutic species, the support to small-scale fisheries, the fight against illegal fishing, the extension of the use of VMS and/or AIS systems to fishery segments currently not monitored, as well as the strengthening of multi-level governance systems to foster the sustainable management of common fish stocks in the context of national, EU and international cooperation initiatives (e.g. FAO-GFCM, CBD).

Both from our analysis and interviews, fisheries is not a homogeneous sector. It covers a wide range of practices and fleets and can be structured very differently from one country to another. For instance, some fisheries target mobile species, while other fisheries need access to specific, fixed areas, which introduces different relationships to sea space for fishers and authorities. In practice, fisheries targeting non-mobile habitat-dependent species seem more exposed to conflict of sea space use as it makes it hard for them to relocate. Likewise, due to fisheries control regulations, Small-Scale Fisheries (SSF) are often exempt from using location devices such as vessel monitoring systems (VMS) or Automatic Identification System (AIS). Therefore, in many countries, little information about the spatial distribution of SSF is available compared to larger

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vessels. In turn, this can influence the capacity of MSP to address challenges specifically relating to such fleet segments. Interviews also showed that MSP could reflect the heterogeneity in the sector in that some fleet segments may benefit from privileged access to governance bodies compared to others. In turn, the distribution of space between macro-sectors may be more or less beneficial to specific types of fisheries. Typically, the location of an offshore wind farm may be compatible, or not, with various types of fisheries. Some interviews suggested that the final location of farms could reflect discrepancies in influence from one fishing fleet segment to another. Variables such as climate change and better anticipating the related future shifts in the geographic distribution of species targeted by fisheries were considered relevant challenges for MSP by all plans.

It is worth noting that some plans tackle sustainable fisheries from a non-spatial perspective (Finland, France, Italy). Plans adopting a strategic approach to MSP included provision on fisheries sustainability from technical perspectives such as data and research, fuel transition, nets recycling, improved selectivity techniques and bycatch reduction, reduced overfishing, control, and fight against illegal unreported, unregulated (IUU) fishing. They also featured socio-economic measures on topics such as the cultural role of fisheries, challenges relating to ageing fishers, the need to attract youth, well-being onboard, or income and decent revenues. In a nutshell, those plans also considered the role and/or function of fisheries in the socio-economic system and reflected on broader societal challenges such as the energy transition in maritime sectors and fair and just transition.

From the perspective of aquaculture, fish and mussel farming were commonly considered in the plans, at least as a potential for the future. The way aquaculture activities are planned is dependent on the context of the country and the sea areas in question, i.e., whether the activity takes place at the coastal area or open seas. When mentioned, aquaculture is often associated with the requirement for sustainability. The spatial dimension of aquaculture is tackled by some plans. For instance, in Italy, aquaculture is one of the sectors considered in zoning and in the definition of priorities in the plans' planning units. Moreover, Italian plans include several measures primarily devoted to the integration between MSP and aquaculture zoning (sectoral) plans. This is pursued through a measure sustaining the development, adoption, and implementation of AZA (Allocated Zones for Aquaculture) Plans at the sub-national (regional) scale, coherently with the MSP Plans. While there is currently no aquaculture in the German EEZ, the German MSP plan aims to encourage co-use between aquaculture and existing installations (such as offshore wind farms) to achieve greater spatial efficiency. The Spanish plan includes the objective to design spatial planning of aquaculture from a medium- and long-term scale approach compatible with environmental conservation and protection of the marine ecosystem. It sets up a measure calling for the elaboration of planning and management instruments for the declared Areas of Interest for Aquaculture (ZIA) and Marine Cultures (ZICM).

Sustainable seaweed production is less commonly considered and was found in less than half of the assessed plans (Finland, France, Spain). When considered, approaches vary. In Spain, it was considered under the umbrella of aquaculture. Seaweed is included in some of the French plans and measures are species-specific. The Finnish plan promotes co-use, for instance with specific heat-producing infrastructures or in association with fish farming to reduce nutrient output.

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1.2.4. Biodiversity and ecosystem protection and restoration

All analysed MSP plans share the protection of the marine environment as a cross-cutting or overarching objective. However, plans generally consider that the designation or extension of Marine Protected Areas (MPAs) does not pertain to the scope of MSP. While MSP is not used in the assessed plans to designate or extend conservation areas, many countries still use it as a facilitating platform, a catalyst, or an indirect tool to support the designation or extension processes. In Bulgaria, while MPAs designation is outside of the scope of MSP and no specific measures are included, the plan still provides political support to the objective of reaching the 2030 targets of EU Biodiversity Strategy, the extension of EU sea protection to 30%, of which 10% strictly, by 2030. Italian MSP plans also provide support, from a strategic planning perspective, to the Biodiversity Strategy 2030 targets and to the development of new protected areas, in connection with the existing ones. Italian plans support those objectives through the identification of planning units where the priority is set for nature protection as well as through specific measures such as the establishment of an "MSFD-MSP" working group tasked with the objective of identifying valuable areas for the extension of the current MPAs and Natura 2000 sites network and for the definition of OECMs. In France, plans call for highly protected areas, but include no measures on MPAs at large. The Latvian MSP plan includes measures that could support the establishment of conservation areas, such as requiring qualitative assessment to update information on ecologically significant areas and distribution and condition of biotopes/species.

Some plans include biodiversity-oriented zoning measures. In Germany, the plan is tasked with contributing to protection and improvement of the marine environment including by keeping protected areas and species free from incompatible uses and designating priority and reservation areas for nature conservation; these areas can go beyond existing MPAs. The Finnish MSP plan aims to create an overall view of the network of marine protected areas and ecological connections. As a practical measure, the plan identifies areas with significant underwater natural values. In Spain, plans designate Priority Use Areas for biodiversity (which includes all protected areas as MPAs, Natura 2000 sites and other protected areas by different tools), and High Potential Areas for biodiversity (including the areas considered to be of high value for the protection of biodiversity and which are not currently included in any figure of protection, but could be in the near future to achieve the 30% of sea protection by 2030).

In Italy, MSP also considers Other effective area-based conservation measures (OECMs). Italian plans explicitly refer to OECMs to meet the Biodiversity Strategy's 30% by 2030 target. They include a measure to identify new areas of spatial management of maritime traffic (Particularly Sensitive Sea Areas - PSSAs, Areas to Be Avoided - ATBAs or temporary threshold shifts - TTSs) and strengthen existing ones, with the aim of improving the regulation of shipping and reinforcing conservation actions for marine ecosystems and biodiversity.

Only some of the plans include elements on marine connectivity or "blue corridors". In Spain, the plan sets up the objective to "promote the connectivity, functionality and resilience of marine ecosystems through the consideration of Marine Green Infrastructure" (MGI). The MGI elements have been included as an annex of each marine demarcation as one of the MSP measures included in the plans. The "MSFD-MSP working group" foreseen by Italian MSP plans is expected to deliver studies on connectivity of MPAs. Italian MSP plans also include a measure stating that the

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improvement of marine connectivity is pursued through studies and research activities aimed at increasing the spatial knowledge of land-sea interactions on areas identified as hot spots for environmental protection and landscape preservation. While the German plan makes no specific mention of improving marine connectivity, it still includes provisions for migratory species (birds and mammals). It mentions birds' migration corridors, the permeability of marine space for large-scale migratory species and the connection between functionally relevant areas. It also includes a measure that aims to ensure connectivity of nature conservation areas with functional areas important for the protected assets of the North Sea management plans.

Restoration of marine ecosystems was considered to a lesser extent in the MSP plans. Only the Italian plan explicitly addresses restoration. The plan includes a strategic objective that "aims at considering the process and objectives of restoration of marine ecosystems in the medium-long term", reflecting the proposal for a European Law on Environmental Restoration (COM (2022)304 final - the so-called "Restoration Law"). The plan sets up a measure aiming at elaborating a National Plan for Environmental Restoration, identifying the priority areas to be restored, the restoration measures and methods to be adopted. Another measure aims at improving the knowledge on the distribution of habitats and species included in the Restoration Law proposal. The Spanish plan indirectly refers to restoration, as the National Strategy for Green Infrastructure and Ecological Connectivity and Restoration, which guides the marine green infrastructure, also includes the topic of restoration.

1.2.5. Blue circular economy

The ways plans approach the blue circular economy vary greatly. In some plans, the topic is covered both at a strategic level and at an operational level with explicit references and/or dedicated objectives and measures. Other plans reflect the blue circular economy to some extent or indirectly, either through generic mentions only or by addressing some specific blue economy sectors or segments. Some plans do not tackle the blue circular economy. Whether and how plans address the topic depends on their scope and mandate, including the relationships established between the plans and the other national policies such as those covering circular economy or recycling at large.

In France and Italy, the blue circular economy is included both at a strategic and operational level. In France, the topic is included either directly or indirectly in all plans' vision statements. In their objectives and measures, all French plans either explicitly call for blue circular economy at large, or for specific blue circular economy elements such as eco-design for boats and infrastructures, waste collection and recycling from industries such as boats decommissioning and fishing or the recovery of sediments from dredging. Beyond industries, the French plans also aim to involve citizens to blue circular economy actions including by means of waste-oriented ocean literacy and supporting voluntary foreshore maritime waste collection. They also call to adopt a sea basin approach to blue circular economy, for instance by means of cross-country information dissemination as well as by reflecting on the European dimension of circular economy initiatives designed within planning units. Similarly, Italian plans support a blue circular economy both at a strategic and operational level. Italian plans include both generic and specific blue objectives and measures. For instance, the plans feature a cross-cutting objective aiming at promoting the opportunities for marine and maritime activities offered by the circular economy approach, and specific measures targeting supply chains related to ships, leisure, sport and fishing boats, aquaculture and fishery by-products and waste. The Italian plans specify that some of the sector-specific

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measures related to circular economy could be implemented in synergy with actions aimed at the environmental and socio-economic requalification of coastal industrial areas in crisis or under decommission. Italian plans also clearly link MSP with other policies relevant to the circular blue economy, such as the National Strategy for the Circular Economy and the National Bioeconomy.

In the Finnish MSP plan's vision, the blue circular economy is to some extent considered as a cross-cutting theme for many of the sectors covered by the plan. Resource efficiency and circular economy, and the support for developing future technological solutions related to them, are also considered in the planning area specific visions. Objectives include targeted measures such as the circular use of the extracted materials in sectors such of offshore wind farm construction and dredging, the potential to use fish side streams and low value fish from fisheries in the development of blue biotechnology, and the improvement of waste management and recycling opportunities at ports and marinas for small boating.

In Bulgaria and Latvia, while plans do not include objectives or measures on circular blue economy at large, some specific elements are covered. For instance, in Bulgaria waste prevention is addressed in the specific objective dedicated to cooperation to reduce pollutant levels to values harmless to marine ecosystems and the plan recommends applying the principles of circular economy. The Latvian plan focuses on the disposal of sediments from dredging.

Lastly, the German and Spanish plans do not cover the circular blue economy.

1.2.6. Zero pollution

Zero pollution has received relatively little attention in the assessed MSP plans. All plans include pollution-related provisions, but they are mostly sector-specific and focus on pollution prevention. Plans address both drivers and forms of pollution (pressures). Across plans, identified drivers of pollution included shipping and maritime logistics, tourism, fisheries and aquaculture, offshore energy, security, and port activities. Some plans do consider pollution sources from land and land-sea interactions. French, Latvian, and Spanish plans include objectives relating to discharges in the sea from land-based activities, such as nutrients from agriculture, landfills, or sewage plants. Plans address pressures such as water and air pollutants, noise, solid waste, and the introduction of alien species. On pollution, our analysis of plans show that they all refer to either the Good Environmental Status (GES) and/or implementing the MSFD. Pollution provisions can also originate from sector or environment specific international and regional bodies, such as regional seas conventions. For instance, the German EEZ plan chapter recalls that provisions on pollution from shipping refers to a host of international agreements such as MARPOL, OSPAR and HELCOM.

Pollution remediation is rarely considered in the plans. In France, plans include measures for the identification and treatment of areas of waste accumulation. The Latvian MSP considers that algae and mussel aquaculture may contribute to pollution remediation and fight eutrophication as the growth process absorbs nutrients and filters the water.

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1.2.7. Cross-cutting elements: research and innovation and cross-border cooperation

Research and innovation, education and training and cross-border cooperation are important actions either directly or indirectly contributing to the marine EGD objectives. Their consideration in the MSP process and the resulting plan can support sustainable decision-making and other objectives set in the plan by providing new knowledge and data, supporting understanding through education and awareness raising, and increasing reliability and acceptability of the planning decisions. Depending on the national scope of MSP and the planning context, different approaches to these topics are taken in the MSP plans of the countries MSP-GREEN partners originate from.

Research and innovation were considered important by the plans for both gaining knowledge on how to best protect the marine environment and supporting the sustainable blue economy. Looking from the wider planning context, most of the plans aim to support the operation environment for research and innovation on marine and maritime topics, including higher education, but the extent to and the ways in which the issue is covered vary between the analysed plans. It depends on whether the focus is on a single sector or cross-sectoral topics and whether the objectives are set for the regional or national scale. Outside of a few exceptions, for example for technologies to mitigate underwater noise in the Italian case, the plans rarely make references to the promotion of specific technological innovations.

General level objectives related to research and innovation that cover multiple themes are fairly common in the analysed plans. For example, the Finnish plan specifies that different research needs are examined systematically as a part of the MSP process. The Spanish plan defines a wider multi-sectoral objective to promote and coordinate the scientific research on the carrying capacity of marine ecosystems for different uses and activities. The objectives and provisions on research can also be more strictly connected to specific cases: the German plan aims to secure the longevity of research on fisheries and offshore wind energy in the marine areas, while the Italian plans include measures at the national level supporting several sectors such as renewable energy production, fisheries and aquaculture. The spatial dimension of research and innovation is considered in the analysed MSP plans through, for example, the promotion of new Research & Development (R&D) and innovation platforms in the Spanish plan and by establishing regional innovation centres, and clusters, in Bulgaria, leaning on the strategic documents of the Black Sea region. In the Latvian case, research and innovation are only to be considered in the future steps of MSP. The importance of data production, sharing and harmonisation were identified as the basis for spatial planning of maritime areas in general and in some countries as important enablers of research and innovation on MSP-related fields. For example, the French plan states on the national level that MSP requires access to best available data and promotes the open access of public data to increase their re-use and potential for new uses.

Education and training related to the marine environment and maritime professions was identified as an important action for raising public awareness and securing the future for a sustainable blue economy. However, in most cases the topic was outside of the main focus of MSP. While in some of the MSP plans individual issues were considered (for example, securing the continuity of and increasing the attractiveness of maritime professions such as fishing or increasing the connection to ocean literacy initiatives), in Bulgaria and France the topic was covered more extensively. The Bulgarian plan sets

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objectives and measures focusing on maritime education and training for skills development and increasing the capacity of marine sectors to secure the competitiveness of the blue economy. In France the scale and type of objectives are different for the national and the regional (sea-basin) plans, the general focus being on the increase of knowledge and innovation in maritime topics. The national objectives support both the development of high-level expertise and the public awareness and knowledge on maritime issues, while the regional issues are more tied to the regional context and characteristics of the areas.

Many of the actions related to the implementation of the EGD themes in the marine areas (for instance the improved protection of valuable biodiversity areas or mitigation of the impacts of offshore wind farms on the marine ecosystems and habitats) are not bound by national borders. The context for cross-border collaboration is set in the Maritime Spatial Planning Directive (2014/89/EU), which defines a requirement for all member states with marine areas to prepare an MSP plan that is coherent with those of neighbouring countries. The countries whose plans were analysed by MSP-GREEN were engaged in discussions, knowledge and data exchange and sharing of objectives both during the plan preparation and several projects which had set the ground for the statutory processes. The preparation of the national plans has benefited from the sharing of ideas and experiences in multiple international cooperation projects, such as MSPMED involving several MSP competent authorities and scientific and technical partners from the Mediterranean.

Activities crossing national borders were considered as key issues to discuss and collaborate on with the neighbouring countries. For example, the Bulgarian plan highlights a strong cross-border dimension with Romania, identifying cooperation on specific actions such as fishery management, biodiversity protection and pollution prevention among others. At the sea basin or regional scale, involvement in collaborative planning activities, such as the HELCOM-VASAB Maritime spatial planning working group at the Baltic Sea, and in geo-data sharing, for instances the involvement of Italy in the Geodata portal of Adriatic Ionian Region (GAIR), were commonly mentioned by the MSP-GREEN partners. Collaboration with non-EU states was highlighted in the Mediterranean Sea basin, whereas collaboration in the Baltic Sea and the Black Sea regions with Russia was stopped due to the Russian invasion of Ukraine.

1.2.8 Overview of the inclusion of EGD elements in MSP plans

With the aim to complement the findings described in the previous paragraph with a synthetic overview of the assessment, results from country analysis are summarised, using a qualitative approach. The synthesis is based on the six selected EGD topics and their respective sub-topics, with reference to the taxonomy defined in the Common framework methodology reported in Appendix 1.

Inclusion of EGD elements at subtopic level has been assessed, based on the screening of the plans reported in the country chapters. The consideration of such elements has been classified in three categories:

- YES
- To a Certain Extent (TCE)
- NO.

Based on the inclusion of EGD related elements in sub-categories, inclusion in

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categories has been deducted. The categories have been assigned to classes (YES, TCE, NO), based on their occurrence of EGD elements in AT LEAST ONE sub-category. An example of this classification approach is provided here below:

Table 2. Example of classification of the EGD categories, based on the inclusion of EDG elements in the considered sub-categories. The example considers one hypothetical country.

CATEGORY	Climate change mitigation	Y
SUB-CATEGORIES	Renewable energy production, storage and transportation	Y
	Clean energy transition in maritime sectors	TCE
	Transformations in ports	TCE
	Blue carbon sinks	N

Table 2. Example of classification of the EGD categories

It is worth noting that with this approach we do not aim at capturing different frequencies of occurrence of the EGD elements in the plans, appearing across sub-categories. To create a taxonomy for categories and sub-categories (see Appendix 1), choices were made by partners based on the project's goals and the practical need to ensure a common framework methodology's operationality. Some degrees of heterogeneity exist between categories, for instance regarding the number of sub-categories they rely on. From that perspective, comparisons between categories' occurrence should be approached carefully, and reflect only generic tendencies. In addition, it is reminded that the assignment of occurrence assessment (NO, TCE, YES) by project partners at a sub-category level is based on an expert-based judgement. In this sense the synthesis is simplified and has the aim to provide a tendential qualitative picture.

The synthesis has been prepared with reference to both plans objectives and measures and it is reported respectively in table 3 and in figure 3 for objectives and in table 4 and in figure 4. In table and figures, the total number of countries where the EGD elements appear is given, out of the seven and six countries analysed respectively in the case of objectives and measures (the German plan does not include measures).

Considering MSP objectives, the topics (categories) Climate change mitigation and Sustainable sea-food production are definitely very well represented in the plans. The analysis at sub-category level reveals that, in the case of Climate change mitigation, this is largely due to objectives linked to renewable energy production, storage and transportation, whereas decarbonization initiatives related to transformations in maritime sectors and ports play a minor role and blue carbon sinks are almost not mentioned. In the case of Sustainable sea-food production, fisheries and aquaculture are similarly considered in the objectives of the plans whereas developments linked to sustainable algae production are much less addressed in plans objectives.

Despite the relevance given to climate change mitigation in MSP plans objectives, Climate change adaptation is less reflected in the plans, as it emerges across all the three sub-topics analysed (green infrastructures, sensitive habitats and species, anticipation of climate change effects).

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Biodiversity and ecosystem protection and restoration are clearly referred to in the objective of more than a half of the plans analysed, in the others indirect or partial mentions occur. None of the analysed plans lack a mention (at least indirect) to biodiversity protection. Instead, marine restoration is still very much under-represented in MSP plans objectives so far.

Finally, direct and explicit reference to Blue circular economy and Zero pollution are minor in the MSP plans objectives but indirect mentions are more frequent, for example for actions related with waste prevention and pollution prevention.

When considering measures, the synthesis shows similar patterns, as described for the objectives, but with a bit lower occurrence of EGD elements in measures than in the objectives, with the exception of Biodiversity protection and Zero pollution.

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EGD elements according to the taxonomy identified in the Common framework methodology (Appendix 1).	Inclusion of EGD elements in MSP plans (7 countries analysed)		
	YES	To Certain Extent	NO
1. Climate change mitigation	7	0	0
Renewable energy production, storage and transportation	7	0	0
Clean energy transition in maritime sectors	3	3	1
Transformations in ports	1	3	3
Blue carbon sinks	0	1	6
2. Climate change adaptation	3	4	0
Green Infrastructures to enhance coastal resilience	2	1	4
Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes	0	4	3
Anticipation of climate change-related effects	1	3	3
3. Sustainable sea-food production	7	0	0
Sustainable fisheries: sustainable fisheries management, including area and time-based measures	7	0	0
Sustainable aquaculture and shellfish production	6	1	0
Sustainable algae production	1	2	4
4. Biodiversity and ecosystem protection and restoration	4	3	0
A coherent network of marine protected areas	4	3	0
Restoring marine and coastal ecosystems	1	3	3
5. Blue circular economy	2	3	2
Circular design	1	1	5
Waste prevention	2	2	3
Re-use, repair, upgrade, recycle	1	3	3
6. Zero pollution	1	6	0
Pollution prevention	1	6	0
Pollution remediation	0	1	6

Table 3. Inclusion of EGD elements in the OBJECTIVES of the MSP plans.

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EGD elements according to the taxonomy identified in the Common framework methodology (Appendix 1).	Inclusion of EGD elements in MSP plans (7 countries analysed)		
	YES	To a Certain Extent	NO
1. Climate change mitigation	5	1	0
Renewable energy production, storage and transportation	5	1	0
Clean energy transition in maritime sectors	2	2	2
Transformations in ports	1	2	3
Blue carbon sinks	0	1	5
2. Climate change adaptation	2	3	1
Green Infrastructures to enhance coastal resilience	2	2	2
Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes	2	1	3
Anticipation of climate change-related effects	1	3	2
3. Sustainable sea-food production	6	0	0
Sustainable fisheries: sustainable fisheries management, including area and time-based measures	5	1	0
Sustainable aquaculture and shellfish production	4	2	0
Sustainable algae production	1	2	3
4. Biodiversity and ecosystem protection and restoration	4	2	0
A coherent network of marine protected areas	4	2	0
Restoring marine and coastal ecosystems	2	2	2
5. Blue circular economy	2	1	3
Circular design	0	2	4
Waste prevention	2	1	3
Re-use, repair, upgrade, recycle	1	1	4
6. Zero pollution	1	4	1
Pollution prevention	1	4	1
Pollution remediation	0	2	4

Table 4. Inclusion of EGD elements in the MEASURES of the MSP plans.

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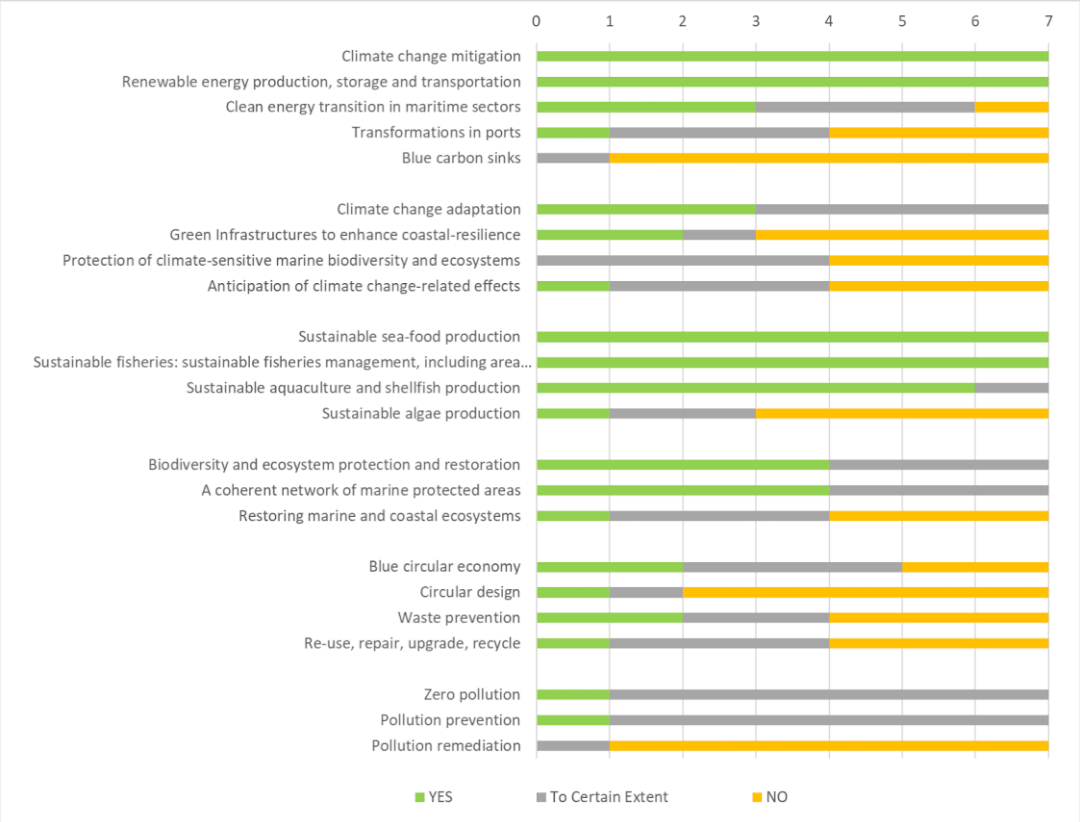

Figure 3. Inclusion of EGD elements in the OBJECTIVES of the MSP plans.

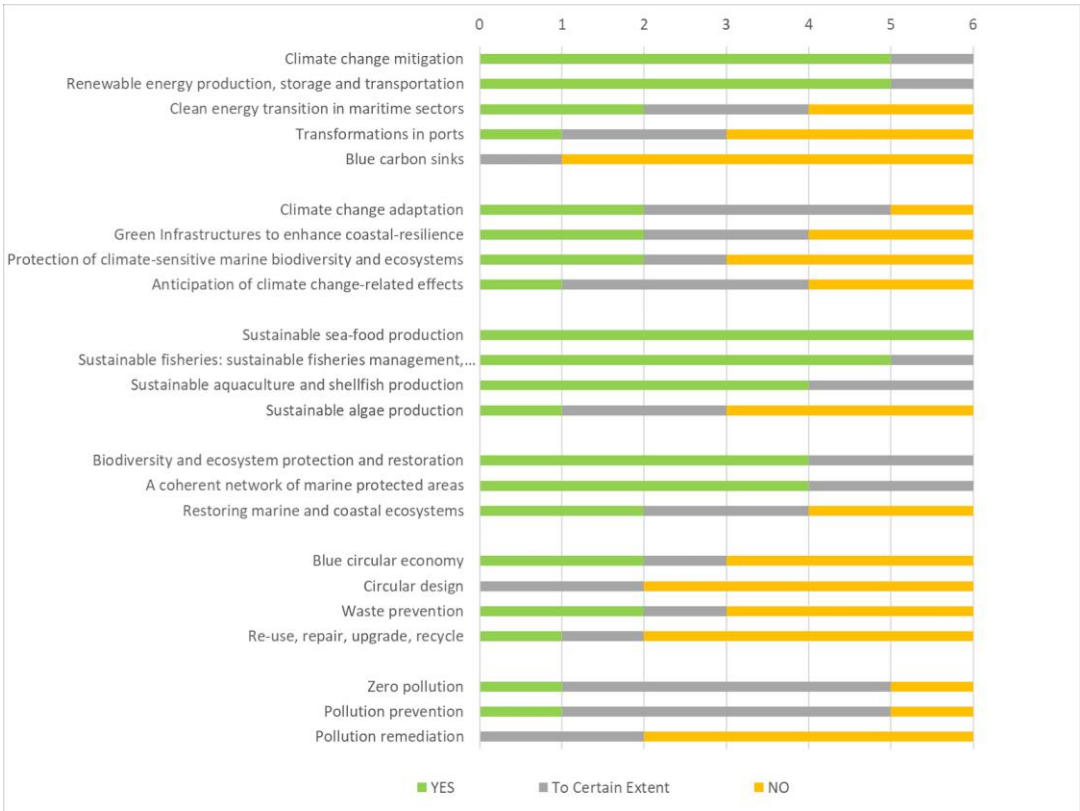

Figure 4. Inclusion of EGD elements in the MEASURES of the MSP plans.

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1.3. Fair and just transition in MSP

There is no clear definition for what fair and just transition means for MSP. Participation, equal representation of the diversity of stakeholders and areas, the power to influence planning and access to the plans and data were identified as some of the principles that can be regarded as important dimensions of fairness. There is a need to better define what MSP aims to achieve as regards to fair and just transition and how it should be clearly communicated to be accessible for all. Common EU scale principles, that take into consideration national characteristics, could be beneficial in achieving this goal.

The first round of MSP planning required the countries to define which are the best ways to organise participation and who are the main stakeholders. As the responsible authorities, legislation on MSP, considered themes and spatial coverage of the countries are different, so were approaches to stakeholder engagement. Nevertheless, there are common requirements for MSP: the plans need to consider the shared use of sea space, participation of all competent public and private stakeholders and the equal representation of all areas and actors. The country chapters describe MSP as an inherently participatory process, coordinating the different needs and activities of the different marine sectors covered in the plan. The MSP-GREEN project partners also agreed on an overarching objective for MSP to go beyond participation and move towards the co-development of plans (see Appendix 2). Through a holistic approach, MSP could work as a platform for supporting intersectoral, inter-ministerial and interregional dialog at multiple levels, in a medium/long term perspective.

The objectives of stakeholder involvement were similar in all countries, including for example ensuring coordination of all sea uses, synchronising policy objectives and development interests, exchanging information, co-creating knowledge, and promoting the approval of the plan among stakeholders. To support the efficient use of the sea space, the promotion of synergies between sectors though stakeholder engagement was a common practice. The Bulgarian MSP plan, for example, foresees multifunctional zones aiming to achieve positive synergies and support the better coordination of sea-related sectoral policies. The Italian case shows that MSP can work as a framework for encouraging synergies between different sea uses while simultaneously considering synergies with environmental and landscape conservation.

From a spatial perspective, ensuring equal consideration and representation of the plan's spatial coverage and its area of influence is important. Strong engagement of the coastal regions into MSP was common, also in Germany where MSP is done separately for the EEZ (on federal level) and for the territorial sea (by the coastal federal states). The example from Italy highlights the importance of regional knowledge and expertise in the co-design of the MSP plans together with the national authorities. In addition to providing key insights and data on the regional issues, the regions were also invited to express their needs regarding MSP and related planning options. Other observations on the importance on the regional scale were made for example in Finland, where the regions are part of the MSP coordination, and France, where each *façade* had a separate participatory process including the general public.

The countries showed notable effort to ensure participation of all relevant stakeholders and used adaptable approaches to participation to cover the aspects described above. In addition to the formally defined requirements for participation in the legislation, many countries took extra steps to widen their engagement. For example, additional events or working groups on identified key topics and on regionally relevant issues were

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organised. The definition of working groups, networks or other similar entities made from different compositions of marine sectors for promoting collaboration and communicating MSP related topics was common in the countries during the first cycle of MSP. For example, when starting the MSP process in Latvia, an MSP Group was set up and later merged with the Coastal cooperation and coordination group. Another example of synergies between stakeholder engagement in marine and coastal planning is from Finland, where the development of the coastal strategy and the MSP process are strongly interlinked.

It is important to consider whether through engagement into the planning process, the stakeholders were able to influence the plan and the related decision making, including the distributive effects of the plan. The answer to this question is not easy; it depends on the national context and the stakeholders in question. The contribution of administrative stakeholders from ministries and other key institutions (at the national and subnational level) is self-evident as the MSP plan needs to be agreed by these institutions in line with the issues and activities relevant to them. The examples provided by the countries whose plans were analysed show that these authorities needed to be brought together with private sector actors to look at the multiple uses of the sea areas. For example, in the Spanish MSP process during the identification of high potential areas for OWF development, two ministerial entities under the Ministry for the Ecological Transition and the Demographic Challenge were identified as main actors to cover both, the viability of OWF development and the aspect of biodiversity protection in the areas. To consider other sea uses, these organisations were then brought around the same table with the fisheries sector, being the most influenced sector when it comes to OWF development. Nonetheless, different sectors clearly have differing capacity to influence the planning process related to such issues as size, political support, and resources.

The involvement of local scale actors and the public is seen as important but doing this in practice can be challenging as it was highlighted by the workshop results (see Appendix 2). The impacts from MSP can be local, but the planning scale of MSP is mostly focused on national and regional issues, which can make it difficult to engage the local actors. The MSP-GREEN project partners thought that it is important to include the local stakeholders in the planning process from the beginning. In addition, participation needs to be organised in a way that considers the capacity of the participants to comfortably engage in the discussions. Once the local actors are engaged in the MSP planning process, it is important that their perspectives are visible in the resulting MSP plan. For example, the approval of the MSP plans by the national authorities can lead to compromises in the planning decisions as is highlighted by the examples from Spain and Germany.

While the analysis highlighted notable efforts to engage relevant stakeholders in the considered countries, it is still difficult to consider whether participation was sufficient. This particularly applies when considering both stakeholders (with a mandate or direct interest) and the general public. First, ensuring representativeness of diversity and spatial distribution of stakeholders is important to ensure the coverage of all valid opinions and to identify the possible impacts of the plan on different stakeholders and areas. In all cases, the plans did not set targets for or give specific consideration on participant characteristics such as gender, age, or ethnicity or on disadvantaged groups. Even if all the relevant participants are identified, engaging them into the planning process could be challenging. The analysis highlighted for all the countries the importance of communication via for example web pages, newsletters, working groups and social media, to ensure that stakeholders and the public are aware of the on-going

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planning process and about when and how they can participate. Structured development of the participatory processes is in any case required in the future and the engagement of stakeholders needs to be continued during the implementation phase. For example, during the Italian MSP process, a specific strategy for the long-term development of participation and involvement of stakeholders in the implementation, monitoring, evaluation, and revision of the MSP plans were introduced as one of the measures of the plan. Similarly, the Spanish MSP plan includes a measure that aims to elaborate long-term stakeholder participation and develop an involvement strategy, paying special attention to the sectors with the strongest social roots, local administrations, and citizenship, during the plan's implementation.

The assessment of the costs and benefits of the plans can also be used to ensure the fairness of the impacts of MSP. The countries whose plans were analysed were in varying stages of assessing the impacts of the plans and the methods to do this in practice were also different. An example from Germany highlights a common property of MSP plans, as entities representing the best possible balance between sea uses and area allocation, lessening the need for further consideration of mitigation and compensation of the plans impacts. In addition, the country analysis highlights that the participatory planning process can function as a tool for evaluating and considering the impacts of the MSP plan on different groups.

Public access to data and the plans supports acceptance and transparency of MSP. All the countries in which the analysis was performed provided the MSP plans, and data and reports related to them in both national web services and/or on EU level platforms such as the European Marine Observation and Data Network (EMODnet). High quality data from different fields, such as ecological, social, political, and economic data, form the basis of MSP and when shared in an accessible way can also increase the stakeholder understanding of the topics faced in planning. Bringing together data from different providers aids in building an overview of all the actions on-going at seas.

1.4. Key challenges for MSP to work as an enabler of the EGD

Semi-structured interviews were conducted by project partners with a view to highlighting key challenges for MSP to work as an enabler of the EGD. In total, MSP-GREEN project partners conducted 30 interviews. While the considerations presented in this section derive from a limited number of interviews, they also reflect a diversity of insights from national and sub-national MSP authorities, as well as a wide range of stakeholders, including various maritime sectors. Analysis of the interviews resulted in the identification of 6 major thematic challenges relating to space (1.4.1.), data (1.4.2.), uncertainty (1.4.3.), MSP scope (1.4.4.), contrasting policy objectives (1.4.5.) and planning process (1.4.6.).

1.4.1. Space as a resource: challenges related to spatial need, distribution, and compatibility of uses

Challenges relating to space availability were highlighted in almost all the countries analysed in the project. Many EGD objectives require space to unfold. However, European seas are already very busy places and sea space is limited. Interviewees highlighted that the EGD may require more space than what is available in some areas to achieve its many different objectives. Put differently, there would not be enough

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space in some areas to deliver all EGD objectives. Finding space for new activities and uses in the face of traditional ones would constitute a challenge. Typically, issues relating to finding the necessary space to achieve both offshore renewable energy and marine conservation areas targets were highlighted. Other new activities and uses that were also said to require space included aquaculture development, energy transition in ports and nature restoration. Some interviewees considered multi-use as a possible way forward. However, they also highlighted that the practical implementation of space and resource sharing could be challenging or sometimes even impossible when activities interfere with one another. These limitations suggest that multi-use of the sea space should not be considered *de facto* as a silver bullet. The lack of compatibility can introduce the need to prioritise access to sea space resulting in spatial competition, turning space itself into a limited resource.

1.4.2. Obstacles to the use of the "best available data"

Article 10 of the MSPD states that "Member States shall organise the use of the best available data". In practice, interviewees cast light on several issues relating to data. First, lack of data was raised as a major obstacle, although it was acknowledged that much has been done to improve data availability and use. A first data gap would relate to the marine environment, on topics such as ecosystem services and functioning or habitats and species distribution (Bulgaria, Finland, France, Spain). Another data gap would concern the effects of human activities on the environment, especially for new activities such as offshore renewable energies, or about the assessment of cumulative effects (Finland, Spain). There would also be a lack of data about some specific maritime activities, for instance about small-scale fisheries geographic distribution (Bulgaria, Italy).

Beyond the lack of data, interviewees pointed out to a second stream of challenges that would concern the characteristics of data. Firstly, interviewees pointed to a lack of dynamic and up to date data. This would contrast with the dynamic nature of the ocean, which would constitute an obstacle in reflecting the evolving state of ocean knowledge and would not allow to reflect the swift evolutions of some sectors such as offshore renewables. Interviewees also highlighted issues relating to the fragmentation of data. Here, the issue was not so much that data would be missing, but that it would be scattered between many actors and administrations. This would result in a lack of coordination and limit the possibilities of cross-checking and cross-using of data. In the same vein, issues relating to lack of data compatibility were raised, as different stakeholders are producing, processing, and using different types of data, at different scales. Lastly, beyond issues relating to the lack or characteristics of data, interviewees also raised the challenge of non-public and/or non-available data.

1.4.3. Planning transitions vs. managing uncertainties

The EGD calls for many transitions in coastal and maritime realms, e.g., ecological and energy transitions of maritime activities and societal changes including new relations to nature and conservation. MSP *per se* implies a projection in the future. Both transitions and planning come with temporal uncertainties. From our interviews, the management of such uncertainties could prove challenging. According to interviewees, it is difficult for some stakeholders to project themselves into the future and have a medium to long-term vision given constant changes (environmental, climate-related, social, economic, etc.). In the same vein, interviewees pointed to a lack of visibility regarding the

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development of certain sectors in transition (e.g., development of renewable energy). These sectoral uncertainties would be related to constant changes in targets, timetables, and deadlines for developing activities, which would also vary across levels (EU, national, sub-national). In addition, interviewees showed that visions of sustainable development may be perceived differently at different levels and by different actors, making the practical implementation of transition objectives even more complex.

Beyond the temporal dimension, some interviewees pointed out that uncertainty can be created by the unclear definition of some premises and principles (e.g., "precautionary principle" or "ecosystem-based approach", or "stakeholder engagement"). Such uncertainties may provoke that these premises and principles are not fully or easily operationalised and applied.

1.4.4. Issues related to the scope, mandate, and nature of MSP

Interviewees highlighted that the scope and mandate of national MSP processes could lead to challenges in the implementation of the marine components of the EGD. The geographic scope or mandate of MSP could constitute itself a challenge for inclusion of EGD elements. In some instances, the limitation of MSP to specific maritime areas would make it difficult to approach marine or maritime issues from the integrated perspective requested by EGD. For instance, from our analysis, the German plan for the EEZ is limited in its ability to address EGD objectives relating to coasts, which have to be addressed by spatial plans of the three coastal federal states for both the marine and terrestrial areas respectively. Similarly, addressing some land-sea interaction issues such as eutrophication require the ability to adopt measures inland, which can be outside of the legal remit of MSP. In addition, interviewees mentioned that the geographic scale adopted to design plans can prove challenging for some stakeholders. For instance, in France, MSP is based on the concept of "*façade*", complex administrative units spanning across regions. According to some interviewees, it would be difficult to conceive planning and the transitions the EGD calls for at such a scale.

From our interviews, the enforceability of plans, i.e., whether plans are binding or not, would affect their ability to effectively deliver on EGD objectives. For instance, Finnish interviews highlighted that stakeholders may have a lack of commitment to the objectives set in a non-binding plan, even if they are defined through a collaborative process. Even when stakeholders are aware of the objectives set in the MSP plan and are engaged in their advancement, can the lack of binding actions lower the speed at which progress is made.

From our analysis, this would relate to the challenges met due to a lack of coordination between authorities and competences either involved in MSP at various levels, or across sectors and policies. This would echo the question of the role of MSP *vis-à-vis* the various sectoral maritime and marine policies. Based on the assessed plans, MSP is transversal, but not meant to regulate or replace the policies it coordinates. Its capacity to deliver practical effects, including for the EGD objectives, is therefore limited if a real and full coordination and integration among institutions and sectors is not ensured. Practically speaking, the legal scope or mandate of the authorities in charge of planning often cover a limited spectrum of the users and uses tackled by MSP. From our analysis, the issue is even more reinforced when MSP is expected to bring together sectoral policies that are contradicting one another or calling for objectives that may diverge. As one of the project partners (Latvia, MoEPRD) puts it:

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"The process of maritime spatial planning itself is a complex field of negotiation" (see Chapter 7).

1.4.5. Contrasting policy objectives

As a transversal tool, MSP aims at integrating and coherently articulating marine and maritime policies in planning units. From our analysis, contrasting or even contradictory policy objectives that need to be coordinated within planning may constitute a significant challenge for MSP. Even more, since our analysis observed that MSP often has no regulatory power over the contrasting policies and can therefore only cast light on or take note of the difficulties in delivering on contrasting objectives. From interviews, a key tension in MSP was identified between EGD policies on nature protection and restoration and those calling for the development of new blue economy activities, such as offshore renewable energy or aquaculture. This can be explained by conflict and competition for sea space as exposed in section 1.4.1. Conversely, some actors considered that environmental policies on topics such as compensation can hamper innovation. Therefore, prioritisation and compromises may be needed. However, interviewees highlighted that such compromises were not always considered in the plans and/or could not always rely on clear political guidance. Mismatch in policy calendars, for instance between the MSFD and MSPD cycles, was considered a challenge.

1.4.6. MSP process limitations

From our interviews, the first set of limitations associated with MSP processes are those relating to a lack of resources. The lack of MSP resources embraces several dimensions. First, interviewees shared that MSP can be limited due to a lack of human resources (HR). For instance, in Finland and Bulgaria, due to the lack of dedicated resources, MSP is only one amongst many other topics handled by regional planners. In Latvia, from the training perspective of the HR challenge, it was highlighted that there is no specific academic programme dedicated to MSP. The lack of adequate financial resources attributed to MSP processes was also regularly mentioned by interviewees. This could partially explain the above-mentioned issues relating to HR. The lack of financial resources allocated to the implementation phase of MSP plans was also considered to hinder their effectiveness. Both for human and financial resources, the picture would get even more complicated when the implementation of plans relies on other authorities and/or sectors that are not clearly identified in the plans, or when they are identified but not associated with practical means to deliver on the plans' provisions.

Time constraints were also said to pose an obstacle for MSP processes. This challenge was twofold: some interviewees argued that MSP should be attributed more time, others that MSP was not swift enough in meeting urgent challenges. As far as lack of time is concerned, it can be time-consuming to acquire knowledge and data on all marine activities, including those expected to contribute to the EGD, required for sustainable decision-making. MSP also needs to be based on public participation and consultation, which again requires time. At the same time, MSP is under pressure and time constraints as it is expected to deliver swiftly on many political and societal needs, including those stemming from the EGD. Some interviewees expressed frustration with regards to the slowness of MSP processes compared to the urgency to act on issues such as the energy transition or biodiversity loss.

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From the perspective of the EGD's "leave no one behind" principle, issues relating to participation and lack of social licensing were highlighted in most of the MSP processes analysed. They can be caused by the functioning of MSP governance bodies, which may complicate the participation of some stakeholders into decision-making. In turn, this may lead to a lack of representation or equity. For instance, access to governance bodies may be difficult or limited for some stakeholders. According to interviewees, decisions can be taken by high level authorities and fail to consider local stakeholders and economic operators. From our analysis, in some cases, reported difficulties to engage into MSP may simply mirror or be the consequence of broader representation issues within sectors (e.g., fisheries or offshore energy). Abbreviated consultation procedures, especially when complex by nature and/or dealing with complex topics, were said to hinder proper public consultation and engagement. Challenges may also arise when only limited information is provided by authorities, or when it is shared with such a high degree of technical details that citizens or the civil society are not able to practically engage with it. From our analysis, MSP's task to communicate on marine and maritime topics also remains challenging due to the low ocean literacy within European societies on a general level.

Overall, it was mentioned that motivating stakeholders and public engagement into the MSP process can be challenging. The fact that MSP remains a relatively new tool and that its operational impacts are often unclear contribute to the challenge. Amongst stakeholders more versed in MSP, participation was sometimes voluntarily questioned due to an opposition to the concept of planning at sea *per se*. Some interviewees (France) saw MSP as a "projection of terrestrial logics at sea" underpinned by power competition that would lead to an appropriation of the maritime space by some uses and users.

1.5. Summary considerations and conclusions

This paragraph summarises the elements presented in the report, resulting from analysis of plans, interviews, and the workshop results (for the latter see Appendix 2).

1.5.1. Key thematic takeaways

Climate change mitigation: Climate change mitigation is included in all assessed plans. The topic is mostly approached from the perspective of the energy transition at sea. Within MSP plans, the focus is mainly on offshore wind energy. Other renewable sources of energy (e.g. wave, solar, current, tide) are considered to a lesser extent and mainly from a research and innovation perspective. Some plans also approach energy transition from the perspective of promoting energy efficiency and new fuels in maritime sectors and ports. Blue carbon and the role of ecosystems in climate change mitigation are rarely addressed by the plans assessed.

Climate change adaptation: Plans only consider climate change adaptation to a limited extent. Some of them address the effects of climate change on landscapes due to increased risks such as coastal erosion and floods. Some plans include a limited number of *ad hoc* provisions and measures on specific topics such as fisheries adaptation and nature-based solutions. Some provisions are considered as indirectly contributing to climate change adaptation objectives but often not explicitly formulated with climate change adaptation as a goal, such as the protection of the marine environment and the improvement of its status.

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Sustainable food production: Sustainable seafood production is well considered in all the assessed plans. Achieving sustainable fisheries is a goal of all MSP plans, but relationships between MSP and fisheries governance frameworks vary at a national level. Some plans do not regulate fisheries *per se* but include provisions supporting sustainable fisheries, such as excluding incompatible activities in some areas or identifying spawning grounds. Other plans include provisions and measures that more directly regulate fishing, for instance on bycatch, licensing, or the fight against illegal fishing. As far as aquaculture is concerned, fish and shellfish farming are commonly considered in the plans, at least as a potential for the future. Sustainable seaweed production appears in less than half of the assessed plans.

Biodiversity and ecosystem protection and restoration: Protecting the marine environment is a cross-cutting or overarching objective in all analysed MSP plans. Generally, plans do not include the designation of new MPAs since this is considered to be outside of the scope of the MSP planning process. As documented in the assessed plans, MSP is considered as an operative tool to support nature protection either from a governance perspective, for instance through the creation of dedicated working groups, or from an operational perspective, for instance by requiring updating information on ecologically significant areas. Some plans include biodiversity-oriented zoning measures, such as the designation of priority and reservation areas for nature conservation or the identification of areas with significant underwater natural values. Provisions on OECMs and marine connectivity were less commonly found in the plans. Only one plan explicitly addresses restoration of marine ecosystems.

Blue circular economy: The assessed plans approach blue circular economy in different manners. Some of them cover the topic both at a strategic level and at an operational level, with explicit references and/or dedicated objectives and measures. Other plans only address blue circular economy to some extent, either through generic mentions only or by targeting some specific blue economy sectors. Some plans do not tackle the blue circular economy at all. Whether and how MSP addresses the topic depends on the plans' scope and mandate, including the relationships established with other national policies such as those covering circular economy or recycling at large.

Zero pollution: Zero pollution receives relatively little attention in assessed MSP plans. All countries include pollution-related provisions, but they are mostly sector-specific and focus on pollution prevention. Plans address both drivers and pressures, including multiple forms of pollution such as water and air pollutants, noise, solid waste, and the introduction of alien species. Pollution remediation is rarely considered in the plans. Many plans consider pollution issues from the perspective of achieving the GES therefore referring to MSFD implementation. It is worth noting that pollution provisions also originate from international and regional bodies, such as regional seas conventions.

Cross cutting elements - research & innovation and cross-border cooperation: The assessed plans consider supporting research and innovation as a way for gaining knowledge on the marine environment and for boosting sustainable blue economy, within the MSP frame. Education is important for increasing understanding and raising public awareness, while securing a blue economy with a skilled workforce. The plans' preparation benefited from cross-border collaboration; especially marine and maritime activities crossing national borders are considered key issues to discuss. How and which of the aforementioned cross-cutting elements are considered depends on the national scope of MSP and the planning context. The objectives and measures range

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from cross-cutting general level aims to theme or area specific actions.

Fair and just transition in MSP: Participation, representation of the diversity of stakeholders and areas, the power to influence planning and access to plans and data have been identified in our methodology as key dimensions for supporting a fair and just transition through MSP. In general, the analysed MSP plans and the related processes went beyond the formally defined requirements and made considerable efforts to ensure widespread participation. Working groups, knowledge co-creation, inclusive communication and online data services were common actions. Challenges were identified in reaching the local scale actors (sometimes due to the strategic nature of the plans and/or MSP being a national level competence) while less consideration was directed on gender issues or the participation of disadvantaged groups. Whether the participation resulted in the stakeholders being able to influence the planning decisions, depended both on the context and the type of stakeholder. Overall, the role MSP can play in supporting a fair and just transition still needs to be further explored and operationalised. This includes identifying the planning approaches and methods of engagement that would provide a fair and just distribution of benefits and impacts of the MSP plans.

1.5.2. Conclusions

National contexts strongly influence whether EGD elements are incorporated in MSP. Therefore, it is necessary to account for the specificities of national contexts when analysing how MSP plans incorporate and enable the EGD marine components. Specificities relate to national MSP timelines, countries' approaches to MSP and what mandate they give to it. Different geographical and biophysical features may also have a role in shaping the way some aspects of the EGD are considered within MSP, as do national policy priorities. Specific national interpretations of EGD elements, for instance what restoration means in each country, can also play a role.

Depending on the national context, in particular the mandate given to it, MSP has different levels of capacity to support the objectives of the EGD. For several EGD topics and related objectives MSP has a direct, relevant role. For other topics, MSP might not have the mandate to influence certain actions and therefore cannot directly enable certain objectives of the EGD. It can, however, provide indirect support by linking up with other policy areas or decision-making frameworks such as sector plans. In any case MSP provides the framework to integrate international, sea basin, national and sectoral policies, and strategies relevant for the marine components of the EGD, as well to raise awareness, support discussions, and give recommendations.

Our analysis cast light on several key challenges for MSP to further work as an enabler of the marine components of EGD. In some areas, implementing the EGD may result in or reinforce spatial competition due to the lack of available sea space. It is still necessary to overcome obstacles relating to the lack of some marine and maritime data, and related issues such as data fragmentation and lack of interoperability. For some stakeholders, difficulties to project themselves in the future over the medium and long term as well as the unclear definition of some key premises and principles were said to create uncertainty that could in turn hamper action. Limitation in how plans can work as an enabler of the EGD can stem from the geographic and legal scope and mandate of MSP at a national level. Obstacles can arise from a lack of cooperation between relevant authorities and contrasting objectives from policies coordinated within planning. MSP process limitations, such as a lack of resources, time or participation can hinder the

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implementation of the EGD marine components.

There is a strong interconnection between the EGD objectives and the related thematic categories considered in this study. To reach the objectives set by the EGD, MSP needs to take a cross-sectoral approach, which indeed is an intrinsic characteristic of maritime spatial planning. Marine activities are interconnected and easily affect each other. Such interconnections can result in conflicts and synergies, to be respectively managed and supported by MSP. In this regard, multi-use of the sea space is perceived as a possible or even an essential solution, although work must still be done for its operationalisation. To plan and support stakeholder collaboration in multi-use, discussion across sectoral borders is crucial. Considering the sea and coastal areas as socio-ecological systems where the sustainable development of marine sectors, equitable and fair transition and protection of the environment are interlinked, can guide MSP in identifying synergies and solving conflicts.

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Chapter 2

The Green Deal component of MSP in Bulgaria

2.1. Background information about Bulgaria's MSP process and plan

2.1.1. Background information about the plan

In Bulgaria the MSP Directive 2014/89/EU was transposed in early 2018 in the national legislation by an Amendment of the Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria Act (SG No. 28/29.03.2018).

There is one single plan (centralised, having general character): Maritime Spatial Plan of the Republic of Bulgaria for the period 2021-2035. At sea the Plan includes the internal waters, the territorial sea, the contiguous zone, and the Exclusive Economic Zone (EEZ). The total marine area interested by the plan is 36,190.56 km^2.

The land boundary of the Plan changes according to specific requirements and scope of the initial data for the purposes of the analysis of the marine environment and the adjacent coastal zone - from the border of the Black Sea municipalities for demography and other indicators on which data are collected at municipal level, till the defined beach boundaries, when exploring the recreational capacity of the coast.

The main aim of the Plan is achieving sustainable growth of the maritime economy and sustainable development of the Bulgarian Black Sea region, through an efficient use of natural resources, in accordance with the requirements for integrated protection of the marine environment.

Figure 5. Bulgarian maritime spatial planning space

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Cross-border dimension has been ensured in particular with Romania (as Bulgaria and Romania are the two EU Member States in the Black Sea) under the two EMFF MARSPLAN I and II projects supporting the cross-border collaboration in implementing the MSP Directive.[6]

The Plan does consider a multi-scalar approach: in the course of its implementation more detailed and distinct plans for different marine areas will be elaborated and these plans can be under the responsibility of the same or different authorities; and there can be a hierarchical relationship between plans. The Plan features zoning of the sea space, which 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., rather than perspective and considering cumulative impacts (synergies/conflicts) as result of spatially overlapped zones.

Functions and uses are grouped into four types of zones:

i) Restricted zones for use: zones with a ban on use include those zones where it is only possible for a single function, due to legal prohibitions and incompatibility with other maritime uses due to risk to safety, life and health of people, risks of accidents and damage to important infrastructure or of cultural values. Examples: military training zones are included in this group, zones with bans on navigation and anchoring, and the areas with underwater linear objects of the technical infrastructure that are at risk of being affected by other maritime activities. Both types of zones are reflected - with a permanent ban and with a temporary ban for use;
ii) Zones with specific conservation regime: cover marine protected areas of the National Ecological Network and the protection zones of cultural heritage, water protection zones under Art. 119a of the Water Act (2000);
iii) Multifunctional zones: combine several different compatible functions without conflicts in certain sea areas. Currently any combinations are possible except those with specific legally regulated restrictions; and
iv) Areas for future use: determined due to the identified gaps in the knowledge in the offshore areas.

Considering the dynamic nature of the environment and of the MSP document, this zoning is also dynamic and will reflect changes in environmental conditions, technologies, national or sectoral priorities and needs. The intended uses and activities grouped into these four types of functional areas are described in the Plan with the restrictive regimes and the legal basis (EU and national).

The Plan is not self-consistent and refers to other strategic documents. The legislative framework of the Plan is determined by legislative, programme and strategic documents - international (conventions, protocols, chapters), European (regulations, directives, decisions, programmes, strategies, and initiatives); regional (conventions and protocols for the Black Sea region); national (laws, regulations, guidelines, concepts, strategies, plans and programmes of measures); examples of good practices from other countries.

The Responsible Authority is the Ministry of Regional Development and Public Works of Bulgaria (MRDPW). The institutional framework of the MSP plan in Bulgaria is defined in

[6] See http://www.marsplan.ro/en/

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Section VII 'Use of maritime areas and protection of the marine environment' of the Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria Act. According to Art. 51b:

> "*The general management and coordination of the maritime spatial planning shall be carried out by the Minister of Regional Development and Public Works, who shall also be responsible for the elaboration and maintenance of the Maritime Spatial Plan of the Republic of Bulgaria*".

Planning of the coastal municipalities is also under the mandate of the Ministry of Regional Development and Public Works, who according to Art. 124 para. 2 of the Spatial Development Act (SG 1/02.01.2001), gives permission for elaboration of a Master plan of a settlement formation of national importance. The spatial planning in coastal municipalities is carried out jointly with the municipal local administrations.

Although the adjacent coastal areas are not indicated in the Maritime Space Act, for the purposes of the maritime spatial plan they will be considered within the zones for special territorial protection defined by the Black Sea Coast Spatial Development Act (SG 48/15.06.2007), (zones "A" and "B", respectively 100 m and 2 km from the shoreline, and the adjacent waters in the area with a width of 200 m). This scope includes important sites and facilities of transport, tourism, technical and port infrastructure, which are related to the development of sea activities and have an impact on the quality of the marine environment and the services offered. The environmental dimension of the MSP plan consists in the implementation of the Marine Strategy Framework Directive (MSFD) and the national Marine Strategy (Programme of Measures, PoMs) and by the provision of Water Framework Directive (WFD). Both directives are fully integrated in the plan and have provided support to the MSP.

The environmental part of the plan is also supported by the Environmental Impact Assessment (EIA) Report and additional document by the Ministry of Environment and Water of Bulgaria (MOEW) with complemented measures and recommendations to reach the targets of the EU Biodiversity Strategy 2030. The Plan should reconcile conflict-free existing and future activities, taking into account the PoMs to the national Marine Strategy according to the MSFD, which is supplemented by the WFD planned measures for coastal waters.

The Bulgarian MSP plan is a strategic plan that has indirect impact on the planning through guiding effects. The Plan does not envisage new constructions or changes in the land use of the coastal territory, which is subject to the master plans of the 14 Black Sea municipalities. It provides basic strategic guidelines for consideration of the land-sea interactions and for coordinating maritime activities. The Plan does not result in implementation of investment initiatives, which are planned and processed within the legal framework for spatial planning (Spatial Development Act (2001), Black Sea Coast Spatial Development Act (2007), and Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria Act (2018). The Maritime Spatial Plan complies with the priorities of regional, national, and local strategic documents related to sustainable development of maritime areas.

With regards to enforceability, in the course of the Plan implementation, detailed action plans for some marine areas will be elaborated and these different plans can be under the responsibility of the same or different authorities.

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The vision of the Plan for 2035 was developed together with stakeholder participation in seminars. The vision is focused on development, protection and use of the national maritime space and it is based on the Plan's slogan "Black Sea - an open door to the world, the Bulgarian Black Sea coast - our responsibility and common heritage", linked with the National Spatial Development Concept for the period 2013-2025 and its 2019 Update.

The Bulgarian MSP plan has main strategic goals and respective specific objectives to each of the strategic goals, all objectives are strategic, and the plan does not include quantitative objectives. The strategic goals are linked to the strategic international, European and national documents/policies that set the direction for development in the coming decades.

The basic points of the Plan are sustainable blue economy development and ecosystem services. The same platform is also used to build the future development scenarios. The three pillars of sustainable development (economic, social, and environmental) are the basis for the different scenarios, in each of them a relevant aspect is prioritised: i) Scenario A – Economic growth; ii) Scenario B – Ecology; iii) Scenario C – Social balance; and iv) Scenario D – Integrated (EU, local, national, and regional priorities).

Preparation of the MSP Plan started in 2019, the first draft and its EIA were publicly consulted in September 2021. The Plan was approved on 11 May 2023 by the Council of Ministers. The next steps are the following:

- Notification to the Black Sea countries, the European Commission, and the Member States (Art. 14 Directive 2014/89/EU) within a 3-month period from the plan approval.
- Plan review and possible updates due to changes in the geopolitical situation in the Black Sea and the energy crisis - end of 2023 – early 2024.
- Plan implementation and monitoring of the set indicators (every 2 years report on the impact monitoring on the environment from the plan application (to the Ministry of Environment and Water).

2.1.2. Bulgarian MSP plan and the European Green Deal

Preparation of the Bulgarian MSP plan started in 2019 when also the EGD was formally published. Therefore, the EGD has been reflected in the Specific objective 2.1. Coordination of sectoral policies in the maritime economy in support of the Green Deal.

> *"At the core of this specific objective is the coordination to achieve a synergistic effect of the impacts of the individual sectoral policies for maritime work - shipbuilding and ship repair, maritime traffic, tourism, offshore sea energy, fisheries, aquaculture, etc. They are all tied to the goals of the Green Deal, which is essentially the new strategy for growth and an attempt to integrate the common policies of the EU in a single strategic package to meet current challenges."*

For the implementation of this specific objectives, a platform of EU and national instruments and strategic documents are foreseen: maritime spatial plan, integrated territorial strategies, plans for integrated development of coastal municipalities and their general development plans, municipal master plans within the scope of zone "A" (100 m from the shoreline) with specific studies and accompanying schemes, as well as other harmonised acts, contracts and relations aimed at development, management, use,

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access, control and protection.

However, from all EGD policies only the Biodiversity Strategy was generally mentioned in the plan, but without details how to reach the ambition for 30% protected areas (of which 10% strictly protected) until 2030. Recommendations have been provided to the Plan`s Environmental Impact Assessment (EIA) report in the standpoint by the Ministry of Environment and Water (Competent MPAs Authority), with additional measures referring to achieve the targets of the EU Biodiversity Strategy. It can be noted that a number of EGD documents were already available and officially published when the draft MSP plan was elaborated, however were not directly referenced in the document. For instance, the new Circular Economy Action Plan for a cleaner and more competitive Europe (COM (2020) 98 final) and Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030 (COM/2021/236 final) are indirectly mentioned, although the Plan addressed this point in the specific objective for sustainable fishery and aquaculture. Climate change adaptation is addressed through the National Strategy for climate change, but without specific objectives and measures for marine ecosystems, refugees' identification, and no areas identified/reserved in the plan to be used in the future in order to preserve important species or specific sectors (i.e. fisheries and aquaculture).

Based on the interviews, improvements could be seen and there are significant challenges to ensure coordinated EGD implementation across interrelated MSP sectors. All respondents highlighted the importance of the integration of the EGD objectives in the MSP Plan, however it was also pointed out that the EGD objectives have been considered to some extent so far. On the other hand, biodiversity and ecosystem protection, sustainable sea-food production and a circular economy are important objectives taken into account in the plan. The main challenges identified are "*challenges related with limitation of space availability*", "*issues related to lack of data (public information and data), in particular high-resolution data*" and "*operational implementation of the adopted national MSP plan*".

2.2. EGD components of MSP plan analysis

2.2.1. Climate change mitigation

Climate change mitigation is indirectly reflected, not in the vision, it is mentioned in the Plan the need for future development of offshore wind farms. In the ecological scenario B of the Plan one of the policy-driving factors is the use of renewable energy sources (mainly wind) and it is considered as one of the key national priorities.

Renewable energy production, storage and transportation are not directly referenced in the strategic goals and specific objectives of the Plan (still there are no installed offshore wind farms in the Bulgarian sea space). It pointed to the potential for developing renewable energy production, including offshore wind energy, but without formulating an explicit quantitative objective or zones allocated for offshore renewable energy (ORE) development. The Plan seeks those reserves that are related to marine technologies, facilities, and industries in order to reveal more innovative solutions.

After the approval of the MSP plan the revision and possible update may follow due to changes in the geopolitical situation and the energy crisis - end of 2023 – early 2024. The EGD is reflected in the Specific objective 2.1. Coordination of sectoral policies in

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the maritime economy in support of the Green Deal. At the core of this specific objective is the coordination to achieve a synergistic effect of the impacts of the individual sectoral policies for maritime activities - shipbuilding and ship repair, maritime traffic, tourism, offshore sea energy, fisheries, aquaculture, etc. No specific measures are provided to offshore renewable energy, just pointing on the potential for a sustainable blue economy and energy efficient sectors. However, the plan refers to renewable energy development as a key and priority field for development. The strategic documents in the energy sector reflect the country's policy in the sector, aimed at ensuring and diversification of supplies, energy efficiency and increasing the share of renewable sources.

Clean energy transition in maritime sectors is indirectly addressed, no specific reflection or specific measures are made in the Plan of the clean energy transition. However, some specific objectives do support this goal: Specific objective 2.3. Sustainable development of shipping and shipbuilding. Maritime transport plays an essential role in the global supply chain and is a key sector of the country's economy. The development of the economy related to the sea is identified as a priority during the EU programme period 2021–2027. An important focus will be the investment of resources for clean sea water, to reduce carbon emissions from ships, and to protect aquatic biological resources.

Transformations in ports are not reflected in specific objectives or with specific measures. *Blue carbon storage* is not reflected in the objectives, but in the section for future development of the environmental protection activities – no specific measures or initiatives provided, just mentioned on the:

> *"An ecosystem approach will be applied, that utilises the carbon storage in coastal and marine ecosystems – rock reefs, sand and mud habitats in shallow waters, sand dunes and coastal wetlands that naturally capture the carbon dioxide, and that will contribute to mitigating global warming."*

No quantitative objectives are foreseen to the above pointed EGD elements.

2.2.2. Climate change adaptation

Climate change adaptation is addressed in the Plan at general level through the National Strategy for Adaptation to Climate Change and Action Plan, adopted by Decision of the Council of Ministers No. 621 of 25.10.2019. The Plan analysed the expected impacts as a result of climate change and frequent natural disasters and negative hydro-geological and geological processes – the areas threatened by floods and/or sea level rise and areas under risk with active landslide processes. It refers to the relevant programmes and planning documents.

Green infrastructures to enhance coastal resilience and/or to enhance marine connectivity were not reflected in the Plan goals/objectives or specific measures were not provided.

Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes was indirectly addressed – through the provisions of the MSFD and Programmes of Measures (National Marine Strategy) integrated in the Plan.

Anticipation of climate change-related effects was not also directly reflected, climate

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change impacts are generally mentioned in the MSP of Bulgaria, without specific objectives and measures for marine ecosystems, refugees' identification, and no areas reserved in the plan that may need special protection in order to preserve important plants and animals. No areas have been identified to be used in the future by specific sectors, due to climate change (e.g. fisheries, aquaculture, maritime routes, etc.). Some general anticipation of climate change-related effects on the marine environment is reflected in the Plan.

The Plan does not contain any quantitative objectives related to these EGD elements.

2.2.3. Sustainable food production

Sustainable food production refers to the implementation of the Common Fishery Policy (CFP) for Bulgaria and Situation analysis of the state of fisheries sector (2021-2027). The main directions are in result of a review of current policies, regulations, programmes and strategic documents in the sector.

Sustainable fisheries and aquaculture are reflected in the Specific objective 2.4. Sustainable development of fisheries and aquaculture sector. It is related to implementation of the CFP, which aims to ensure that fisheries and aquaculture are developed in a sustainable way from an ecological, economic and social point of view. This EGD element is also addressed in the Specific objective 4.2. Cooperation for effective fisheries management and reducing overfishing. It highlights protection of the population of marine mammals, sea birds, and preservation of traditional livelihoods for the local population. It is envisaged by 2025 to achieve a reduction in pressure from the development of fisheries and aquaculture sector while providing more sustainable development in a healthier marine environment.

Specific measures/recommendations were also provided to *Sustainable fisheries*:

- Effective control on fishing areas, science-based quotas for exploited species and control on unregulated fishing;
- Define methods and criteria for assessing the investment proposals depending on the ecological capacity of the marine environment;
- Joint conservation of fish resources will require significant efforts by all Black Sea countries, including increased control over the sea traffic, the presence of fishing vessels in certain areas and their activities.

Specific non-spatial measures (recommendations, not actions) were also provided to *Sustainable aquaculture*, in particular Specific objective 2.4 provides recommendations for sustainable aquaculture development, the key ones 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 (Fisheries Local Action Groups – FLAGs – could play the role of cross-sectoral clusters);
- Removing abandoned aquaculture facilities against plastic debris.

Sustainable algae production is not directly reflected in the objectives or through some specific measures.

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No quantitative objectives are provided in the Plan to these EGD components.

Quantitative zoning information: for aquaculture managed areas - the total areas suitable for shellfish farming in the Bulgarian Black Sea: 679.4 km^2 or this accounts 1.88% with respect to total Plan area. Areas with issued permits for aquaculture: total extension 13.6 km^2 or 0.04% with respect to the total Plan area. Areas with fishery management measures (e.g., fishery restricted areas, no trawling areas, areas dedicated to small-scale fisheries or artisanal fisheries, etc.): the basis for allocating zones for protection of economically valuable species of fish and other aquatic organisms is the Fisheries and Aquaculture Act (SG 41/24.04.2001), total extension is 1472.6 km^2 or 4.7% with respect to the total Plan area.

2.2.4. Biodiversity and ecosystem protection and restoration

From *Biodiversity and ecosystem protection and restoration* - only protection is reflected in the Plan through the provisions of MSFD, WFD and environmental national legislation, fully integrated in the MSP Plan. The Plan does not envisage designation of new or extended MPAs, as it does not have the mandate to do so. The Plan will only reflect the newly designated MPAs by the Competent Authority Ministry of Environment and Water in the process of implementation, as the MPA designation is a separate process from MSP, and it is based on the environmental protection legal basis.

The Plan pointed to the need to extend the MPAs network and for more coherent MPAs. No restoration measures have been addressed or reflected and the Plan does not envisage ecological blue corridors. As mentioned above, the important document is the standpoint from the Ministry of Environment and Water to the EIA of the MSP plan with complemented recommendations and measures.

Elements to improve marine connectivity (*e.g. among submarine canyons, reefs, etc.) and elements to achieve a coherent network of effective marine protected areas* are not directly reflected in the objectives. The Plan supports the coherent network of MPAs (just mentioned), however, there are no specific objectives for improving marine connectivity or for blue corridors. The Plan refers to environmental legislation and to its EIA, additional recommendations have been provided in the standpoint of the Ministry of Environment to the EIA of the MSP Plan. For *Restoring marine and coastal ecosystems* no specific objectives or mentions to restoration are provided in the plan (the plan and its EIA refer to environmental national legislation). No quantitative objectives were foreseen.

A coherent network of marine protected areas is indirectly reflected, and no specific measures are provided in the Plan (as it does not have the remit to do so).

Regarding the establishment of new or enlargement of strictly marine protected areas (10% target) and definition of strict protection, no specific measures were provided, but the Plan supports reaching the 2030 targets of the EU Biodiversity Strategy (still there is no definition of "strict" protection in the national legislation). This is not in the remit of the plan and as mentioned there is a standpoint by the Ministry of Environment and Water with recommended additional measures to support this element. *Establishment of new or enlargement of N2K and OECMs (30% target*) is reflected - all existing MPAs have been taken into account in the development of the national MSP, and it also considers the need to complete/enlarge the national ecological network in the sea. Concrete measures in this direction are included in the mentioned standpoint to the

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Plan's EIA, considering that MSP supports the progression towards MPAs conservation objectives. The MSP process takes into account and integrates other relevant environmental legislation, such as the MSFD and the WFD.

For *Identification of ecological "blue" corridors* - no specific measures were provided in the Plan and its EIA. For *elements that improve marine connectivity (i.e. submarine canyons, artificial reef, etc.)* - no specific measures/recommendations were foreseen in the Plan and its EIA.

Regarding the objective of restoring marine and coastal ecosystems - restoration is mentioned in the Plan for scenario "B" - the priority is "a clean environment and a sustainable marine ecosystem in conditions of active conservation and restoration". However, no specific objectives or measures were provided in this context.

Quantitative zoning information: all existing MPAs from the national and Natura 2000 networks have been included in the plan, the total extension is 2821.35 km^2 or 7.8% with respect to the total Plan area.

2.2.5. Blue circular economy

Circular design is not reflected in the Plan vision, goals and objectives, and no measures are provided to this element.

Waste prevention is addressed in the Specific objective 4.1. Cooperation to reduce pollutant levels to values harmless to marine ecosystems. This specific objective can be achieved through the implementation of a set of measures through the provisions of the MSFD and Programme of Measures, as well as in terms of cross-border cooperation, such as:

- Reducing the levels of all types of pollutants to values that are not harmful to marine ecosystems, by preventing accidents, agreed and effective management of land-based and industrial sources of pollution activities in the coastal areas and the shelf, including effective control and gradual restricting or sanctioning the activity of objects outside the scope of constructed sewage systems or without adequately functioning own treatment facilities, as well as introduction of 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 of waste generation in the areas of the water area and territory of the Black Sea coast;
- Defining specialised installations for collection and disposal of sediments and pollution in ports, preventing the exchange of ballast waters and in coastal waters to limit the entry of alien species.

Reuse, repair, upgrade, recycle is not directly addressed, but some strategic goals and specific objectives do support circular economy (not blue, just circular): Strategic goal 2: Building a diversified and sustainable maritime economy and vibrant territorial communities. It is related to the policies for the sustainable use of marine and coastal resources and ecosystem services of the Black Sea. The realisation of potential benefits will require strategies that will be basis for:

- Increasing investments in the development of existing sectors;
- Encouraging investment, innovation and technological transformations in support to the development of new and emerging sectors of the blue economy;

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- Implementation of a circular economy;
- Further development of upstream and downstream linkages in the value chains of existing sectors.

No measures/recommendations are provided for *Reuse, repair, upgrade, recycle*.

The plan recommends applying the principles of circular economy in the Black Sea region. No quantitative objectives were envisaged.

2.2.6. Zero pollution

In the Plan's vision, there is a general reference for reducing pollution, but no mentions of zero pollution, more specifically in:

- Convention for the Protection of the Black Sea against Pollution (Bucharest, 1992);
- Strategy for shipping safety and environmental protection from ship pollution, approved by Decision No. 420 of the Council of Ministers of 26 June 2020;
- Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on port reception facilities for the delivery of waste from ships, amending Directive 2010/65/EU and repealing Directive 2000/59/EC
- Also, through the provisions and implementation of the MSFD and national Marine Strategy (Programmes of Measures), fully integrated in the MSP Plan.

Pollution prevention is reflected indirectly through the provisions of the MSFD and Programmes of Measures, however no quantitative objectives are foreseen. A list of measures are provided for this EGD element:

- Measures related to the aquaculture sector: regulations for removal of abandoned installations for aquacultures and pound nets, in order to prevent pollution of the marine environment with solid waste and reducing the risk of accidents.
- Reducing the levels of all types of pollutants to values that are not harmful to marine ecosystems through incident prevention, coherent and effective management of land-based sources of pollution and industrial activities in coastal areas and the shelf, incl. effective control and gradual restriction 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 formation of waste in the sea area and on the coast.

Pollution remediation is not reflected within the objectives, measures or recommendations.

2.2.7. Cross-cutting elements

Research and innovation are reflected in the Specific objective 1.4. Information provision for Plan implementation and monitoring. Collected information is needed at all stages of the development, monitoring, implementation, and revisions of the Plan. In this way, the requirements of both MSP Directive 2014/89 and Directive 2007/2/EC on the

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establishment of an Infrastructure for Spatial Information in the European Community (INSPIRE) are fully implemented to meet the EC's requirements in the assessment of marine spatial plans. The Plan has established a Geographic Information System (GIS) platform that will be continuously updated when the new data becomes available. However, the spatial data are not in downloadable format, and the Plan does not provide measures or objectives for data sharing. Some measures/recommendations in the Plan (based on the Common Maritime Agenda for the Black Sea, 2019) do also support research on the marine environment:

- Development of marine science and maritime education and training to develop new skills and capacity in the marine economy sectors;
- Marine research and innovation by linking science, business and education and using the expertise in the region;
- Improving the state of the marine environment and coordinating actions to address transboundary environmental challenges and reduce plastic marine litter;
- Joint observations and monitoring of human activities and environment for sustainable use of marine resources.

Additionally, the Plan foresees objectives and/or measures to support research and technological innovation in maritime sectors through Strategic goal 3: Enhance maritime culture, education, and knowledge. Establishing modern scientific infrastructures, implementing new technologies and innovations is the best way to increase the competitiveness of the blue economy. The realisation of this goal includes building a knowledge base and innovations for maritime policies in all sectors – maritime transport, shipbuilding and ship repair, fisheries and aquaculture, coastal and maritime tourism, etc.

The Plan foresees objectives and/or measures to address education, skills development, and training in maritime professions through the Specific objective 3.1. Development of scientific infrastructure and research capacity. The availability of a modern base for research and development provides favourable conditions for training and career development of scientists, as well as for promotion of mobility. The indicative measures stimulated by the initiatives and the vision for the development of scientific research and innovations in the Black Sea region through the regional strategic documents include:

- Establishment of two Regional Innovation Centres of Excellence (Varna and Burgas) with development units and technological testing laboratories;
- Establishment of a "Black Sea Centre for Blue Growth and Innovation", including Black Sea Plastic Monitoring Laboratory and Laboratory for the application of new methods and technologies in the sustainable use of river and marine resources;
- Establishment of networks (clusters) of regional institutions, scientific organisations and high-tech enterprises for the implementation of targeted regional tasks and programmes;
- Fostering cooperation between scientific organisations, and the public and private sectors of the blue economy.

Cross-border MSP process is coherent for the two EU Member States Bulgaria and Romania under the two European Maritime and Fisheries Fund (EMFF) projects MARSPLAN-BS I and II supporting the cross-border collaboration in implementing the

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MSP Directive.[7] The Plan foresees regional cooperation on specific actions/sectors (e.g. pollution prevention, biodiversity protection, fishery management, energy transition) through some of the goals and objectives:

- Strategic goal 4: International and regional cooperation for conservation and use of Black Sea resources. The conservation of resources and biodiversity in the Black Sea requires joint efforts of the countries in the region and their institutions. This cooperation is expected to be expanded with all Black Sea countries. It will follow the priorities of the currently implemented programmes for the Black Sea region, as well as the strategic documents. Joint actions to promote the transition to a circular economy, capacity building will be supported to stakeholders, using awareness campaigns to promote sustainable practices.

- Specific objective 4.2. Cooperation for effective fisheries management and reducing overfishing. It addresses the preservation of the population of marine mammals, sea birds, sustaining traditional livelihoods and facing the needs of population and sea tourism. It is foreseen by 2025 to reduce the pressure of fishery and aquaculture sectors while achieving more sustainable development in a healthy marine environment.

Additionally in order to achieve this specific objective, the following recommendations are given:

- Effective control on fishing areas, science-based quotas for exploited species and control on unregulated fishing;
- Methods and criteria for assessing the admissibility of investment proposals depending on the ecological carrying capacity of the marine environment[8];
- Development and implementation of regulations for removal of abandoned installations of aquaculture and pound nets, in order to prevent the pollution of the marine environment with solid waste and reduce the risk of accidents;
- Joint protection of fish resources will require common efforts by all Black Sea countries, including increasing control over the sea traffic, the presence of fishing vessels in certain areas and their activities.

2.3. Fair and just transition

The identified stakeholders in the preparation of the Bulgarian maritime spatial plan are ministries, state and executive agencies or their territorial units, regional governors and local authorities, representatives of academia, legal entities, and individuals, including Black Sea regional organisations.

The identification of stakeholders follows Step 2 from the Standards of the Council of Ministers for conducting public consultations (2009) and the main criteria:

- Transparent representation of both collectors of information governing the processes of the implementation of the Plan and those whose stakes are most affected by the Plan implementation.
- Considering diverse interests, perspectives and expectations from the development and implementation of the maritime spatial plan.
- Balance between economic and environmental stakes, policies, priorities, and

[7] See http://www.marsplan.ro/en/

[8] See https://www.eionet.europa.eu/gemet/bg/concept/1198

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goals.
- Involvement of representatives with diverse experience, competence and knowledge, and with experience of participating in public consultations.

The local participatory initiatives were also engaged, for example fishery local action groups (FLAGs) along the coast were involved in the public discussions, focus group meetings and seminars. Sectoral representation of all groups of stakeholders was not provided in the course of the Plan elaboration. Only key governmental/state stakeholders were directly ensured in the planning process. The characteristics of the stakeholders (e.g., gender, class, ethnicity, age and/or disability) or disadvantaged groups were not specifically identified and/or considered in the Plan. Also, the Plan does not really consider the gender balance in maritime professions. Only in the integrated scenario D, are considered the necessary conditions for reducing the disproportions of negative demographic processes, for equality, for supporting local fishing communities and small and medium-sized enterprises (SMEs), for active and responsible participation in the development and implementation of the MSP.

The Plan does promote synergies between economic sectors through the foreseen multifunctional zones in the plan, based on the Multi-Use (MU) concept. The main goal is combination of compatible functions for more efficient use of maritime spaces, achieving positive synergy and economy of space and scale, and better coordination of sea-related sectoral policies. The Bulgarian MSP plan presents analysis of the opportunities of combining functions/activities at sea or in specific areas. The scientific rationale for the plan is provided by the EMFF MARSPLAN-BS II project (2019-2021), that supported MSP in Bulgaria and the elaborated Multi-Use case study on Tourism, Underwater Cultural Heritage and Environmental protection.[9] However, this research rationale/methodology was not included in the Plan.

Stakeholders' involvement took place through consultations and dialogue at all stages of preparation of the Plan and in the formal public discussion of the draft MSP Plan and its EIA (in September 2021). The local and expert knowledge was integrated through in-depth interviews during the plan preparation. Consultation procedures were selected, and a Consultation Plan was developed in accordance with the time plan schedule and with the requirement to reconcile the procedures for preparing the Plan and its EIA. These procedures cover thematic round tables, focus groups, interviews, and public discussions. Given the Covid-19 situation during the period of the planned discussions, they were replaced by in-depth interviews conducted on the main topics of the focus groups (31 experts participated). The participants had sufficient capacity to influence the planning decisions (as most of them were from executive institutions/agencies). For example, the participants in the interdisciplinary seminar contributed to the final version of the vision of the plan.

The Plan covers all areas, but more attention and focus on the strategic goals and specific objectives are given to the two large bays/cities with big ports Varna and Burgas, in particular for future uses and developments. There was no assessment of whether the plan's provisions are expected to have an impact on coastal or other regions in terms of sector changes/sectoral compensations/employment. Some mitigation measures were proposed in the EIA of the Plan, to assess the impact of the

[9] Stancheva et al., Supporting multi-use of the sea with maritime spatial planning.The case of a multi-use opportunity development - Bulgaria, Black Sea, *Marine Policy*, Volume 136, 2022, https://www.sciencedirect.com/science/article/abs/pii/S0308597X21005388

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Plan implementation on the MPAs and species.

Regarding access to the MSP Plan, the following documents were considered: Law on Access to Public Information (promulgated SG No. 55/2000, amended SG No. 17/26.02.2019) and the Law on Access to Spatial Data (promulgated SG No. 19/2010, amended SG No. 17/26.02.2019), which regulate the use of information and data generated and maintained by public bodies, subject to compliance with the requirements for intellectual rights, protection of personal data, confidentiality of information.

The Bulgarian MSP Plan and its documents are published on the national MSP website.[10] However the spatial data are not available in a downloadable format and have not been shared in the EMODnet portal. No socio-economic impact assessment was carried out in the Plan, it is just a general description and distribution of benefits and costs considered in the Plan, without assessing the environmental, economic, and social gains and losses, and how they affect different communities, groups, or sectors. The impacts of the planning decisions for different communities and groups were not evaluated.

2.4. Key challenges and obstacles identified

In a nutshell, all three interviewees showcased an awareness and knowledge about the EU Green Deal (EGD) main objectives and on some of the related policy strategies. Particularly, indications were made on: “no net emissions of greenhouse gases by 2050; economic growth decoupled from resource use”; “no person and no place left behind”; and on the intermediate goal: “Reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels in a fair, cost effective and competitive way”.

As main implications of the EGD for the MSP plan the respondents indicated significant decreasing of sea water pollution, climate changes and their reflection on the European seas, increased need to determine appropriate areas for developing offshore wind energy, MPAs enlargement to reach the targets of the EU Biodiversity Strategy by 2030, new requirements regarding the aquaculture zones, that need changes of the national normative regulations, etc. One respondent pointed that considerations/achievements of the ambitions of the EGD will lead to re-allocation of planned areas and changes/revisions of the MSP plan.

For the future, to facilitate the inclusion of the EGD objectives in the MSP plan implementation and revision, it was recommended focusing more on the issues of climate change impacts, renewable energy, and biodiversity protection. The inclusion of stakeholders from all categories in the revision and implementation phases of the MSP plan would be key to provide up to date and accurate data and information, and to take all stakes in the process. More publicity, meetings and forums would also be helpful and better articulation of the MSP and the provisions of the maritime spatial plan are critical.

As regards the need to better align the EU policy in order to facilitate the MSP to become enabler for the EGD, the majority of respondents considered this as an important issue. A respondent pointed that the focus should be on the improvement of sectoral EU

[10] See https://mspbg.ncrdhp.bg/?lg=en

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strategies, but also the EGD goals/objectives should be integrated in the MSP Directive. Improvements could be seen and there are significant challenges to ensure coordinated EGD implementation across interrelated MSP sectors. All respondents pointed out the need to improve the national policies, for instance to have more comprehensive policies to facilitate this process, not only at governmental level as well as on the local, regional and municipality level, NGOs, and the stakeholders to be more involved in MSP implementation. Also, the policy in regard to the potential of renewable energy resources should be improved. An interviewee underlined that the improvement of national policies could be seen mainly in better interaction/dialog between institutions, non-governmental sectors and consideration of local needs.

The ranking of challenges/difficulties/gaps was conducted by the three interviewees in the second phase of the interactions. Results from the ranking shows that the main challenges, related to the level of difficulties are "*challenges related with limitation of space availability*" and "*issues related to lack of data (public information and data), in particular high resolution data*". At national level, the maritime area, in particular onshore areas are overcrowded with many traditional uses, while the new, EGD demands /needs arise, such as the need of offshore wind energy, declaring a new or extended MPA areas (to reach the targets of the Biodiversity Strategy 2030), etc. The challenge with issues related to the lack of data (public information and data), in particular high-resolution data, is not something new, especially when it comes to spatial data for the maritime space. High-resolution data, with free access, allows more reliable forecasts and better planning, respectively, and the lack of such data makes the planning difficult.

Other, highly ranked difficulties are more specific country ones: "*Use of limited space and the combination of activities in it, which sometimes interfere with each other*", "*Slow processes of decision making*", "*Operational implementation of the adopted national MSP plan*".

As far as the first challenge overlaps to some extent with "*challenges related with limitation of space availability*", the other two "*Slow processes of decision making*" and "*Operational implementation of the adopted national MSP plan*" are directly related to the administration and implementation process of the Bulgarian MSP – lack of capacity and financial resources.

As regards the challenges, related to the "*Priority as urgency to be overcome*", the majority of respondents selected "*Operational implementation of the adopted national MSP plan*" and this challenge got the highest ranking. As the Bulgarian maritime spatial plan was adopted on 11 of May 2023, just two weeks before interviews, and the process of implementation should follow in the next months, it is understandable that the main concerns are about the MSP operationalisation. Other highly ranked urgent challenges are:

- Slow process of decision making;
- Poor communication between stakeholders;
- Issues related to lack of data (public information and data), in particular high resolution data;
- Difficult communication and coordination among institutions.

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Chapter 3

The Green Deal component of MSP in Finland

3.1. Background information about Finland's MSP process and plans

3.1.1. Background information about the plan

In Finland the MSP Directive (2014/89/EU) is implemented in the Land Use and Building Act (132/1999) and the Government Decree on Maritime Spatial Planning (816/2016) adds detail to it. They define the objectives for maritime spatial planning (MSP): to promote the sustainable development and growth of different forms of use, the sustainable use of marine resources, and the achievement of a good status of the marine environment. The aim is to achieve these objectives by reconciling the needs of different sectors while protecting and improving the status of the marine environment and ecosystems.

Finland has one MSP plan, The Finnish Maritime Spatial Plan 2030. The plan has been prepared in three parts in three planning areas: Northern Bothnian Sea, Quark and Bothnian Bay, Archipelago Sea and Southern Bothnian Sea, and Gulf of Finland (Figure 6.). The eight coastal regional councils are responsible for the preparation and approval of the plan. The Finnish Ministry of the Environment is responsible for general development and guidance of MSP and international cooperation. The plan covers the whole sea area of Finland starting from the coastline and including territorial waters and the exclusive economic zone (EEZ). MSP is the only planning tool in Finland that covers the EEZ making it central for the planning of this area. Cross-border areas are shared with Sweden, Estonia, and Russia. In addition, the Åland Islands has jurisdiction of their own MSP and is responsible for preparing its own plan.

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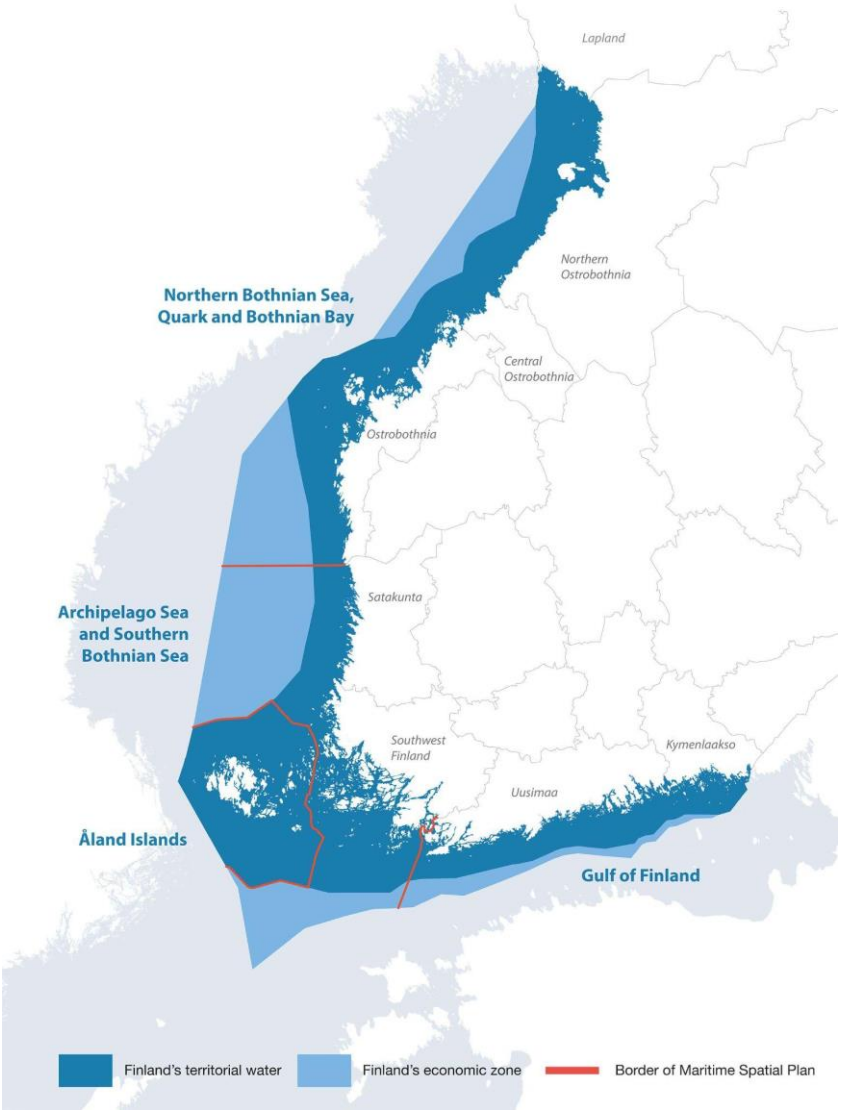

Figure 6. The coverage and the planning areas of the Finnish Maritime Spatial Plan 2030. The Åland Island is responsible for the preparation of their own MSP plan.

The Land Use and Building Act defines that the needs of the following sectors must be examined in the MSP plan: energy production, maritime transport, fishing and aquaculture, tourism, and recreation, as well as the preservation, conservation, and improvement of marine nature. Attention must also be paid to the special characteristics of the marine areas, land-sea interactions and to national defence needs. In addition, extractive, marine industry, blue biotechnology, and cultural heritage sectors were identified during the planning process and are also addressed in the plan.

The Finnish Maritime Spatial Plan 2030 is a strategic plan that has an indirect impact on planning through a guiding effect on the plans of the Finnish land use planning system. As the regional councils are responsible for both strategic MSP and legally binding regional land use planning covering territorial sea area, this impact is emphasised. Although MSP is not part of the land use planning system, nor is it hierarchically above other planning instruments, it is a tool for spatial planning with a stronger connection to the planning system than could be assumed based on the legal settings. While the plan is not legally binding, it can be relied on as a strategic document in the planning and implementation of development projects. The interactive approach to MSP will likely

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impact the stakeholders' views of the potential for and feasibility of different project types and implementation methods and result in new forms of cooperation. Also, it is likely that the plan and the related reports will be considered as additional information in some permit processes. At this stage, the question of how the plans will affect different sectors and administrative processes remains partly unanswered.

The impact of the MSP plan also arises from the linkages with national, regional, and sectoral policy guidelines and strategies, and regional programmes and their realisation, and from supporting the goals of regional development projects and natural resource plans for state owned water areas and other maritime management, conservation and restoration plans. Through these connections a current view of the actions and future objectives and visions of the different sectors is formed. MSP is a part of a larger whole of decision-making and planning the use of the sea, with the aim of making the objectives and visions visible and presenting them on a map. As regional development is also the responsibility of the regional councils, the plan naturally includes a comprehensive description of the regional development trends, supporting the implementation of the plan in practice.

3.1.2. Finnish MSP plans and the European Green Deal

The preparation of the Maritime Spatial Plan 2030 for Finland started in 2016 and the final plan was approved at the end of 2020. Due to the mismatch of schedules, there are no direct references to the EGD. However, multiple EU policies and strategies that can be considered as predecessors or are connected to the EGD are noted. These include for example the EU climate and energy package, Renewable Energy Directive (2009/28/EC) and the habitats directive (92/43/EEC) and the documents focused on the Baltic Sea such as the EU Strategy for the Baltic Sea Region and the Sustainable Blue Growth Agenda for the Baltic Sea Region.

The plan is also connected to multiple national policies and strategies for all the sectors covered by the plan and for cross-cutting topics. Although the objectives from them are considered in the MSP process, they are not directly transferred or visible in the MSP plan. MSP strives for consistency between these programmes, strategies and sector-specific plans and it has turned out that various sector-specific plans and strategies may have conflicting objectives. MSP aims to coordinate these planning instruments and hopefully prevent such conflicts in the future.

As mentioned, the Land Use and Building Act defines which sectors the MSP needs to consider, while others can be added based on the planners' decisions. While some of the EGD components, such as biodiversity and ecosystem protection and fishing and aquaculture, match the sectors, most of the components are cross-cutting elements within the plan. The detail to which the components are considered varies and some sub-components have not been considered so far. Keeping this in mind, no sector or theme is in principle out of the scope of MSP in Finland and new themes can and will be considered in the second cycle of planning. The second round started immediately after the first one in the beginning of 2022. The plan will be updated by the end 2026 as it will be synchronised with the MSFD and WFD planning cycles in Finland.

The way of organising MSP and the selected division of tasks and responsibilities in Finland can support the objectives of the EGD. The planners evaluated that the chosen approach supports the participation of actors and the consideration of planning questions that are regionally relevant. This makes it easier to implement the plan in

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practice and increases the commitment of both planning authorities and stakeholders to the objective of the MSP plan.

For the analysis of the EGD components in the MSP plan of Finland, the following principles were used to analyse the visions, objectives, and measures. These principles highlight the role of the Finnish MSP plan as a strategic planning document, setting the context within which it can work as an enabler of the EGD.

The plan contains a shared vision for the marine area for 2050, which is divided into three topics: A healthy Baltic Sea, Sustainable blue growth, and Wellbeing for people. In addition, there are planning area specific visions and nine sector-specific visions for 2030. All parts of the vision of the plan were developed in collaboration with the stakeholders.

All the objectives are strategic, and the plan does not include quantitative objectives. The objectives are described in the sector-specific roadmaps for 2030, which were developed during a collaborative stakeholder process. The plan does not directly link with other policy documents in regards to the objectives. Therefore, the different policy areas and their objectives, both quantitative and qualitative, are not covered in the plan.

The planning principles of the plan are considered as measures. The plan contains planning principles for all the map markings and for the planning areas.

It is important to consider that the map markings of the plan are overlapping, there is no prioritisation related to them and their spatial delimitation is done on a general level. They indicate already existing significant and future potential areas for the different needs of the various uses of marine areas and for marine nature. The plan identifies that significant and potential areas may also exist outside the places identified in the plan. The placement of various activities in the potential areas will require more detailed planning, which is outside of the mandate of MSP

3.2. EGD components of MSP plans analysis

3.2.1. Climate change mitigation

In the Finnish MSP plan climate change mitigation is mostly considered by the promotion of offshore wind farm (OWF) development and the use of new technologies and innovations in maritime sectors. In Finland, regional planning guides the OWF development in the territorial waters and the responsible authority in the state-owned water areas is Metsähallitus. These actors are identified in the objectives related to OWF development. Currently MSP is the only authority guiding the development in the EEZ. From the legislation perspective, the Land Use and Building Act (132/1999) defines that the needs of the energy and maritime transport sectors, which are important for climate change mitigation, are to be considered in MSP. In the act, there is no direct mention of climate change and instead the promotion of sustainable development is mentioned. The requirement to consider the needs of national defence can be seen in practice in the Gulf of Finland where OWF construction is prohibited due to their interference with military radars.

In the vision for the year 2050 climate change mitigation is considered by stating that the plan promotes the transition to a low-carbon society by increasing the production

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of offshore wind energy and sustainable blue economy in marine areas will provide low-carbon and resource efficient solutions. The sector specific visions for 2030 state that new developments in maritime logistics and industry will minimise the adverse effects of the activities and make them sustainable. The planning areas' specific visions identify carbon neutrality and renewable energy technologies as solutions for the future.

On the objective level the plan aims to improve the operating environment for offshore wind energy in Finland. In politics, the role of OWFs in reaching carbon-neutrality goals has been identified and the role of the government as an active lessor of marine areas for OWFs will be developed. The importance of the state in creating a supportive offshore wind energy investment environment and increasing supportive measures to start construction are identified. In addition, the importance of regional plans in OWF guidance and land-sea interaction created by OWF development through ports, maintenance, logistics, main grid development and access possibilities and cables among other things are identified in the objectives.

As a central measure for climate change mitigation, the plan identifies potential areas for energy production by OWF. These areas cover approximately 4.4 % of the total plan area. They do not define where OWF needs to be located and suitable locations can also be located outside of the indicated areas. The plan also considers the need for actions on the development of the national energy grid and the connections of the OWF to it. The cross-border cable connections are identified on the plan map. At the current moment, the plan does not specify a quantitative objective for energy production. There is on-going discussion on the offshore wind energy production objectives and national guidelines, which once defined, will likely affect the content of the MSP plan.

For the energy transition in the maritime sectors and the ports, the plan identifies objectives that support emission reduction, but no quantitative objectives are defined. Electrification, digitalisation, and automatization are identified as key technologies to support the objective. The plan also identifies the need for research and innovation in the long term for new forms of energy production, such as wave and solar power and the use of the common reed as bioenergy, and for the preparations to support them. The other forms of energy production can be included into the planning principles in the next planning cycles.

Blue carbon sinks are not directly considered in the plan, although the main objective of the plan is to support the sustainable use of the sea areas and the protection of marine nature. The aim to preserve valuable biodiversity areas and take nature into consideration in all actions will indirectly support the storage of carbon in the ecosystems.

3.2.2. Climate change adaptation

Climate change adaptation as a concept is not used in the Finnish plan, but there are direct and indirect references to the topic. The vision of the plan makes no direct references to climate change adaptation. On the general level vision states the need for reaching the good status of marine environment and to consider the ecological impacts of all activities at sea, which will also support the protection of marine biodiversity and ecosystems. To achieve this objective in the long-term, further consideration of how to adapt to climate change is needed. The objectives identify this, by stating the need for further consideration of the impacts of climate change and changes in the habitats of species in the future. In addition to marine nature, the impact of climate on other marine

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sectors is something which will be further considered during the second cycle of MSP in Finland.

The most important measure for climate change adaptation is the identification of significant underwater natural values (EMMA areas), which can also be considered key areas for the provision of ecosystem services (such as the protection of coastal areas) in the future. Marine activities that threaten the natural values of these areas are not indicated as overlapping map markings. While the plan does not anticipate the climate change related effects, it includes many unplanned areas with no strategic objectives identified, leaving flexibility for future changes in activities. These areas cover approximately 40 % of the sea area and are not specifically identified for the purpose of climate change adaptation in the plan.

3.2.3. Sustainable food production

The plan identifies fisheries and fish farming as the main actors in sustainable sea-food production. The sector specific vision identifies them as sustainable and climate-friendly sources for food in the future. In the Northern Bothnian Sea, Quark and Bothnian Bay planning area the vision supports the recovery of migratory fish stocks, which is an important issue for the region, not only for ensuring the sustainability of the fish stocks, but also for the sustainability of tourism and recreation activities based on fishing.

For sustainable fisheries, the plan objectives define that fishing that has a positive impact on the status of the marine environment will be increased. To support the reproduction of fish stocks, the objectives state that regional planning will consider fish spawning areas in the future. Some of the areas with significant underwater natural values identified in the plan are at the same time important fish spawning areas.

The plan identifies potential areas for coastal net fishing and open sea trawl fishing in terms of professional fishing. In these areas, it is important to consider the use and management plans related to the fishery areas produced by other authorities, which include more specific regulations and restrictions for the areas. In addition, the planning principles identify that it is important to pay attention to the annual and seasonal changes and the impacts of climate change in the areas used for fishing when developing the industry. The areas cover approximately 24.9 % of the plan area and are often overlapping with other map markings.

In Finland the sustainability of the fishing profession is also a challenge due to the high average age of fishers and the lack of youth entering the profession. Another major challenge is the large great cormorant and seal populations, which make small-scale coastal fishing less profitable. The objectives note that competence of the fisheries and aquaculture sectors should be maintained in the future. Also, partly due to this, the plan identified the objective of increasing cooperation between tourism with fishers to increase income possibilities.

As eutrophication of sea areas is a major challenge in Finland, there are multiple objectives and measures related to fish farming as a point source of nutrients. The plan identifies a set of objectives to reduce the nutrient load and to consider the local impacts caused by fish farming. The objectives identify new technological and practical solutions to support sustainability of the sector such as close-cycle farming, fry production in circulating water plants on land, increasing the collection of sludge and placing the production facilities outer to the sea where water changes more often, as

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important actions to overcome this challenge. From another perspective, the objectives highlight fishing as a method for reducing eutrophication by removing specific species of fish.

The Finnish Aquaculture Strategy aims to increase fish farming in the marine area. The MSP plan considers the objectives of the strategy and identifies potential areas for fish farming with a generalised strategic map marking. In reality, areas suitable for fish farming can also be located outside of the indicated areas. The plan identifies that the objective to increase fish farming conflicts with the aim of achieving a good status of the marine environment by fighting eutrophication. Due to this the map marking is based on the opportunities that new technologies and sustainable solutions provide to meet the environmental and food production objectives in the future. The plan only promotes fish farming in situations where the state of the water permits it.

Due to the environmental settings, mussel and algae farming in Finland is challenging, but the plan does consider them to a lesser extent. The plan identifies the potential for multi-use of sea space by setting the objective for microalgae production in the form of heat recovery from the condensate water of power plants and data centres. These areas are also indicated by a map marking for significant special areas. In addition, the exploration of using algae in connection with fish farming to reduce nutrient output is promoted by the objectives. These other forms of aquaculture are to be considered more extensively during the second cycle of planning, which could result in them being included in the next plan.

3.2.4. Biodiversity and ecosystem protection and restoration

One of the main objectives of the Finnish MSP plan is to support the achievement of the good status of the marine environment. A central principle for the planning is that any potential future marine uses that are likely to lead to conflict with significant nature values are not promoted. The MSP plan aims to create an overall view of the network of valuable marine nature areas and ecological connections, which are important for the provision of sustainable ecosystem services. This being said, the Finnish MSP plan does not indicate existing areas of the Natura 2000 network, national parks or other nature reserves of which the protection and implementation is guided by other legislation. The spatial delimitation of all nature conservation areas and their qualities are included in the supporting materials of the plan and are considered in the planning process.

The vision for 2050 refers to biodiversity and ecosystem protection on a general level by stating that the good status of the marine environment will be a part of the normal operations in all sectors in the future. The sector vision for nature conservation and management makes a more detailed description stating that all marine uses impacting the marine environment will consider the ecological preconditions and safeguard marine biodiversity. Different approaches to protection and its importance for the sustainability of marine ecosystems is noted in the vision by stating “collaborative and sustainable protection of the marine environment improves the state of the marine ecosystem”. The planning area visions also identify the importance of biodiversity protection by highlighting for example, the need to see nature values as assets and directing activities towards areas where the environment is best able to withstand them.

The need to determine a sufficient network of protection areas in the future is considered by a set of objectives. The objectives approach the issue from multiple perspectives including, ensuring the protection of the biota’s offspring areas, revision

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of national conservation commitments, ensuring the sufficiency and interconnectedness of the conservation network and preparing for the impacts of climate change and changes in the habitats of species. A central objective is that all marine uses will be located so that their impact on the environment is as small as possible. Furthermore, specific objectives on for example the need to determine remediation and compensation measures in connection to infrastructure projects and valuing tangible assets with modelling methods to support decision-making are considered.

The plan identifies areas with significant underwater natural values. It is especially important to consider the preservation of the characteristics of the underwater habitats, when developing marine uses within these areas. Areas with significant natural values are also located outside the indicated areas and can be outlined in the future by using data from additional field surveys. The indicated areas are not proposals for protection areas. These areas cover approximately 5.5 % of the plan area and are mainly located near to the coast. The plan also identifies ecological connections that are significant in terms of land-sea interaction, such as rivers which are important for migratory fish, or from other perspectives such as international green connections (Green Belt of Fennoscandia). The planning principles of these ecological connections state that it is important to pay attention to the preservation and improvement of the connections when developing any human operations.

The plan does not include any direct objectives or measures on the restoration of marine and coastal ecosystems. This topic will be further investigated during the future planning cycles.

3.2.5. Blue circular economy

Blue circular economy is to some extent considered as a cross-cutting theme for many of the sectors covered by the plan. The importance of the topic is identified in the main vision of the plan where the promotion of a sustainable blue economy in marine areas will provide exemplary resource-efficient and circular economy solutions. Resource efficiency and circular economy, and the support for developing future technological solutions related to them, are also considered in the planning area specific visions.

The objectives of the plan consider blue circular economy to some extent. The circular use of the extracted materials in for example OWF construction and dredging are considered. For the development of blue biotechnology, the potential to use side streams and low value fish from fisheries is identified. Objectives also aim to improve waste management and recycling opportunities at ports and marinas for small boating. No measure or map markings for these topics are defined in the plan.

The role of blue circular economy for the maritime sectors are noted in the background information section, where the plan refers to *Finland's Strategy for the Baltic Sea Region (2019)* and the *Government Resolution on Finland's maritime policy guidelines: From the Baltic Sea to the oceans (2019)*. These strategies identify blue circular economy as a key opportunity for combining economic development with improvement of the environment. The Finnish MSP plan is not directly connected to the objectives of these strategies.

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3.2.6. Zero pollution

Zero pollution is considered to a lesser extent in the plan with a focus mostly on pollution prevention. The vision does not specifically consider the topic, although it identifies that the exploitation of sand and other minerals in marine areas needs to be in line with the objectives of reaching a good status of the maritime environment. The objectives identify the need for improving waste management at ports and to reduce the nutrient load caused by aquaculture and to consider its local impacts.

The measures identify the risks of oil and chemical accidents which could occur during operational activities in maritime logistics. The plan does not present any measures that consciously increase the risks of accidents. In addition, to foster the good status of the marine environment, the future needs for dredging of ports and main shipping fairway areas were surveyed and most suitable banking sites for dredging masses identified in terms of protecting the marine environment and cost effectiveness during the planning process. These areas are not identified in the plan.

3.2.7. Cross-cutting elements

From the cross-cutting elements research, innovation, data and cross–border cooperation are considered in the plan to varying levels of detail. None of the topics are considered as one of the main themes of the plan, which has led to them being non-systematically considered as cross-cutting elements both in the plan and during the planning process. Outside of a few mentions in the objectives, the plan does not consider issues related to education and training.

The plan contains no direct measures for increasing the availability of ocean and maritime data or for data harmonisation or sharing. This does not mean that these topics have not been considered in the planning process. For example, the need for harmonising the planning data sets on a Baltic Sea and EU scale, more specifically how different sea uses or areas are described in the plan maps, has been brought up. Another example is the The Marine Finland online service[11], which aims to provide all Finnish marine and maritime data in a single platform and although it is not mentioned in the plan, it is linked to the whole planning process. In addition, the plan identifies an objective for bringing together MSP and the planning of marine and river basin management to identify potential new data or data service needs.

The Finnish MSP plan does not set any direct measures to support research. On a general objective level, the plan identifies that research needs will be examined systematically as a part of the MSP process from the perspective of all themes, especially regarding the marine environment. The sector specific objectives also identify some thematic needs for research, for example a need for “securing support and sufficient funding for research and innovation programmes and experiments in Blue biotechnology”.

One of the key goals of the MSP process was to encourage cooperation between countries. This aim is considered in the Land Use and Building Act, which sets a requirement for cooperation with the neighbouring states to coordinate maritime spatial plans. Finland was engaged in bilateral cooperation with the neighbouring countries

[11] Marine Finland Online Service, https://www.marinefinland.fi/en-US

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Sweden and Estonia during the plan preparation. In addition, there was close cooperation with Åland throughout the planning phase, which can be seen in, for example, the use of common data and harmonisation of map markings. At the sea basin scale, there was close cooperation with the other Baltic Sea countries to coordinate maritime spatial plans. Finland has been active in the Baltic Sea region international cooperation through the HELCOM-VASAB Maritime Spatial Planning Working Group as well as through more informal Planners' forum.

In practice, international consultation events were organised during the start-up phase and after the completion of the plan draft. The various projects in which the regional councils have participated in have also included cross-border cooperation. The plan itself, considered a cross-border dimension in some of the map markings and objectives. For example, the marine ecological connection linking the green zones of Fennoscandian and Europe runs through the Gulf of Finland and is in its core international. The objectives for energy production states that international cooperation is increased in large-scale offshore wind projects and over the long-term preparations are made to expand the cooperation to joint OWF.

3.3. Fair and just transition

The first cycle of Finnish MSP was built around a collaborative planning approach where the leading principle was to provide everyone the right to participate. In practice all authorities and organisations, whose areas of activity are covered by the plan, and the public interested in MSP were engaged in the plan preparation. The planning process aimed to secure sufficient participation from all relevant stakeholders and the actualization of this goal was also followed throughout the process. The participatory process did not specifically consider characteristics such as gender, class, age, or ethnicity in stakeholder participation nor identified possible disadvantaged groups.

The goal of the collaborative approach was the co-creation of knowledge and the formation of a shared understanding and vision for MSP. During the collaborative planning process from 2016 to 2020 multiple national and regional workshops and two hearings were organised. These events covered all stages of planning, starting with a set of workshops which resulted in the definition of a common approach for MSP in Finland. The collaboration focused on the content and themes covered by the plan as well as the actual planning process. The whole planning process, the steps, methods, and approaches that it includes, was designed based on the results. The other workshops focused either on defining the future scenarios and visions or on the themes covered by the plan. Additionally, the Ministry of the Environment together with the MSP Coordination Group organised several national briefing events and workshops and at the same time the regional councils held dozens of regional workshops. Engaging different actors to participate was relatively successful, but not without challenges. Sectors or groups which were not actively participating were targeted in the communication to raise their interest.

To ensure equal spatial representation the stakeholder events were organised in different parts of the different planning areas. For example, the vision, scenario, and thematic workshops were organised in each planning region. The coastal regional councils involved in the coordination of the planning process were able to actively promote issues relevant to them and invite regionally relevant participants into the process. All of this resulted in a MSP plan, which aims to cover all areas equally, by

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taking into consideration the biogeological context of the marine and coastal areas that forms the operating environment for different sectors for each of the three planning areas. Each planning area for example, has their own development visions and planning solutions. In addition, the MSP plan is approved by the regional assemblies. This ensures that regional and local interests are considered, but at the same time can challenge the inclusion of wider national level ambitions in the MSP plan.

Through active communication in the Finnish MSP website and via social media channels, the stakeholders were made aware of the planning process and the different stages of participation. Anyone could join the MSP cooperation network, which served as an information sharing channel via for example newsletters. All participants of the network received invitations to the regional and national workshops, regardless of the participants affiliation. The final plan is in a digital form and accessible online at www.merialuesuunnitelma.fi and all reports and steps of the planning process are available on the planning process website. The MSP plan and information on the planning process are available in both national language, Finnish and Swedish, and in English.

One of the key goals of the MSP planning process in Finland was to promote synergies between economic sectors. During the vision phase, central organisations and actors together identified possible synergies and created the future visions and roadmaps that consider the identified synergetic use of sea areas. Specific needs for cooperation between some sectors and actors are considered in the plan objectives. For example, the need to increase dialogue and cooperation between tourism and fisheries and aquaculture, logistics, and wind energy operators is considered. Another example focuses on the objective to strengthen the cooperation across sectors and industries related to nature conservation and management to achieve a good status of the marine environment.

As a part of the planning process, an impact assessment of the plan was done in spring 2020. It included two main approaches. First, an examination of national and regional needs connected to MSP. The examination evaluated the impacts that the realisation of the planning notations would have on multiple socio-environmental aspects such human living conditions and environments, biodiversity, and natural resources. Second, an evaluation of the significant direct and indirect environmental, economic, and societal positive and negative impacts of the plan generated through the different sectors considered in MSP.

To carry out the impact assessment, a decision had to be made on how notations on existing activities on the one hand, and notations indicating future potential on the other, should be considered. As a rule, the impacts of existing maritime activities have been described on the basis that the plan will enable the continued existence of these sectors. The impact of notations indicating future potential were assessed at a more detailed level as, if realised, they would often have significant indirect impacts on the marine environment, the economy or society.

The plan is strategic and general in nature, and its guiding effect is indirect. Due to this the impact of the plan for specific groups, communities or areas was not assessed. Local communities with connection to the sea through social, cultural, and economic reasons are considered in the assessment, but only at a general level. As the plan does only indirectly impact the activities at sea area and does not identify concrete changes these activities there are also no direct costs or benefits. Because of this the just distribution

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of cost and benefits was not specifically considered, but the possible positive and negative impacts for the planning areas were still evaluated.

3.4. Key challenges and obstacles identified

Key challenges and obstacles for MSP to work as an enabler of the EGD were identified in interviews aimed at key actors involved in the coordination of the MSP process in Finland. During nine interviews, discussions with 11 maritime spatial planners from the eight coastal regional councils and one representative from the Ministry of Environment of Finland were held.

The interviewees were aware of the EGD, but mostly considered that they are unfamiliar with the details or the related strategies and policies. Many considered that it is difficult to conceive which themes are covered by the EGD. In addition, as the EGD consists of multiple policies and strategies it is difficult to keep track of all the details and current state of objectives. At the same time, the interviewees were knowledgeable of how the EGD themes are considered in the MSP plan and during the planning process.

The interviewees evaluated that the first MSP plan of Finland covered the themes of the EGD relatively well. Some of the planners mentioned that many of the themes are considered in the Land Use and Building Act (132/1999) and through other national policies on MSP and the MSFD. Renewable energy and biodiversity and ecosystem protection were topics that were strongly associated with MSP while circular blue economy and zero pollution were considered as least covered in the plan. Although, when talking about pollution the focus often turned to eutrophication, which the interviewees identified as a major challenge for achieving a good environmental state of the sea and as a topic which is considered in detail in the plan.

Based on these observations, the interviewees did not consider the lack of knowledge on the EGD to be a key challenge in reaching its main objectives set for MSP. Regardless of this, integrating EGD objectives into the objective setting of the national MSP in the beginning of the next cycle of planning was seen as important. This would serve a double purpose by also familiarising the maritime spatial planners and the stakeholders with the EGD themes. Monitoring actions related to the objectives, was identified as a possible solution to going beyond objective setting into real implementation.

The interviewees identified a variety of challenges related to different thematic entities that can be obstacles for MSP to enable the EGD objectives. They felt that the most current challenges are related to OWF development. Multiple interviewees highlighted that planning is under pressure and time constraints caused by political and societal needs, while at the same time more understanding and data on the impacts of OWF on nature, harbours and electric grid planning among other things is still needed.

Planning and coordination of sea uses was seen both as the main purpose of MSP and as a challenge. Although compared to many European countries Finland has a large sea area and a long coastline, space constraints in marine areas pose key challenges to overcome. For example, many of the important biodiversity values exist in the coastal area which are under human pressure also from activities such as ports, industry, settlement, and recreation. At the open seas, including the EEZ, areas required to meet the targets for offshore wind energy production are likely to overlap with fishing and maritime transport. The consensus was that it is difficult to assess the overall impacts of planning solutions due to the complexity of the marine environment, the multiple

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different sea uses and in some cases lack of information or understanding. Evaluation of the cumulative impacts was seen as one of the most challenging and urgent issues faced in MSP. The interviewees noted that understanding the national and regional environmental context is crucial to solving these challenges, for example by taking into consideration the seasonal changes in how the sea is used. In some cases, other societal needs, especially defence and security of supply of energy and food, are emphasised in the current geopolitical situation and can overrule the objectives of the EGD.

Lack of information or understanding to support planning decisions was considered as one of the biggest and most urgent challenges for all MSP actions. Although the interviewees noted that Finland has an extensive collection of valuable data regarding the marine areas, in certain topics data unavailability is a barrier for sustainable decision making in MSP. Where data is available, challenges might arise from data suitability for regional scale planning or from the lack of capacity to interpret the data in a relevant way for a specific context. In addition, keeping track of all different data sources and combining information from multiple sources and themes is a challenge. In some themes, such as climate change, the uncertainty related to the future and how accurately the data describe the future are things that MSP needs to consider. The collection and structuring of all background knowledge for planning and identifying data gaps are the first steps for overcoming this challenge.

Improving the environmental status of the sea is dependent on activities performed on land, which are outside the mandate of MSP. For example, nutrition flow from agriculture, forests or other land uses are significant sources of nutrients causing eutrophication of the sea. Because of this, actions done at the sea by for example planning aquaculture alone will not solve eutrophication. In addition to the plan's focus on land-sea interaction, one key process in solving this challenge is the Coastal Strategy, which is currently being updated and will be strongly linked to the MSP plan.

The way that MSP is set up in Finland is both a strength and a possible source of challenges. The plan being a strategic document, which indirectly guides the use of the sea, affects its impact. This means that the MSP in Finland does not have the mandate to implement actions in practice that support the EGD. The voluntary nature of the MSP plan and the lack of strict binding national objectives can be challenges for efficient promotion of the EGD. As MSP aims to guide the coexistence of all sea uses, contraindications in sectoral strategies can make it difficult to reach the objectives. For example, the objective for increasing fish farming can be contradictory to the aim to reach the good environmental status of the seas. The development of sectoral strategies and practical actions are still too often done without sufficient consideration of the other sectors. Here MSP can be a central tool to boost cross-sectoral cooperation and identify synergies.

The way that the responsibilities of MSP in Finland are divided between the coastal regional councils and the Ministry of the Environment, was considered a functioning system, which is able to bring up regional questions and lead to practical actions in other planning levels such as the legally binding regional land use plans and regional strategies. Lack of dedicated resources for MSP can cause challenges both due to the lack of human resources and the investments from society to marine research and the creation of data and knowledge. To consider the EGD objectives more thoroughly, more time to get familiar with them and their marine dimensions is needed. The MSP coordination is based mostly on project funding, which according to the interviewees,

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makes it challenging to follow everything that is on-going.

Stakeholder engagement and communication were seen as important tools to support the EGD objectives, but there are practical challenges related to them. The first cycle of Finnish MSP was relatively successful in getting all marine sectors involved, yet motivating stakeholder and public engagement remains challenging. For example, MSP is a new tool and stakeholders can still be unfamiliar with it and its impact, which can decrease motivation or simply cause some actors to miss the chance to participate because of lack of information. As the plan is non-binding the stakeholders can also have a lack of commitment to the objectives set in the plan, even if they are defined through a collaborative process. When it comes to the EGD, communication of the objectives is important as also the stakeholder might be unaware of the details.

Finally, securing a fair and just transition is important for the EGD goals in MSP. Even though the plan focuses also on the specific needs of the planning areas, considering the local context can be challenging when planning is done at the national scale. Lack of knowledge on the objectives and lack of acceptance of the planning decisions by the local communities can prevent the implementation of the actions supporting the EGD. Considering the local context, engaging the local actors, and taking their needs into consideration are solutions to overcoming this challenge.

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Chapter 4

The Green Deal component of MSP in France

4.1. Background information about France MSP process and plans

4.1.1. Background information about the plan

French MSP plans are called "*Documents Stratégiques de Façade"* (DSF). They are based on planning units known as "*façades*", which somehow correspond to sea basins. There are 4 French MSP plans (DSF), one for each of the following macro-planning unit:

- Eastern Channel – North Sea (Hauts-de-France and Normandy regions)
- Northern Atlantic – Western Channel (Brittany and Pays de la Loire regions)
- South Atlantic (Nouvelle-Aquitaine region)
- Mediterranean (Occitanie, Provence-Alpes-Côte d'Azur regions and Corsica).

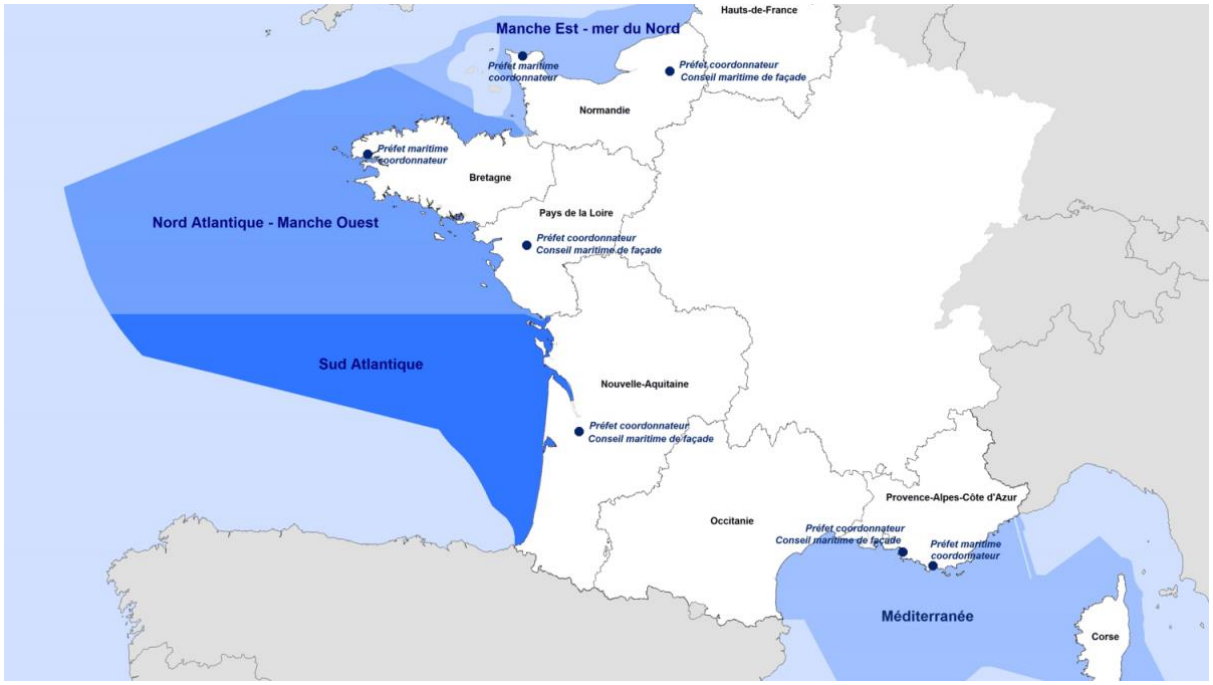

Figure 7. French maritime façades (macro-planning MSP units)

In France, MSP plans translate at a *façade* level the National Strategy for Sea and Coast ("SNML" - NSSC).[12] Although French MSP documents are self-consistent, they acknowledge the existence of local/regional planning documents and integrated coastal zone management (ICZM) documents, as well as relevant sectoral policies. MSP plans are not meant to replace sectoral policies, but to address their spatial dimension and/or

[12] French National Strategy for the Sea and the Coast, 2017, https://www.ecologie.gouv.fr/sites/default/files/SNML%20version%20ENG_MTES.pdf

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to translate them in the specific context of a given *façade*. MSP plans look into issues such as where to best locate the infrastructures relating to a given sectoral policy, whether this is likely to lead to spatial competition, if synergies and multi-use could be explored, etc. They also spatialise environmental and socio-economic challenges. From a non-spatial perspective, MSP documents contextualise the implementation of sectoral policies in specific *façades* by reflecting on dimensions such as employment, research, training, etc.

Within each macro-planning unit, MSP is conceived as a set of documents, which together constitute the MSP exercise. Each of the plans builds on a similar structure:

- Strategic part ("Volet stratégique")
    - Situational analysis ("Etat des lieux »)
    - *Façade* strategy ("Stratégie de façade et vision »). It includes a vision statement, strategic-level objectives and their associated "specific" objectives.
    - "Vocation maps": indicative zoning documents, complementing the macro-unit strategy document, setting up priorities within planning units known as "vocation zones"
- The Operational part ("Volet opérationnel"):
    - Monitoring mechanism ("Plan de Suivi")
    - Action plan ("Plan d'Action") that details measures designed to implement the MSP plan.

Plans adopt a multi-scalar approach. Building on objectives set up at a national level, they are drafted at a macro-unit level. Within macro-units, sub-planning units are identified based on ecological and socio-economic criteria (Vocation zones – *Zones de vocation*). Priority sectors and functions are associated with each of those sub-planning units, while taking stock of already existing uses. Each vocation zone is associated with a map (vocation maps – *Carte des vocations*). The vocation maps propose an indicative spatialisation of existing environmental and socio-economic challenges. In total, the French maritime space is divided into 58 vocation maps.

The French vision of MSP attempts to combine two MSP approaches: spatial planning (distributing space amongst activities) and strategic planning (defining the objectives pursued at a *façade* level and within each of the zones on the "vocation maps" - preservation of the environment, energy production, etc.).

At sea, the geographic scope of the plans encompasses waters under national sovereignty and jurisdiction (up to the limit of the EEZ and continental shelf extension). On land, it includes activities located on the territory of coastal administrative regions and having an impact on maritime areas. The depth of the terrestrial perimeter varies according to the activity studied.

In France, the State leads the MSP process. State authorities at a regional level, known as « *Façade* coordinators Préfets» (regional préfets and maritime préfets) pilot the plans' preparation. Préfets are supported by Interregional maritime services (Directions Interrégionales de la Mer - DIRM), State services at an interregional level. At a central administration level, the Secretariat of State for the Sea is responsible for MSP and the NSSC, from which MSP plans are derived.

With regards to enforceability, as far as the marine part is concerned, the plan imposes

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an obligation of compatibility of plans, programmes, schemes, and projects partially or completely located within the DSF's geographic perimeter, as well as of administrative acts taken for the management of the marine area. This obligation of compatibility with the plan includes documents that may "straddle" the terrestrial and marine parts. As regards the terrestrial part, the plans, programmes, schemes, projects located and authorisations issued in these areas (coastal administrative regions) must take account of the plan, provided that they are likely to have a significant impact on the coastline. By way of exception, the master plans for water development and management (SDAGE) must be compatible with the environmental objectives of the *façade* strategic documents.

MSP Preparatory work started in 2016. *Façade* strategies were adopted in September and October 2019. Monitoring mechanisms were adopted in October and November 2021. Lastly, action plans were adopted in April and May 2022, thereby completing the first French MSP preparation and adoption cycle. The second cycle was initiated in early 2023, starting with the revision of the NSSC. In June 2023, the government asked the Préfets to launch regional consultations with maritime and coastal stakeholders with a view to planning offshore wind farms (OWF) and pooling public debates on MSP and OWF. Proposed indicative targets for planning highly protected areas in each of the four basins were also shared. Public debates are scheduled within each of the *façades* from Autumn 2023 onwards.

4.1.2 French MSP plans and the European Green Deal

None of the French plans makes explicit reference to the EGD and its associated documents. This can mostly be explained by the fact that the French MSP process started before the European Green Deal was published. The four *façades'* strategies were all published before the EGD communication was available.

However, it can be noted that several EGD documents were already available when the MSP plans' action plans were released. 2022 MSP action plans all included a background section recalling the policy and legal context of the action plans at times of drafting and publishing (e.g., the period spanning from the end of 2019 to spring 2022). During this period, several EGD package documents relevant to the action plans were published. While they were drafted about 1.5 years later than the 2019 *Façade* Strategy documents, the action plans' background sections were only updated to a limited extent. Some do mention new national documents, but none at EU level. The ongoing revision of the French MSP plans might provide an opportunity to reflect EGD elements in the new documents.

A specificity of the French MSP process is that the Marine Strategy Framework Directive (MSFD) and the MSPD are jointly implemented. Due to the joint implementation of the MSFD and MSPD, the environmental pillar of the French plans almost exclusively derives from the MSFD. In turn, it does not reflect other environmental policies, including possible marine biodiversity-related elements from EGD documents.

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4.2. EGD components of French MSP plans analysis

4.2.1. Climate change mitigation

The National Strategy for the Sea and Coast (NSSC) explicitly mentions climate change mitigation as an objective. It points to offshore renewable energy (ORE), as well as energy transition in maritime sectors such as shipping, ports, or fishing. At a façade macro-planning level, climate change mitigation is mostly addressed in an indirect manner. Rather than explicitly mentioning climate change mitigation, documents often refer to energy transition.

All four DSF include both objectives and measures on renewable energy production, storage and transportation. For instance, the South Atlantic plan includes two objectives relating to offshore renewable energy: "*Support the development of the offshore renewable energy sector through appropriate planning*" and "*Support R&D in the sector to deploy these technologies*". The Mediterranean plan's socio-economic objectives mention "*developing renewable marine energy in the Mediterranean*". It is worth reminding that numerical energy targets and objectives are not set up in the framework of establishing *façade* MSP documents, but by a national sectoral policy, the Multiannual energy plan (MEP). The current 2019-2028 MEP aims to reach an installed capacity of 2.4 GW of offshore wind power by 2023 and around 5.2-6.2GW by 2028. The objective of the MSP plans is then to address the spatial dimension and translation of the energy policy's objectives. It investigates where to best locate maritime infrastructures such as Offshore Wind Farm (OWF) meant to deliver on those targets taking into account *façades* specificities, possibilities for synergies with other sectors, etc. From a more socio-economic dimension, it can also reflect on what reaching such energy targets would mean for other sectors and for the *façade* in terms of employment, training, research ecosystem, etc. On 7 June 2023, the government required the launch of regional consultations with maritime and coastal stakeholders with a view to initiating the spatial planning of offshore wind energy while asking for a pooling of public debates with that of the upcoming revision of MSP documents. The objectives of the public debates held within each *façade* will include discussions on proposed priority areas for the development of offshore wind energy over the next 10 years and up to 2050, according to indicative ranges proposed for each *façade* (see table 5). In total at a national level, proposed indicative offshore wind energy capacity objectives amount to 18 GW by 2035 and 40 GW by 2050.

Façade	10-year targets for new capacity to be awarded (including extensions - already identified -) in GW	Targets to 2050 (including all already-awarded parks, those in the process of being awarded and identified extensions) in GW
MEMN	Between 7 & 11	Between 12 and 15.5
NAMO	Between 6 and 9.5 *(Including 0.5GW)*	Between 17 and 25
SA	Between 2.5 and 5.5 *(Including 1 GW)*	Between 7 and 11
MED	Between 3 and 4.5 *(Including 2x05.GW)*	Between 4 and 7.5

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Table 5. Indicative offshore wind capacity ranges proposed for each French Façade

Beyond energy production, some plans reflect on the whole renewable energy system. For instance, they call for integrated grid infrastructures. Plans also consider the socio-economic dimensions of offshore renewables, including training, employment, or research.

It is important to note that the French MSP legal framework has been modified by the Law no. 2023-175 of 10 March 2023 on accelerating the production of renewable energies. The law especially amends Article L. 219-5-1 of the Environment Code[13], which is the legal basis for the French MSP documents (DSF). The new version of the article specifies that each of the four MSP document must establish

> "*For each maritime façade, a mapping of the priority maritime and land zones for the installation, over a period of ten years from its publication, of offshore wind renewable energy production facilities and their connection infrastructures to the public electricity transmission network*", and that "*the map also defines the priority zones for the development of offshore wind power by 2050*".

In the first MSP cycle, French plans only featured indicative zoning, so-called "*vocation maps*". They did not establish a prescriptive distribution of space but a prioritisation of activities at sea in each sub-planning unit (vocation zones). The newly introduced obligation to map out zones prioritising a specific sector (offshore wind) in the next generation of plans therefore constitutes a major shift in the French approach to MSP.

Beyond renewables, all four plans include both objectives and measures targeting clean energy transition in maritime sectors. For instance, two plans mention "durability" of maritime transport within their objectives, while another one features the strategic objective of "*adapting fleets to the challenges of the ecological transition*". Interestingly, one of the plans reflects on how maritime transport could also support the energy transition by means of operating vessels for offshore renewable energy infrastructures. Beyond vessels themselves, another plan highlights how new maritime transport strategies, such as coastal shipping, could also play a role in the energy transition through a new approach to logistics and shorter supply chains. Here again, MSP plans reflect but are not meant to substitute relevant sectoral policies. In that perspective, it is worth mentioning that a national "Roadmap towards decarbonation of the maritime sector" was published in January 2023. It includes an action 3.1. relevant for future MSP cycles, which aims to set up at national and *façades* levels a plan for the needs and availability of low-carbon maritime fuels.

Transition in ports appears in all four plans. However, approaches differ. Two of the plans explicitly rank the topic as a strategic objective. One plan solely refers to "exemplary leisure ports", while another embeds the topics in a broader research and innovation objective, mentioning "cleaner port equipment and electricity for ships at berth". It is worth noting that the National Port Strategy was released in 2021 and includes strategic objectives relating to ports energy transition. In 2016, the "Blue Economy Law" (Leroy law) also already included measures on liquefied natural gas (LNG) and electricity at berth.

[13] Article L. 219-5-1 of the Environment Code, https://www.legifrance.gouv.fr/loda/id/LEGIARTI000047296509/2023-03-12/

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Blue carbon is not covered in any of the French MSP plans. Nonetheless, the topic only emerged very recently in France, especially in the wake of the One Ocean Summit in 2022. Therefore, it is possible that it will benefit from a greater attention in the next generation of plans.

Overall, French "vocation maps" feature two priority categories relevant for climate change mitigation: "offshore renewable energy" and "sustainable maritime transport". At an aggregated national level, they respectively rank second and third by order of priorities within vocation maps. ORE is mentioned as a priority in about 28% of the vocation maps, and sustainable maritime transport in about 26% of them. There are however high discrepancies from one basin to another. In the Easter Chanell North Sea *façade*, ORE are mentioned as a priority in 75% of the vocation maps. The figure drops to about 7% only in the Mediterranean Sea *façade*.

4.2.2. Climate change adaptation

At a national level, the NSSC includes climate change (CC) adaptation items. It has a specific emphasis on coastlines and islands adaptation and anticipation (e.g., sea level rise, coastal erosion, or climate change related natural hazards). It is also worth noting that France set up in 2006 a National Strategy for Adaptation to Climate Change, which was accompanied by National Adaptation Plans revised on a regular basis. The second and ongoing plan covers the period 2018-2022. It includes a section on the sea and coast, which calls to "*promote and implement spatial reorganisation of the coastline at relevant territorial scales, taking into account changes in the coastline and coastal risks*". It connects and complements the 2012 National ICZM Strategy. In 2021, the Climate and Resilience Law introduced the possibility to create Local ICZM strategies.

At a *façade* level, all four MSP plans include climate change adaptation within their vision and/or at a strategic objective level. Mirroring the national level, *façade* documents mostly focus on the anticipation and coastal management dimensions of CC adaptation. They take specific interest in topics such as coastal erosion, sea level rise or risk management e.g., marine submersion. Such a specific prism on CC adaptation is explicitly acknowledged by the North Atlantic Western Channel, South Atlantic and Eastern Channel North Sea plans. They all state:

> "*In this first plan, taking into account climate change and its effects mainly concerns the mobility of the coastline (e.g., rising sea levels leading to increased risk of flooding or erosion of the coastline). The preparation of the plans will be enriched in future cycles to take greater account of the impacts of climate change*".

As far as coastlines are concerned, plans feature objectives and measures on so-called "flexible" or "soft" management (*gestion "souple '' ou "douce"*) of the coastline. This approach consists in preserving or restoring coastal nature as a management strategy, i.e., using nature-based solutions, to deliver on objectives such as climate change adaptation.

From a spatial perspective, two out of the four *façades* include sub-planning units (vocation maps) featuring coastline evolution or erosion amongst their priorities. MSP documents clearly establish that climate change adaptation is mainly addressed through the lens of coastline evolution and erosion. Therefore, these priorities can be used as a proxy to assess the presence of climate change adaptation in the French

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indicative zoning documents. At an aggregated level, those coastline erosion and evolution priorities are featured in 4 vocation areas, i.e. 7% of the French vocation maps. In detail, they are found in the South Atlantic and Mediterranean MSP documents. Both basins include 2 vocation areas with coastline evolution and erosion counting amongst the priorities. However, it is worth distinguishing between the two basins. The South Atlantic *façade*'s coastline is divided into 4 sub-planning units (vocation areas). Two out of the four sub-planning units include these climate change adaptation related priorities. However, in terms of surface, those two units cover a great deal of the basin's coastline. Other South Atlantic coastal areas are of much smaller sizes, and most of all, natural parks i.e., areas for which priorities are reflected in, but not decided through the MSP process. In the Mediterranean *façade* zoning document, most of the 30 vocation areas have a coastal dimension. However, only 2 out of the 30 areas feature coastline evolution and erosion priorities. This makes climate change adaptation a much less stringent priority compared to the South Atlantic basin. The North Atlantic Western Channel zoning document mentions that all vocation areas within the territorial sea should, as a general priority, "*take into account climate issues*". However, the nature of these "*issues*" and how they will practically "*take into account*" is not specified. In turn, none of the North Atlantic Western Channel plan's vocation areas include priorities that would be clearly related to climate change adaptation. This means that, while all plans acknowledge climate change adaptation at a strategic, objectives or measures level, with a specific focus on coastline management, this hardly translates into their zoning document (exception made of the South Atlantic *façade*).

Beyond coastal issues, mentions of climate change adaptation are only found topically in French MSP plans. For instance, in the North Atlantic Western Channel strategic document, the adaptability of the fisheries sector to climate change is mentioned as a challenge within the *façade* description section. Similarly, the South Atlantic plan recognises that aquaculture could be impacted by climate change. It further mentions that climate change impacts could include "*development of toxic micro-algae, bacteria, and viruses*". The Mediterranean strategic document acknowledges the "*effects of global warming, a potential generator of bacteria, viruses and invasive species that present a public health challenge*" (note that science now usually refers to *climate change* rather than *global warming*). The Easter Channel North Sea plan acknowledges the potential for research to support "*the adaptation of activities to climate change*".

4.2.3. Sustainable food production

The National Strategy for the Sea and Coast (NSSC) includes sustainable food production amongst its main objectives. Those objectives mainly refer to sustainable fisheries and aquaculture, without mentioning sustainable algae production. None of the relevant EGD related policies are explicitly mentioned in the framework of the NSSC (as this strategy dates back from February 2017). The NSSC refers to international and national fisheries policies such as the Common Fisheries Policy and the International Convention on Labour (ILO) for fisheries aquaculture sectors. Amongst the priority actions of the NSSC, sustainable food production is considered as "*Achieving sustainable resource management, while reducing seafood dependency by reinforcing the ambition of French fisheries, enshrined in the Common Fisheries Policy, and supporting the development of aquaculture*".

Three out of four French MSP plans include sustainable food production in their 2030 vision (Mediterranean (MED), Eastern Channel-Northern Sea (MEMN) and North Atlantic-Western Channel (NAMO) plans). They mainly refer to sustainable fisheries and

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aquaculture without an explicit mention to sustainable algae production, except for the NAMO plan which mentions the "sustainability of exploited resources (professional and recreational fishing, aquaculture, aggregate extraction, food industry, seaweed (wild) harvesting, ...)". The South Atlantic strategic document does not mention sustainable food production in its 2030 vision objectives, but rather focuses on an economic development perspective of the fishing industry. However, it slightly mentions the necessity to support maritime sectors (in general, including fisheries) towards an environmental and energetic transition by referring to the renewing of fishing vessels.

Regarding the French MSP plans and their strategic/specific objectives, they all include sustainable fisheries and aquaculture. All are seeking to move towards more sustainable fisheries management plans (especially for bycatch control) and regulations, and the preservation of endangered and/or protected marine species. They also include the development of innovative approaches for an environmental transition of the fishing fleets and marine aquaculture infrastructure.

The number of strategic and specific objectives related to sustainable fisheries and sustainable aquaculture production in the four MSP plans are: SA - 5 strategic objectives and 7 specific objectives; MED - 3 strategic objectives and 19 specific objectives; NAMO - 7 strategic objectives and 5 specific objectives; MEMN - 3 strategic objectives and 13 specific objectives.

In a very limited approach, some of the strategic documents include sustainable algae farming production. However, there are no strategic objectives in the MSP plans concerning direct algae farming production. A specific objective of the NAMO strategic document refers to "Maintain a sustainable level of kelp fields harvesting (specific quantitative objective/species)" and, in a more limited way, some tracks for operational measures in the MEMN strategic document refer to the importance of supporting research projects and initiatives related to marine aquaponic production systems in symbiosis with algae farming production.

Several specific measures of the French MSP plans are related to sustainable fisheries. These measures mainly concern actions to improve regulations (with particular emphasis on the requirements for fishing authorisations/licences), to reduce by-catches and to reduce the impact of fishing gears on marine species and habitats (according to the specificities of each area (e.g., *Posidonia oceanica* in the Mediterranean)). A total of 26 measures concerns sustainable fisheries. Sustainable aquaculture is however much less covered by the specific measures of the plans, particularly in the SA strategic document where only one measure concerns aquaculture. The inclusion of sustainable algae farming production is very limited in all the four strategic documents. When it is mentioned, it is mainly consisting of indirect references within fisheries management measures or sub-actions.

From a zoning perspective, in the MSP zoning documents ('vocation maps"), sustainable fishing stands out as the main priority. Particularly in three of the four strategic documents (NAMO: 70% of vocational zones feature this topic amongst its priorities; MEMN: 50%; MED: 43%). Those priorities often concern the transition of the fishing fleets towards sustainable practices and "coexistence" with other uses (such as ORE). In the South Atlantic area, sustainable fishing represents 14% of the area's priorities. Sustainable aquaculture is, on the one hand, one of the main priorities in the NAMO zoning document (promoted in 46% of the vocational areas) and on the other hand, much less covered in the three other zoning documents (MEMN: 25%; MED: 3%; SA:

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0%). Sustainable algae farming production is not included as a priority in any of the four MSP zoning documents.

4.2.4 Biodiversity and ecosystem protection and restoration

At a national level, one of the long-term objectives of the NSSC is "*the good environmental status* - GES - *of the marine environment*", i.e., delivering on the MSFD. "*Protect environments, resources, biological and ecological balance*" is one of its priority actions. The document explicitly links MSP and biodiversity. It says that *"spatial planning must take into account the higher intensity of uses and protection issues in the coastal zone*". MSP should also *"create favourable conditions for [...] protecting areas with a high stake in the protection of the marine environment, in particular fisheries conservation zones*". Lastly, *"tools for implementing spatial planning of maritime activities and uses must enable going beyond thematic approaches in order to optimise sustainable exploitation of the sea and the coast, and preservation of its biodiversity*". Broadly speaking, a section titled "*Protect environments, resources, biological and ecological balance; preserve sites, landscapes and heritage*" features topics such as the implementation of the MSFD, the application of the EBA and the avoid, reduce, compensate sequence, the fight against pollutions, restoration of the marine environment and the developments of MPAs. Restoration is otherwise mentioned as follows: "*developing an engineering programme to restore marine ecosystems*". It must be noted that a first version of the National Biodiversity Strategy to 2030 was published in January 2023. Besides, France also published in 2021 a National Strategy for Protected Areas.

At a *façade* level, all four MSP strategic documents include biodiversity protection objectives within their vision and point out the GES objective. Protecting the environment is also considered from the perspective of the benefits it provides our society with. For instance, the Eastern Channel North Sea plan's vision mentions that "*protecting the marine environment and ensuring that it is in a good ecological status is an opportunity for successful economic and industrial development along the coast*". The Mediterranean plan's vision targets "*marine ecosystems in a state of functioning that enables them to provide the full range of ecosystem services*".

In practice, the French MSP approach to protecting marine biodiversity and ecosystems consists in implementing the MSFD. As such, all the MSP plans' strategic environmental objectives are based on the MSFD and its descriptors. Sections dedicated to strategic objectives, both environmental and socio-economic, can vary from a *façade* document to another regarding their structure and presentation. However, they share the same aim of making environmental and socio-economic objectives complementing each other. While environmental objectives are intended to implement MSFD requirements, socio-economic ones are supposed to support maritime sectors development but also to lower their environmental footprint and make them sustainable.

All environmental objectives are gathered and detailed in a dedicated annex to the strategic document. This annex's structure is eventually also based on the MSFD descriptors.

Conversely, non-MSFD relevant species, habitats, ecosystems, or pressure elements and/or high-level biodiversity protection and restoration objectives are not addressed by the French MSP exercise. For instance, plans do not include elements on generic items such as strategies or reflections on MPAs at a basin level, e.g., on connectivity

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and networks, or on restoration overall. Highly protected areas ("*Zones de protection forte*" - ZPF) however are called for in a generic manner in all plans. Similarly, all plans include measures on "important fisheries functional areas" including "Fisheries Conservation Areas". Those objectives are dealt with in other national strategies. It is worth noting that the 2021 National Strategy for Protected Areas states that

> "Document Stratégiques de Façade *will thus be used as channels for the local expression, on the maritime facades of the metropolitan territory, of the national strategy for protected areas*".

As far as zoning is concerned, since the environmental pillar of the French MSP process consists in implementing the MSFD, i.e., a legal obligation applying to all maritime areas, environmental objectives are by principle relevant for all "vocation maps". In practice, each of the vocation maps indeed refer either directly to the protection of the marine environment or at least to an obligation of durability and/or compatibility for the priority sectors identified. The Mediterranean MSP zoning document even states from the offset that "*preserving the environment, reducing and controlling human impact and maintaining or achieving good ecological status is imperative for all areas*". Beyond prioritisation, vocation maps only spatialise some of the existing area-based management tools dedicated to the preservation of the marine environment, e.g., marine protected areas.

On 7 June 2023, the government shared indications with MSP authorities regarding the modalities to designate zones for highly protected areas in each *façade*. The document also included proposed indicative targets for highly protected areas in each of the *façade* (see table 6). In total, the proposed indicative targets aim to protect at least 5% of the French EEZ by 2027.

Façade	Objectives by 2027
Eastern Channel North Sea	1%
Northern Atlantic Western Channel	3%
South Atlantic	3%
Mediterranean	5%

Table 6. Indicative highly protected areas targets proposals for each French façade

4.2.5 Blue circular economy

At a national level, the NSCC integrates the development of a circular economy amongst its objectives. It focuses on industries such as ship repair, recycling, and decommissioning. Besides, the blue circular economy is embedded in several national sectoral policies. In 2015, Law 2015-992 on "Green Growth " introduced elements relating to the circular economy at large, including on waste prevention and reduction, recycling, etc. The 2016 Law for Blue economy ("Leroy law") introduced elements on recovery of sediments from dredging. In June 2020, an Action Plan "Zero plastic waste at sea" was launched. A law "on the fight against waste and the circular economy" was also adopted in 2020. Lastly, a National Strategy on the "Recyclability, recycling and reincorporation of materials" was published in 2021.

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At *façade* level, circular economy is included in all the strategic planning documents' visions. Two visions make explicit mention of the circular economy. Two others indirectly refer to it by casting light on some of its key sectors, such as ship repair, sustainable decommissioning, or recycling. Besides, both the Northern Atlantic Western Channel and Mediterranean strategic plans include a strategic-level objective explicitly calling for a circular blue economy. At a lower level, all plans include circular blue economy specific objectives. As far as circular design is concerned, two of its dimensions are especially featured in plans' objectives: boats eco-conception and maritime infrastructures based on ecological engineering. Dealing with waste prevention, plans focus on reducing waste production at the source for sectors such as ports or shellfish farming. In the same vein, the recovery of sediments from dredging activities is encouraged in several plans, even though the conditions for dumping them at sea will tend to become more restrictive in 2025 leading to an increase in the volume to be treated on land. Besides, reuse, repair, upgrade or recycle approaches also contribute to reducing waste. Plans promote the collection and valorisation of waste from various maritime industries, including from boat decommissioning and fishing nets. The Mediterranean plan further "*encourage[s] the use and recycling of local materials in maritime developments and construction works*". In the same vein, valorisation of sediment waste from dredging activities is promoted in several plans.

Those objectives are operationalised, detailed, and complemented by measures within the MSPs action plans. In addition to measures related to the above-mentioned topics, it is worth mentioning that one of the plans calls for a maritime translation of the national circular economy roadmap, which was adopted in 2019. MSPs action plans also explore other dimensions of circular economy, such as "*networking and the dissemination of information on the façade's circular economy*" or thinking circular economy across *façades* by "*integrating the European level into the circular economy initiatives of the façade*". Additional streams of actions include mapping and sustainably removing shipwrecks and dealing with waste originating from rivers and landfills. Beyond industries, circular blue economy actions also involve citizens, including by means of waste-oriented ocean literacy and supporting voluntary foreshore maritime waste collection.

Based on the MSPs strategic and action plans, the following priority categories featured in zoning documents ("vocation maps") can be considered as contributing or related to blue circular economy: "Boating/ yachting/ nautical activities/sustainable leisure activities", "sustainable shipbuilding", "sustainable ports". At a national level, "Boating/ yachting/ nautical activities/sustainable leisure activities" is considered a priority in 6 vocation maps, i.e., about 10% of the vocation areas. In detail, 5 of those are located in the Northern Atlantic Western Channel basin, and one in the Mediterranean. "Sustainable shipbuilding" is only mentioned once, in a vocation map located in the Eastern Channel North Sea *façade*. Lastly, "sustainable ports" count amongst the priorities of 6 vocation maps. One is located in the Eastern Channel North Sea *façade*, all others in the Mediterranean.

4.2.6. Zero pollution

At a national scale, the National Strategy for the Sea and the Coast (NSSC) includes pollution issues, without explicitly mentioning EGD zero pollution objectives. This topic is mainly addressed through the scope of land-based activities and their impacts on coastal and marine ecosystems. Pollution prevention (rather than remediation) is thus covered by the objectives of the NSSC, with a particular focus in pollution reduction and

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water quality improvement in relation to water policy. The NSSC also includes a detailed state of art of various forms and sources of pollution (presented in the NSSC Annex).

Two out of four French MSP plans include pollution prevention and remediation objectives in their 2030 vision. The Northern Atlantic Western Channel plan recognises the existence of a "possible pollution from marine sources", referring to accidental pollution and/or pollution linked to maritime transport (spill oil). It also acknowledges the importance of specific infrastructures aiming to "reduce" or "eliminate" such pollution. To a lesser extent, the 2030 vision of the Eastern Channel North Sea plan also refers to marine pollution, making a direct connection with marine safety issues and surveillance purposes. The other two French MSP plans do not include pollution prevention and/or remediation in their vision.

The strategic and specific objectives of the MSP plans mainly refer to pollution prevention. To a very limited extent, the Northern Atlantic Western Channel plan also includes pollution remediation in some specific objectives (e.g., reduction of trash litter in coastal areas). These objectives are mostly part of the environmental objectives of the MSFD. Regarding pollution prevention objectives, the four MSP plans include various strategic and specific objectives relating to the reduction of land-based sources of pollution (particularly linked to agricultural activities discharges), the maritime sector (e.g., hydrocarbons, effluent discharges, …) and the reduction of noise pollution. The number of strategic and specific objectives related to pollution prevention in the four MSP plans is: South Atlantic – 5 strategic objectives and 17 specific objectives; Mediterranean – 5 strategic objectives and 15 specific objectives; Northern Atlantic Western Channel – 6 strategic objectives and 2 specific objectives; Eastern Channel North Sea – 1 strategic objective and 8 specific objectives.

Regarding the specific measures and actions included in the MSP Plans, pollution prevention and remediation are included in all the four plans. In total, 24 specific measures included in the four plans concern pollution prevention. Those measures mainly refer to maritime infrastructures (e.g., Ports, vessels discharges, …) impacts on marine ecosystems, the ambition to move towards a more sustainable tourism (e.g., sustainable cruises in the Mediterranean) and awareness campaigns (e.g., data collection, education, waste collection initiatives, …). Pollution remediation measures are mainly linked to the identification of areas of waste accumulation in order to reduce them (included in the four MSP plans). In total, 5 specific measures refer to pollution remediation in the strategic documents.

From a general perspective, the EGD zero pollution objective is not one of the main topics covered by the four French MSP strategic documents. Although some strategic and specific objectives are covering pollution prevention and/or remediation, this topic is not represented in the MSP zoning documents (Vocation maps). In this case, marine environment pollution issues are indirectly addressed through the sustainable transition objectives of maritime infrastructures, activities, and fisheries/aquaculture.

4.2.7. Cross-cutting elements

This section considers the following cross-cutting elements: Research and innovation, Education and training, and Cross-border cooperation in MSP. At a national level, all three dimensions are promoted by the NSSC. On research and innovation, the NSSC features an entire strategic axis titled « *Relying on knowledge and innovation* ». It includes the following objectives: '*Better understanding the sea system'; 'Innovating to*

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recover resources and develop the maritime economy'; 'Structuring research'; 'Developing research and knowledge for and by French overseas territories'; 'Building a marine and maritime knowledge-based society'; 'Raising public awareness of major maritime issues'; 'Continuing training efforts'. The NSSC also features relevant priority actions e.g., "*Getting to know the sea better, developing a marine and maritime knowledge society*" and "*Support maritime innovations, increase research capacity*". On data, the NSSC promotes "*the opening up of public data", which "will lead to their re-use and exploitation for new uses*". Especially, for MSP and data, that strategy states that "*[spatial planning of maritime activities and uses] requires access to the best available data on marine environments and maritime areas*". The NSSC also includes elements on education and training, e.g., improving the attractivity of maritime careers. Lastly, the strategy acknowledges that

> "*[MSP] involves and fosters a dimension of regional cooperation between States bordering the same maritime area, as well as enhanced cross-border cooperation in regional seas, and in defining and implementing European and international policies [...] It also requires cross-border technical exchange in order to render the data and their dissemination systems compatible*".

At *façade* level, MSP documents include research & innovation and education & training elements in their visions and strategic objectives. For instance, the Eastern Channel North Sea plan includes the strategic objective of "*developing a cluster-based structure for professional and higher education, innovation and knowledge dissemination in the maritime area*". The South Atlantic strategic plan aims to "*ensure shared data collection and better use of knowledge*". In the Mediterranean plan, strategic objectives include "*Develop the attractiveness, skills and variety of jobs in the maritime economy and coastal economy*". The Northern Atlantic Western Channel strategic document calls for *"supporting and promoting research and innovation in all areas of the NAMO maritime economy*". In the Eastern Channel North Sea plan, strategic objective 12 calls for "*strengthening the cluster-based structuring of professional and higher-education training, of innovation capacity and of knowledge dissemination within the maritime basin*".

Beyond socioeconomics, the environmental pillar of MSP plans also benefits from relevant elements. For instance, the South Atlantic plan features a strategic objective aiming to "*develop multidisciplinary knowledge and integrated research about the functioning of marine environments*". Multiple sub-objectives and actions further elaborate on and operationalize those strategic objectives. They get more specific in terms of which sector or topic should benefit from research and innovation support or from training programmes, as well as on how to achieve the required changes. For instance, the Eastern Channel North Sea plan calls to "s*upport the structuring of ecological engineering and blue biotechnology sectors*". The South Atlantic plan's objectives especially asks for research & development on offshore renewable and shipbuilding. The Mediterranean plan casts the light on research and innovations for offshore renewables, aquaculture, or eco-conception of ships. In the Northern Atlantic Western Channel plan, specific objectives include reinforcing fisheries-related knowledge.

Plans also provide indications regarding how those objectives should be attained. For instance, they call for the establishment of observatories dedicated to specific topics, e.g., on "maritime activities", offshore wind, "maritime jobs" or "blue economy". They also propose methods to achieve those objectives, for instance by improving data

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sharing between the public and private sectors, integrating the environment into innovation from the offset, improving safety at sea to contribute to maritime jobs attractiveness, supporting the digital transition of maritime industries across supply chains, further clarifying the support brought by the State to the development of specific sectors, etc. All plans feature specific objectives on training and education, e.g., on adapting training programmes to emerging needs for new industries as well as on valuing maritime jobs. This goes beyond maritime professionals, as the plans also include elements involving citizens and the civil society. For instance, the Northern Atlantic Western Channel and South Atlantic plans both promote networks of so-called "marine educational areas" ("Aires Marines Educatives"), which associates pupils and their professors to the management of MPAs.

As far as cross-border cooperation is concerned, all strategic planning documents recall that MSP draws from cooperation at a European level. This includes European Commission (EC)'s led Member States Expert Group ("MSEG") meetings or EU-funded projects looking into cross-border issues. The documents further remind the important role of regional seas conventions in supporting cooperation at a basin level and providing relevant methodological tools. MSP documents also provide more detailed information about cross-border cooperation at a *façade* level. For instance, the South Atlantic MSP Action Plan explains that

> "*Cooperative work has also been undertaken between Member States and third countries through regular meetings of expert groups to address issues specific to cross-border areas. For the South Atlantic façade, these exchanges have taken place with Spain on the specific issues of energy transport, and with the United Kingdom in the context of Brexit and its consequences for the fisheries sector*".

As far as zoning is concerned, several "vocation maps" include priorities relating to knowledge. At an aggregated level, Knowledge is mentioned as a priority in 10 (i.e., about 17%) of the vocation maps. It is mentioned as a priority in three vocation areas in the Mediterranean (10% of Mediterranean vocation maps), 3 out of the 7 vocation maps in the South Atlantic (in this *façade* it is also the priority most mentioned across all maps), 3 out of 13 in the Northern Atlantic Western Channel basin, 1 out of 8 in the Eastern Channel North Sea *façade*.

4.2.8. Fair & Just Transition

Regarding the EGD's 'No one left behind'' objective, it must be noticed that all continental French maritime areas were included in the MSP plans but not the outermost regions and overseas territories. Stakeholder participation and inclusion in the MSP processes is covered differently at a national scale and at a regional scale (*façade*). At national level, the NSSC considered State representatives, *façades* administrative commissions, the National council for the sea and the coast (CNML) and *façade* Maritime Councils (CMF), including outermost regions. Citizens and stakeholders were only included at a regional scale for *façade* strategic documents (mainly through online consultation (8000 connexions/384 advice), ''citizen workshops'' and public meetings), as well as CMFs, public administrations, NGOS, maritime sectors and in some cases, other States (both EU and non-EU).

Gender balance and/or diversity inclusion in maritime professions is not explicitly mentioned or included in the MSP process. However, the South Atlantic (SA) MSP plan

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mentions that "a particular approach will be devoted to the increasing openness of training and careers in the maritime sector to women", especially through one sub-action: "Initiate new discussions to change the perception of marine professions and encourage student diversity in maritime training courses".

From a national and regional perspective, the MSP process seeks to promote synergies between economic sectors in order to ensure the coexistence of the different activities in each *façade*. This is mainly mentioned in the MSP documents' "state of play and vision", regarding the impact of the different socio-economic activities on marine ecosystems and from a social perspective. It also concerns collaboration between scientists and citizens. For example, the MEMN plan presents a table of compatibility between different activities existing in the area. This topic is also covered by some specific objectives and/or actions through the MSP plans, for instance, the specific objective "Encourage the development of areas dedicated to cruise passengers by strengthening city/ports synergies along the coastline", or action: "Developing innovation across all key sectors by building synergies and leveraging partnerships".

4.4. Key challenges and obstacles identified

Six interviews were conducted in France with a view to identify key challenges and obstacles for MSP to work as an enabler of the EGD. Interviewees included stakeholders from the central administration as well public and private representatives from maritime sectors such as port authorities and offshore renewable energy.

4.4.1. Knowledge of the EU Green Deal

Discrepancies were observed in interviewees' knowledge about the EGD. The central administration authority as well as sector representatives either from public affairs departments or national unions and associations regrouping particular interests were more familiar with detailed EGD policies in particular the specific objectives related to their own activity (e.g., renewable energy or fisheries). A representative of harbours acting at local level spoke about the lack of capacity to follow all EU policies, and that such issues are delegated to the national representatives defending their interests. The same interviewee pointed out the difficulties and complexities of EU programmes on transition as well as how difficult they can be to understand for non-experts.

4.4.2. Challenges

Complexity of scale and temporality of MSP in France
Concepts of scale and temporality in the implementation of MSP in France were mentioned several times in the interviews. The first issue raised is the lack of geographical anchorage of the *façade* scale and the difficulties for stakeholders to conceive planning at such a scale. The strategic planning documents are divided along the four maritime *façades*. The *façade*, however, represents a complex administrative unit (as it includes different regions) that stakeholders need to address for the implementation of policies and/or tangible actions which are part of the European Green Deal (EGD) objectives. Still, in terms of scale, a further point raised is the issue of vocation zones. In France, the strategic documents are territory-based, and within each territory, a number of vocational zones are defined, each with different priorities. According to Offshore Renewable Energy (ORE) representatives, the vocation zones are

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too broad and are not appropriate to the scale of the coastline. The lack of adequate mapping of vocation zones leads to lack of clarity and, for instance, would not enable the identification of appropriate areas for the further development of activities like offshore wind farms. They also highlighted the challenge of inconsistencies in the time scales of the MSP documents. These documents were perceived as a fairly general framework rather than a planning document and not easily understood by the general public. According to them, the timeline for the drafting and implementation of strategic documents was delayed compared to the operational component list of issues and objectives discussed several years ago. It has to be mentioned that French MSP plans have been finalised prior to the launching of the EGD. Thus, the implementation of public policies at different levels aims to achieve objectives that were agreed at national level and in an EGD framework. The environmental objectives, for example, stemming directly from the MSFD, would have to be applied at local/regional level, which can be difficult.

Procedures

The most discussed challenge was the procedural mismatch between national planning timeline and EGD objectives, as the drafting of the French strategic planning documents in France started in 2017 (three years before the EGD approval in 2020). This is a significant challenge for the ORE sector. It seems that the delay in developing wind farms is due mainly to the time wasted in defining the precise areas, the timetable for technical studies and environmental assessments, among others.

Managing uncertainty in transitions

Regarding the means of transitioning to energy, environmental, economic, and other types of EGD related transitions, several challenges were identified. For example, the difficulty for stakeholders to project themselves into the future and have a medium to long-term vision given the constant changes (environmental, climate-related, social, economic, etc.) and their ability and capacity to plan for the future varies. This reflects the lack of visibility regarding the development of certain sectors in transition (e.g., development of renewable energy). These uncertainties arise from the constant changes in timetables and deadlines for developing activities, which may be incompatible with EU objectives, national plans or local strategies which are also part of these transitions. As a result, it is difficult for different sectors to implement actions which are based on national prioritisation, which may not be appropriate at regional and/or local level, due to geographical variations. Visions of sustainable development are often perceived differently at sub-national level, making the practical implementation of transition objectives more complex. The homogenisation of these issues and the need for a more pragmatic approach to deal with uncertainties are seen as a key challenge.

Projection of terrestrial logics into the sea

MSP plans are perceived as framework tools rather than planning tools. The overall framework applied to the 4 maritime façades prevents the implementation of precise planning measures tailored to other levels/contexts. MSP plans are seen as a "*projection of terrestrial logics into the sea*", emphasising in particular an appropriation of the maritime space that would underlie the planning process. The projection comes from activities requiring precise zoning supported by EGD objectives, such as offshore renewable energy (ORE) and marine protected areas (MPAs), for example, as opposed to more “fluid” maritime activities such as fisheries. This leads to a sense of territorial ownership of maritime space based on a terrestrial logic, which is not always appropriate and requires particular management.

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Participatory democracy: ''Leave no one behind''
The functioning of governance bodies involved in the implementation of the MSP topics have also been highlighted as a challenge. On this topic, the port industry representative highlighted the difficulty of participating in national decision-making processes. They are concerned by the State's strategic policies related to implementation of EGD (such as decarbonisation, ORE development, etc.). Ambivalence between the "façade" and national decision making and the role of each maritime sector within these bodies, is predominant amongst the respondents. The lack of intra-administrative co-operation in the MSP process was also raised. Despite the involvement of several decision-making agencies/stakeholders in the planning process, collaboration often seems limited. This lack of cooperation between administrations and bodies in charge to implement EGD components results in planning tensions and discrepancies in the implementation of EGD-related measures. As part of EGD "Leave No One Behind" approach, another challenge is the equity of stakeholders' participation in planning governance. Representatives of sectors such as ORE, port, industry, and others are members of local governing bodies (e.g., Maritime Facade Councils (MFCs)), but are not part of national bodies. This differs between sectors, for example the port sector believes that it has more influence at local than national level. Others, like the ORE sector, have the feeling to be more present at national level, due the State's strong action on decarbonisation and the strategy for developing renewable energies, but feel to have little influence at local level. This means that stakeholders do not have the same access to all planning governance bodies at all levels and raises an equity problem (particularly within the MFCs). In equity terms, the difficulties for the public to understand the strategic planning documents and the State's lack of clarity regarding its choices within the public debate has also been identified as a challenge.

Fragmented, scattered, and non-dynamic data
Concern has also been heard about data availability, in particular for implementing the ecosystem approach. A challenge that was identified is the proliferation of platforms with only partial available data. There is a strong need to develop a common tool gathering all data relevant for planning purposes (mapping, consultation, technical study results, etc.) in order to avoid confusion among administrations and the maritime sectors. The static nature of spatial planning and the lack of dynamism of the tools were also debated. Some stakeholders underlined the need for a tool that can evolve in accordance with advances in technology and societal changes, and that is dynamic and in line with the future cycles of MSP in France.

Space availability: articulating EGD challenges
The availability and management of the space to allow the coexistence of various activities, in particular new ones, was also an issue brought up in interviews. This issue was underlined in connection with hosting new activities (related to EGD objectives) such as ORE, which demand a large space. The energy transition requires a major reorganisation of space and a new distribution of activities. The example of the port sector is a good illustration of this point, as ports are often used as storage and transport sites for the ORE structures. But this requires the development of port infrastructure. The interviews pointed up a lack of resources and support to combine this with existing port activities in a limited spatial area. It is important to note that certain aspects of transition, such as zero artificialization targets, are in fact restricting the access to land to host new activities. Better alignment between EGD elements/objectives and the capacity of the various sectors (port, industrial, etc.) is needed. Also, the exclusion of many military zones from the planning process was also

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mentioned. Defence zones are subject to special regulations (they may be located within MPAs or forbid the practice of specific maritime activity). These zones take up a lot of space, and there is no room for dialogue to make the strict regulation of these zones more flexible. This lack of dialogue hampers the implementation of EGD measures for marine spatial planning and makes the compatibility and coexistence of activities very difficult.

4.4.3. Suggestions

To meet the challenges of limiting space and cohabitation, one stakeholder said that the State should be more flexible in regard to "*regulatory experimentation*". The required transitions will imply new practices, which may be out of the scope, or impossible under current regulations. This person was of the opinion that some domains should benefit from legislative flexibility to support innovation. In the same spirit, to deal with coexistence and/or conflict regarding the use of maritime areas, another speaker called for more "pragmatism in the management of the uncertainty". The aim is not to constrain the growth of certain transition sectors due to the uncertainties concerning other sectors or maritime variables (for instance, the future distribution of fisheries or certain marine ecosystems as a consequence of climate change). It would also mean considering that certain activities are *de facto* compatible with others, so as not to restrict their deployment for fear of conflict. For example, according to one ORE stakeholder, there is no single activity with an offshore wind farm that is not compatible. It is more a question of implementing the appropriate regulations and ensuring that they are complied with (e.g., navigation safety). Therefore, the development of wind farms should not be hindered *a priori* by fears of conflict with other activities. From a governance perspective, an interviewee stated that the State must clearly assume the responsibility for the political choices made, including those relating to prioritising access to maritime space.

Given that the MSP is cross-cutting, one interviewee also felt that the silos between authorities responsible for various sectoral or topical policies under the MSP should also continue to be broken down. In terms of participation and inclusiveness, it was emphasised that use of maps and scenarios could be employed to support public participation.

MSP discussions and the topics addressed can be highly technical and difficult for non-experts to understand, which can constitute an obstacle to public participation.

Tools such as maps and scenarios can be used to inform the public about the stakes and practical impacts of the decisions made as part of the multi-year strategic planning process on which they are being consulted. On the technical side, it was recommended to create a centralised platform/tool to integrate all data relating to maritime spatial planning, including the environmental data, which is currently dispersed between different platforms.

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Chapter 5

The Green Deal component of MSP in Germany

5.1. Background information about Germany's MSP process and plans

5.1.1. Background

Overview
Germany borders two seas, the North Sea, and the Baltic Sea. In the Baltic Sea, the EEZ is a narrow band of 4,500 km^2, while the EEZ in the North Sea is significantly larger with a total of about 28,500 km^2. The EEZ in the Baltic Sea is bordered by the federal states of Schleswig-Holstein and Mecklenburg-Vorpommern as well as Denmark, Poland, and Sweden, while the EEZ in the North Sea is bordered by the federal states of Schleswig-Holstein and Niedersachsen as well as the Netherlands, Denmark and the UK (Figure. 8).

In line with Germany's federal structure, responsibility for MSP is divided among four MSP authorities. The Federal Ministry for Housing, Urban Development and Building (BMWSB) is the public authority in charge of spatial planning at the federal EEZ level. The Federal Maritime and Hydrographic Agency (BSH) is responsible for coordinating the planning process. The BSH is a public authority with a wide range of tasks, which apart from MSP also comprises the preparation of the sectoral site development plan for offshore wind and site assessments for offshore wind farm construction.

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Figure 8. Germany's marine territory

(EU MSP Platform, https://www.msp-platform.eu/). NS = Niedersachsen; SH = Schleswig-Holstein, MV = Mecklenburg-Vorpommern, EEZ = Exclusive Economic Zone

The main aims of spatial planning in Germany are set out in the Federal Spatial Planning Act (Raumordnungsgesetz, ROG) which applies to the entire territory of the Federal Republic including the EEZ. Its purpose is to "develop, order and secure" the territory and its sub-areas by means of sustainable spatial development. This is understood as development that "reconciles social and economic demands on space with the ecological functions of space", with the aim of leading to "long-term spatial development that is balanced at a large scale". Conflict resolution and mitigation are important implicit goals of "ordering" space. The coastal federal states of Lower Saxony, Schleswig-Holstein and Mecklenburg-Vorpommern draw up their own Spatial Plans based on state legislation which is similar to the ROG. State spatial development plans comprise the terrestrial territory of the state as well as their respective share of the territorial sea and inland waters.

The ROG was amended in 2017 to transpose the EU MSP Directive into national law. It stipulates that MSP in the EEZ should focus on the safety and ease of shipping, other economic and scientific uses of the sea, and the protection and improvement of the marine environment, while considering potential land-sea interactions and security aspects. The ROG also states that the responsible ministry should draw up MSP plans in agreement with other relevant ministries, and that it should cooperate with neighbouring countries and federal states to achieve coherence with other maritime spatial plans. In its current form, the ROG thus represents the guiding framework for maritime spatial plans in the EEZ, both in terms of the structure of the final planning document and the formal plan-making process. Additionally, MSP in the German EEZ is framed by the UN's Convention on the Law of the Sea (UNCLOS), as well as a range of European Directives, including the Marine Strategy Framework Directive (MSFD) and the SEA Directive.

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Importantly, MSP in the EEZ is a strategic instrument. It sits at the top of a tiered system of planning and licensing where a range of increasingly specific instruments interact, including strategic environmental assessment and environmental impact assessment. By designating priority areas for offshore wind, for example, MSP's task is to ensure these areas are kept free of other potentially conflicting activities. It is not, however, the task of MSP to develop these areas. This is specified in the so-called site development plan for offshore wind, which is a sectoral plan, itself supported by more detailed site assessments. The same principle applies to nature conservation, where MPAs are designated under sectoral law (led by the Ministry for the Environment). MSP can assist by designating priority areas for nature conservation, which enables it to restrict certain activities within these. MPAs and priority areas for nature conservation do not necessarily overlap, which is indicative of an independent role of MSP. Figure 10 describes the tiered system for the example of offshore wind farming.

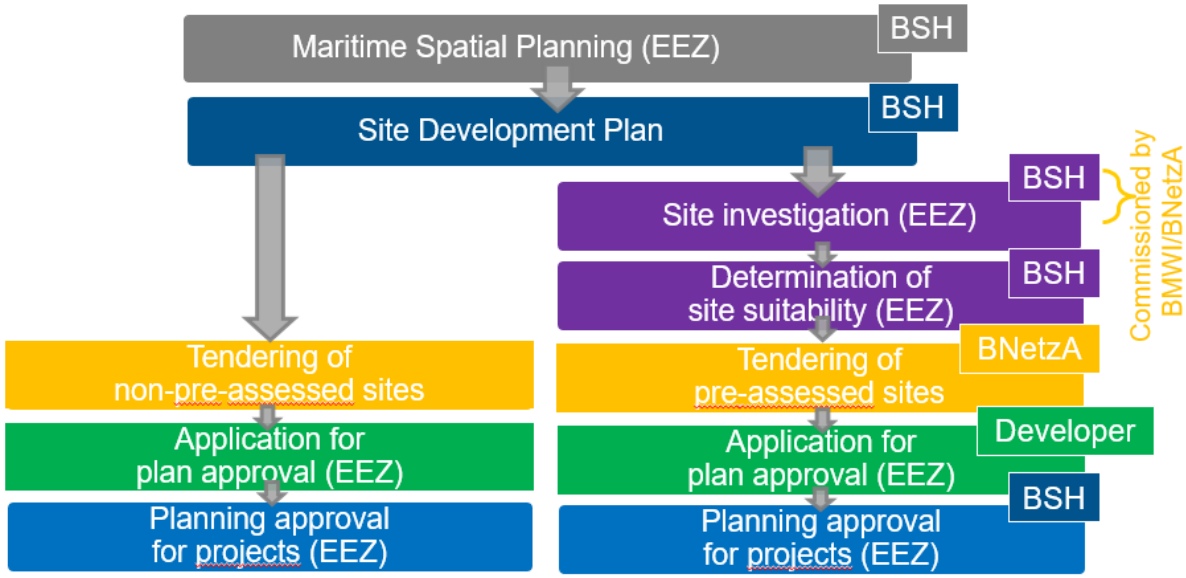

Figure 9. German tiered system for offshore wind farming

Key planning instruments

Legislation makes available two instruments for organising space, so-called objectives (Ziele) and principles (Grundsätze). Objectives amount to binding requirements that have been "conclusively weighed up", which means a binding decision on spatial priorities has been made. Spatially, this can translate into priority areas where uses and functions incompatible with the priority function or use are excluded or restricted. Principles, on the other hand, represent guidelines which have not been conclusively weighed up, meaning there is more room for discretion in any subsequent decision-making processes such as licensing. Spatially, principles can translate into reservation areas where certain uses or functions are given particular weight when weighing them up against competing functions or uses in subsequent spatial development decisions. Objectives and principles do not necessarily translate into spatial designations, which means the text of the plan may contain additional provisions that must be implemented up and above the designated priority and reservation areas. The scope of potential direct or indirect impact of the regulations have been outlined in an explanatory document to the plan[14], e.g. explaining how they have to be considered in subsequent

[14] Federal Maritime and Hydrographic Agency (BSH), Spatial Planning in the German Exclusive Economic Zone (EEZ), 2023,

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planning and licensing procedures, and how they may contribute to the overlaying objectives.

State of play
The current MSP plan for the EEZ came into force on 1 September 2021 after a two-year planning process and was drafted at a time when the EGD already existed. It replaces two earlier plans for the EEZ that had been in force since 2009, one for the Baltic Sea and one for the North Sea. Both had been drafted before the EGD came into being. The main innovations of the 2021 plan comprise:

- Protection and improvement of the marine environment is given priority and reservation areas,
- More priority areas and a greater share of the total planning area have been designated for offshore wind,
- A reservation area for fisheries has been included,
- Reservation areas for defence have been included,
- Conditional and temporary priority and reservation areas have been designated,
- Overlapping priority areas have been designated.

Innovation also comprised the planning process *per se* which was more comprehensive than in 2009 and especially also included informal steps of stakeholder communication during the early stages of planning, before the formal consultation stages.

5.1.2. The German EEZ plan and the European Green Deal

The EGD is directly referenced in the MSP for the German EEZ 2021 only once, namely in the justification for specification 2.2.1 on priority areas for offshore wind energy:

> *"The spatial safeguarding of sites for wind energy production is an expression of the spatial planning mission statement of sustainable, climate-protecting development. In particular, it enables the implementation of the ideas of the mission statement on the use of climate-friendly energies, support for energy security, and the achievement of national and international climate targets and the greenhouse gas neutrality target 2045 (Climate Protection Act) and 2050 (European Green Deal)").*

The EGD is not mentioned in the short introductory vision that underlies the stipulations of the 2021 MSP, although the plan was prepared and adopted while the EGD was already in place (2019). For the EEZ plan only legislation transposed into German law was taken into account, as well as obligations arising from the Convention on the Law of the Sea. All EU Directives have been transposed into German law but there is no explicit or direct reference to these policies or strategies in the plan. For example, the EU Biodiversity Strategy would be part of Federal legislation which guides sectoral nature conservation; the plan thus makes reference to nature conservation provisions and the underlying federal legislation (such as MPAs/N2000 areas) but not to the respective EU Directives. An exception is the Marine Strategy Framework Directive (MSFD) which is mentioned for illustrative purposes and explicitly referred to in the Strategic Environmental Assessment (SEA) that accompanies the plan.

Relevant federal legislation mentioned in the plan includes:

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https://www.bsh.de/EN/TOPICS/Offshore/Maritime_spatial_planning/Maritime_Spatial_Plan_2021/_Anlagen/Downloads/ROP_2021/Accompanying_document.pdf?__blob=publicationFile&v=3

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- Offshore Wind Energy Act, stipulating an expansion target for offshore wind energy of 40 GW by 2040;
- Federal Nature Conservation Act, comprising biodiversity and nature conservation goals;
- Federal Mining Act, guiding the extraction of raw materials.

Some EGD topics have not been included because of the planning scope of the EEZ plan. Due to its geographical delimitation the EEZ plan does not directly address issues relevant to coasts, such as coastal protection (considered to be part of climate change adaptation) or port development. Other aspects such as fisheries or a circular economy have not been included because MSP has not remit for it.

5.2. EGD components of MSP plans analysis

5.2.1. Climate change mitigation

The plan directly refers to renewable energy production and transportation, and indirectly to clean energy transition in maritime sectors through the provisions it makes for shipping. The plan makes no reference to transformation in ports (for lack of a geographical remit) or blue carbon storage as no concrete projects exist in the German EEZ (and territorial waters) because it is prohibited under current German legislation.

Renewable energy production is the central interpretation of climate change mitigation and a key driver of the German EEZ plan in terms of allocating space. Along with shipping it is probably the most consistently argued policy of the plan, supported by the vision, strategic objectives, and planning objectives.

The vision states that "*Healthy seas (...) make an important contribution to climate protection*" and that "*The fundamental use of climate-friendly technologies, especially offshore wind energy and other renewable energies, supports (...) the achievement of national and international climate targets*."

The strategic objective reads as follows:

> *"The expansion of offshore wind farming is of outstanding importance for achieving German and European climate protection goals. Due to the long planning and approval periods for offshore wind turbines and connecting cables it is necessary to secure suitable sites for the long term and to strive for co-use with other sectors." (p.9, justification other economic uses)*

The plan designates various priority and reservation areas for offshore wind in line with the federal government's quantitative expansion targets for offshore wind energy (20 GW by 2030 and 40 GW by 2040). In priority areas, a final assessment has been conducted on the environmental impacts of offshore wind farming, while in reservation areas such a conclusive assessment is still lacking for the key competing uses of nature conservation and shipping. In total, 10.1% of the EEZ have been designated as priority area for offshore wind and 5.9% as reservation area. An additional conditional priority

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area of 0.09% and a conditional reservation area of 0.36% lead to a total of 16.45% of the EEZ that has been dedicated to offshore wind.

There are no quantitative area targets, but a justification statement that the EEZ is to be developed with a view to sustainable energy supply for future generations. For implementation, the plan largely relies on the (sectoral) Site Development Plan for offshore wind which specifies the areas to be developed and in what order. Altogether, enough space has currently been secured through priority and reservation areas to allow the 40 GW target to be met.

Although no specific mention is made in the plan of the clean energy transition, some strategic objectives and principles do support this goal, albeit indirectly and argued from the perspective of existing conventions (such as MARPOL) and the MSFD. It should also be stated that the plan only has very indirect powers to enforce these objectives. The strategic objective reads:

> *"According to the Federal Spatial Planning Act, MSP is to contribute to the protection and enhancement of the marine environment, including the achievement of good status of marine waters, taking into consideration climate protection, by appropriate designations for the marine environment and designations for avoiding or mitigating harmful impacts and pollution resulting from the above uses" (p.5 guiding principles) (i.e. navigation/shipping, all economic uses, scientific uses, and security aspects).*

The planning objective for shipping states that "Shipping is to be carried out with sustainability in mind. The aim is to reduce the impact of shipping on the marine environment. In addition to observing the regulations of IMO, best environmental practice in accordance with international conventions on ocean protection and the state of the art in science and technology are to be taken into consideration" (p.6 (4)). The justification of this objective states that

> *"Compliance with the limits for sulphur oxide and nitrogen oxide emissions as part of MARPOL also supports environmental objective 1 developed by Germany for the North Sea and Baltic Sea in accordance with Article 10 MSFD: Marine environments free of adverse effects by human-induced eutrophication."* (p.8).

No quantitative objectives are stated.

5.2.2. Climate change adaptation

Unlike climate change mitigation, the plan only indirectly refers to aspects related to climate change adaptation. As the plan does not cover territorial waters there is only indirect reference to green infrastructures to enhance coastal resilience. There is also indirect reference to the protection of climate-sensitive marine biodiversity and ecosystems, with the plan acting in support of sectoral provisions to secure areas for nature conservation purposes. No reference is made to anticipating the effects of climate change, although arguably, shipping route designations are to some degree anticipatory in considering possible new Northern routes.

The plan does not contain any specific objectives related to climate change adaptation.

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Some of the general principles set out for protection and improvement of the marine environment can be interpreted as also meeting adaptation objectives (protecting climate-sensitive marine and coastal biodiversity and ecosystems), but they are not explicitly formulated with climate change adaptation as a goal. The relevant planning objective related to protection and improvement of the marine environment states that

> *"The EEZ should be permanently safeguarded and developed as a natural area for the conservation of biological diversity, in consideration of its typical natural features, ecological relations and interrelationships. (...) Adverse effects on the natural balance are to be avoided and mitigated as far as possible, taking into consideration the objectives of the BNatSchG (Federal Nature Conservation Act), the precautionary principle and the ecosystem approach."*

Reference is made to climate change in the context of the marine landscape, although again there is no explicit anticipation of climate change-related effects. The respective planning objective states that "The marine landscape in its natural uniqueness (...) should be preserved. (...) Its importance for functioning seabeds, the water balance, flora and fauna (biodiversity), and the climate is to be safeguarded".

In terms of other documents or policies, it is predominantly the Federal Nature Conservation Act which is referred to.

There are no priority or reservation areas dedicated to Green Infrastructures and Nature-Based Solutions to cope with climate-change impacts, including blue carbon areas. Nor have any areas been identified for future use needs in view of climate change.

5.2.3. Sustainable food production

The plan does not refer to sustainable food production as an overarching or strategic objective.

Nonetheless, fishing, and marine aquaculture are considered economic uses on a par with others; they are therefore covered by the same strategic principles. The general strategic objective for economic uses is that economic uses should be sustainable and as space-sparing as possible, and that economic uses should be sustainable in the sense of intergenerational use. Specific mention is made of fish stocks that are to be managed sustainably in order to ensure long-term fishing use.

Importantly, fishing is not regulated by MSP, so the plan does not restrict fishing directly. No trawling regimes may be part of nature conservation regulations pertaining to MPAs, and there are fishing restrictions in areas dedicated to scientific use. There is also an indirect restriction of fishing in priority/reservation areas for offshore wind as fishing activities are limited (depending on a General Decree for every individual wind farm, in most cases only navigation up to 24m length and passive fishing with baskets and pots is allowed).

MSP can ensure that areas important for fishery are kept free of incompatible uses. In the latter sense the plan makes provisions for the Norway lobster fishery, with the aim of securing an area for this purpose and excluding incompatible uses, such as offshore wind. Unlike other fisheries, this species depends on a particular seafloor habitat and

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fishery areas can therefore be spatially delineated. The justification reads:

> *With the designation of the reservation area, Norway lobster fishing is spatially safeguarded; it is given special consideration in the weighing up with other spatially significant measures." (p.16)*

There are no targets associated with sustainable food production. No time-based measures have been stipulated.

Currently there is no aquaculture in the German EEZ, but the plan aims to provide a framework for the establishment of marine aquaculture. There is no reference to algae at this stage. The planning objective for aquaculture aims to encourage co-use with existing installations (such as offshore wind farms) to achieve greater spatial efficiency:

> *"Aquaculture facilities should be set up in close proximity to or in combination with other existing or under-construction installations. Maintenance and operation of the installations should be adversely affected as little as possible by the establishment and operation of aquacultures. Environmentally friendly species and forms of aquaculture should be chosen." (p.18)*

There are no quantitative objectives for sustainable food production.

In terms of the total EEZ area dedicated to fishery, the reservation area for Norway Lobster amounts to 1.87% of the total planning area.

5.2.4. Biodiversity and ecosystem protection and restoration

MSP in Germany has no direct remit for nature conservation or biodiversity management. It is, however, tasked with contributing to protection and improvement of the marine environment (Federal Spatial Planning Act), e.g. by keeping protected areas free from incompatible uses and reducing the environmental impact of economic uses generally by means of a spatially efficient approach. Environmental impacts of the plan are investigated as part of the SEA process which runs in parallel with the planning process.

The plan makes multiple references to biodiversity, ecosystem protection and enhancing the marine environment, although the terminology used (and prescribed in the Federal Spatial Planning Act) is of a general nature and does not specifically refer to terminology such as restoration, climate refugees, ecosystem services or similar. Nonetheless, the respective planning objectives can be read to cover EGD biodiversity and ecosystem protection objectives at least indirectly. Spatially, biodiversity and ecosystem protection have been given the largest share of the EEZ in terms of priority and reservation areas: The total extension of all priority and reservation areas for nature conservation amounts to 44.10% of the EEZ, with non-strictly protected areas (N2K, OECM – including candidate areas) amounting to 30%. No specific areas have been set aside for restoration.

Biodiversity-related aspirations set out in the vision and strategic objectives include:

> *"Healthy seas provide space for biodiversity, make an important contribution to climate protection, and offer a wide range of ecosystem services" (...)*

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"Maritime spatial planning preserves the natural structures and functions of the seas (...)" "(The plan) shall contribute to the protection and enhancement of the marine environment, including the achievement of good status of marine waters, taking into consideration climate protection through:

- *appropriate spatial designations for the marine environment, and*
- *designations for avoiding or mitigating harmful impacts and pollution resulting from the above-mentioned uses."*

Building on the vision, and in line with legal planning requirements, the plan sets out generic objectives for protecting and enhancing the marine environment in the EEZ:

"*A threat to the marine environment from economic uses – in particular adverse impacts on the natural functions of the marine ecosystem – should be avoided as far as possible" (p.8)*

In the justification for the strategic objective, particular reference is made to the construction of offshore wind farms and associated cables:

"Adverse effects on legally protected biotopes according to Section 30 BNatSchG (Federal Nature Conservation Act) should be avoided during the planning, construction and operation of installations for energy generation and cables (...) Cables should be laid outside nature reserves where possible" (p.10)

The plan does not differentiate between strictly and non-strictly protected areas as making this distinction and delineating strict protection areas is within the remit of nature conservation. The plan designates priority and reservation areas for nature conservation, with some designations overlapping. All existing MPAs (Natura 2000 areas) are designated as priority areas for nature conservation, which allows restrictions on other uses to be introduced (e.g. no offshore wind farms in priority areas for nature conservation). The plan additionally designates a priority area for divers, which partly overlaps with an existing MPA but is larger in size. There are additional reservation areas for divers, as well as reservation areas for harbour porpoise and for bird migration, both of which impose temporary restrictions on certain activities (e.g. a requirement to turn off wind turbines during mass migration events). There is also a temporary reservation area that excludes the construction of infrastructure above the sea surface.

No specific mention is made of improving marine connectivity, although provisions are made for migratory species (birds and mammals):

"The designation of the bird migration corridors "Fehmarn-Lolland and Rügen-Skane takes into consideration the special importance of bird migration across Fehmarnbelt and across Rügen to Sweden." (p.20)

"The permeability of marine space for large-scale migratory species is necessary in order to reach and use areas that are functionally important to them (...) the connection between functionally relevant areas should therefore be maintained. Area designations in the marine environment ensure such passability."

In the context of avoiding barrier effects for marine mammals, explicit reference is made to the MSFD:

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> *"This principle also supports the environmental objective 3.4 MSFD "Human structures and uses do not threaten the natural dispersal (including migration) of species for which ecologically permeable migration corridors constitute essential habitats" and Measure M3.5 "Ensure connectivity of nature conservation areas with functional areas important for the protected assets" of the North Sea management plans (...)" (p.20/21).*

The plan also contains a planning objective designed to preserve the EEZ as a natural area as far as this is possible:

> *"The EEZ should be permanently safeguarded and developed as a natural area for the conservation of biological diversity, in consideration of its typical natural features, ecological relations and interrelationships. (...) Adverse effects on the natural balance are to be avoided and mitigated as far as possible, taking into consideration the objectives of the BNatSchG (Federal Nature Conservation Act), the precautionary principle and the ecosystem approach." (p.18)*

Last not least, the plan contains provisions for preserving the marine landscape, in the sense of ensuring that large parts of the EEZ remain visually open space, meaning they do not have any visible large-scale infrastructure.

There are no quantitative objectives for any of these elements.

5.2.5. Blue circular economy

Circular design, waste prevention, and reuse, repair, upgrade, recycle are not covered by the German EEZ plan as they are dealt with at the level of licensing for individual projects. Correspondingly, there are no quantitative objectives. Only a sustainable economy (and not a circular economy) is referred to in the plan's vision:

> *"The responsible use of maritime resources is the basis of a sustainable marine economy that contributes to prosperity for present and future generations."*

5.2.6. Zero pollution

The plan contains a general reference to reducing pollution but does not mention zero pollution:

> *"(The plan) shall contribute to the protection and enhancement of the marine environment (...), through designations for avoiding or mitigating harmful impacts and pollution resulting from the above-mentioned uses" (i.e. the uses regulated by the plan)."*

Pollution prevention and remediation are regulated at the level of sectoral planning and licensing for offshore wind or other projects. Nonetheless, some objectives do have impacts on pollution prevention, encompassing both noise pollution and the reduction of pollutants in the water/air. The framework for these policies, however, is not the EGD or a zero-pollution target but existing international conventions and agreements.

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For offshore wind, a planning objective focuses on the reduction of noise pollution:

> *"The input of sound into the marine environment during the construction of energy generation installations shall be avoided as afar as possible according to the state of the art in science and technology" (p.11)*

This builds on the understanding that the use of effective technical noise mitigation systems is already provided for at the specific project level during the installation of wind turbines. This should take into consideration the noise abatement concept of the BMU (Federal Ministry for the Environment) for the North Sea of 2013. Reference is also made to the MSFD and its environmental objective 6 "Oceans that are not adversely affected by anthropogenic energy inputs" and operational objective UZ6-04 "Development and application of noise mitigation measures for the North and Baltic Seas" are simultaneously supported." (p.13).

Pollution prevention from shipping is mostly provided for through efficient routeing and emergency preparedness:

> *"By paying attention to existing traffic flows, operational objective UZ2-03 of the MSFD "Preventing and combating marine pollution – improving maritime emergency preparedness and management" is also supported." (p.7)*

There is also a planning objective for sustainable shipping, which states that

> *"Shipping is to be carried out with sustainability in mind. The aim is to reduce the impact of shipping on the marine environment. In addition to observing the regulations of IMO, best environmental practice in accordance with international conventions on ocean protection and the state of the art in science and technology are to be taken into consideration" (p.6 (4)).*

This refers to a host of international agreements on the prevention of adverse effects of shipping on the environment – such as MARPOL, OSPAR and HELCOM in particular. In addition to the mandatory regulations of IMO, best environmental practice under the OSPAR convention and HELCOM of 1992 with its updates (last update on 1 July 2014) and the respective state of the art must be taken into account. Compliance with the limits for sulphur oxide and nitrogen oxide emissions as part of MARPOL also supports environmental objective 1 developed by Germany for the North Sea and Baltic Sea in accordance with Article 10 MSFD: "Marine environments free of adverse effects by human-induced eutrophication" (p.8).

There are no quantitative objectives.

5.2.7. Cross-cutting elements

Multi-use

No areas have been specifically allocated in the plan for multiple use of the sea with different activities to be run in close synergy. Nonetheless, single use areas are rare in the EEZ and there are no areas without any specific use.

Multiple use is covered by the plan in the sense of allowing overlapping uses (including overlapping priority and reservation areas), but not in the sense of purposefully

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encouraging co-use or synergetic use. For example, priority areas for nature conservation overlap with priority areas for shipping and reservation areas for sand and gravel extraction. Certain overlaps are excluded, such as shipping and offshore wind farming.

One form of multi-use was designed explicitly, which is the overlap between priority areas for offshore wind and reservation areas for scientific research. The total area with overlapping priorities for offshore wind and scientific research amounts to 140km² / 0,4%. In the North Sea, this overlap is still conditional as the respective priority area for offshore wind is a conditional priority area for offshore wind energy.

Research and innovation
The plan makes several provisions to support research on the marine environment, and by implication data gathering. The plan allows research vessels to access offshore wind farms, for research not directly related to the activities of the wind farm. This is to enable the continuation of long-established data time series despite large-scale deployment of fixed infrastructure.

The plan as such does not provide for research activities, nor for data harmonisation or sharing (not in the remit of MSP). It does, however, secure several areas for fishery research which has to be considered when deciding on other spatially relevant activities. Where overlapping areas have been designated with offshore wind energy areas, fishery research must be able to continue under the same conditions as prior to wind farm development.

The plan does not make any provisions to support technological innovation in marine sectors (not within the remit of MSP).

Education and training
The plan does not foresee any objectives to address education, skill development and training in maritime professions as this is not within the remit of MSP.

Cross-border cooperation in MSP
Following the requirements of the EU directive on MSP (2014/89/EU) to prepare a MSP that is coherent with those of the neighbouring countries, discussions and exchange of data took place; especially with regard to shipping lanes and fixed infrastructure (e.g. wind farms). With regard to data sharing for MSP Germany is involved in a dedicated expert group in the Baltic Sea Region, as well as similar initiatives in the North Sea Region. No specific cooperation is foreseen with specific sectors, although there are several dedicated initiatives and working groups that might come up with results to be considered in a future revision of the plan (including in ongoing MSP projects).

5.3. Fair and just transition

Planning is designed with fairness in mind as it aims to balance the various uses of the sea in the best possible way, with sustainability as the main guiding principle. In the introductory vision the plan only makes a very indirect reference to the (economic) prosperity of current and future generations, which could be interpreted as intergenerational justice:

> *"The responsible use of maritime resources is the basis of a sustainable marine economy that contributes to prosperity for present and future*

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generations."

Aspects of fairness and equity are also covered by the planning process, where representation of stakeholders is an important consideration during the formal steps of consultation.

Stakeholder participation
Formal requirements for stakeholder participation are set out in the Federal Spatial Planning Act. The BSH took additional informal steps to ensure early and broad stakeholder participation in the planning process, which can be said to have increased recognition and representation. For the purpose of the EEZ plan, stakeholders are mandated stakeholders such as other authorities, those with legal rights (e.g shipping under UNCLOS), stakeholders with an economic interest, stakeholders with an ideological or research interest (e.g nature conservation), and self-proclaimed stakes. There are no targets for stakeholder participation, or any definitions of representativeness or diversity criteria, nor any specific attempts to include disadvantaged groups.

Stakeholder involvement took place at various stages of the planning process, and stakeholders were kept informed on the steps and current state of the planning process on the BSH website, including through a blog. Expert knowledge was considered through a scientific advisory board that accompanied the plan-making process, as well as scientific reports and data made available by various authorities and research institutes. The BSH itself is a data holder for many environmental data.

In terms of influence on the final plan, in principle, every stakeholder has the capacity to influence planning decisions if theirs is a legitimate concern that can be handled through MSP. The results of informal sector workshops in the pre-planning stage influenced the first draft plan in the sense of different planning scenarios drawn up that were then considered in the workshops. A first draft was then made available for consultation, and modifications were made to the first draft plan based on stakeholder input, with the reasoning behind each modification (and also why suggested changes were not taken up) made public. Ultimately, however, the draft plan has to be agreed by mandated Ministries affected by the plan regulations, which is a stage where compromises are made, and final planning decisions are taken.

Leave no place behind
The EEZ plan only covers the EEZ, so "place" in this instance does not mean the territorial sea. Leaving no place behind therefore means involving all three coastal States in the development of the plan. This was ensured by involving various levels of Lower Saxony, Schleswig-Holsteis and Mecklenburg-Vorpommern's administration, including the respective State ministries, coastal cities, and municipalities, as well as regional associations and organisations.

No socio-economic impact assessment was carried out (e.g. as part of the SEA), and no distributive effects of the various provisions of the plan were considered. The plan in itself represents the best possible balance in terms of area allocation between the various uses, therefore no further mitigation or compensation measures are considered. If at all, compensation measures are anchored within nature conservation legislation.

Public access to data and plans
The availability and quality of data (and knowledge) differs in terms of accuracy and

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actuality throughout the planning area. This is caused by the difficulty of data availability with increased distance from shore. Data availability mostly refers to different types of environmental data that are used to underpin planning decisions.

Requirements to ensure public access to data and plans are set out in the Federal Spatial Planning Act. The plan and associated SEA are publicly available on the BSH website (download as a pdf document) and also on the GEOSEAPORTAL and EMODNET as a digital map/shapefiles. The BSH website also offers comprehensive documentation of the planning process itself, including drafts of the plan and the results of national and international consultation.

An important aim was also to generate greater understanding and acceptance of the plan by stakeholders, mostly by making planning options transparent and laying out the planning process in a series of logical steps.

5.4. Key challenges and obstacles identified

Although the EGD is known in principle and acknowledged as an important framework, stakeholders and planners in Germany agree that out of the many objectives of the EGD, only some can be directly addressed by MSP (e.g. energy). Others can be addressed indirectly (like zero pollution, smart mobility) and some not at all (like financing the transition).

The EGD is perceived as rather abstract and as a general framework that needs to be interpreted by national policy. It is also perceived as contradictory with respect to its goals (such as offshore wind farming vs nature conservation vs fishery), especially since there is not enough space in the German EEZ to deliver on all EGD objectives. Prioritisation and trade-off decisions are therefore required, not all of which can rely on clear political guidance. Currently there is an imbalance because high quantitative targets have been set for the deployment of offshore wind energy, making it necessary to use any available space in the EEZ for this use. This leaves little room for choices with regard to the suitability of these areas and makes it difficult to make alternative arrangements for other activities and functions, such as shipping, nature protection, fishery, scientific research and research infrastructure. Stakeholders are critical of the fact that topics are not only considered according to political priorities and urgencies but also based on the “weight” of stakeholders/sectors. Offshore wind is a strong and well-organised stakeholder and clearly has a lot of political support, while other stakeholders like nature conservation are well organised but less well heard, and still others (e.g. fisheries) are not well organised, small and only able to react to events.

For planners, one of the key challenges is that the spatial dimension of EGD objectives is not always apparent. This is also related to the regulatory competencies of MSP. Although the plan provides a spatial framework, it actually has very little scope to implement EGD topics. The plan can achieve direct steering effects when it comes to designating areas, e.g. for offshore wind energy, but only indirectly affects emissions, e.g. by securing the best possible (efficient) routes for shipping. To a large degree, the MSP plan therefore relies on other tools to implement its policies (sectoral plans, licensing etc.). Offshore wind energy is well regulated in a coherent approach encompassing MSP, sectoral spatial planning (Site Development Plan), the tendering of sites (some of which are being centrally investigated), and the approval process for

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specific sites, but other uses and sectors are considerably less well organised, putting them at a potential disadvantage.

It is also obvious that the nature of the planning space matters to which EGD topics can be covered. A challenge specific to the German EEZ plan is its lack of a direct connection to the coast which restricts the relevance of some EGD topics. The German EEZ also does not (yet) cater for uses such as aquaculture, at least not spatially or specifically, although this is a prospective use that will likely become more relevant in the future. The plan also had to include aspects that contradict the EGD, such as making provisions for hydrocarbon extraction.

In conclusion, a key challenge in Germany is that the EGD is not broken down enough to the marine environment to enable MSP to effectively tackle all its various topics. The EGD as such is much less relevant than corresponding national policy and/or strategic goals. National goals are more specific which makes them easier to implement, although the challenge remains of how to deal with contradictory objectives for the planning area. EGD implementation needs instruments that make a difference, and much more policy integration. Germany specifically needs a maritime (also spatial) strategy and action plan/roadmap to facilitate this and support the objectives of the EGD more broadly and across scales. Promoting the Blue Economy in this context may be helpful to make the objectives for the marine space more tangible.

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Chapter 6

The Green Deal component of MSP in Italy

6.1. Background information about Italian MSP process and plans

6.1.1. Background information about the plan

Italy has developed three MSP draft plans (hereafter referred as the plans in this chapter), made available for public consultation on the 15 September 2022.[15] The three plans refer to the following maritime areas of the Mediterranean Sea: the “Tyrrhenian - Western Mediterranean", the “Ionian - Central Mediterranean" and the “Adriatic". The plans apply to the territorial waters up to 12 NM (nautical miles), the continental shelf and the ecological protection zone of the North-Western Mediterranean, the Ligurian Sea and the Tyrrhenian Sea. It is worth noting that on the 31 July 2023 the Italian inter-ministerial Committee for the policies of the sea approved the Plan of the Sea, a document providing political guidance and coordination in the form of an integrated national maritime strategy.

The plans take into consideration land-sea interactions. The plans do not apply to areas where urban and rural plans are already in place, including, in case, port areas. The plans’ geographic scope considers a total area of 548,000 km^2, with 309,000 km^2 pertaining to the Tyrrhenian - Western Mediterranean; 176,000 km^2 pertaining to the Ionian - Central Mediterranean and 63,000 km^2 pertaining to the Adriatic.

[15] Available at https://www.sid.mit.gov.it/login

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Figure 10. Italian Maritime Spatial Plans “Tyrrhenian - Western Mediterranean" maritime area

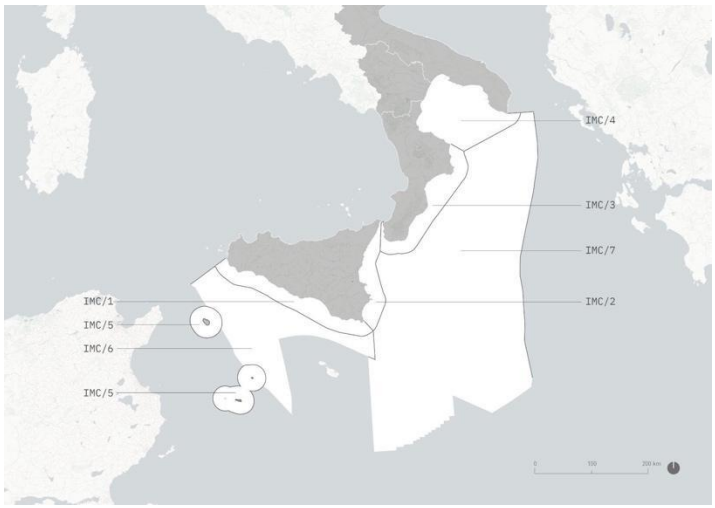

Figure 11. Italian Maritime Spatial Plans “Ionian - Central Mediterranean" maritime area

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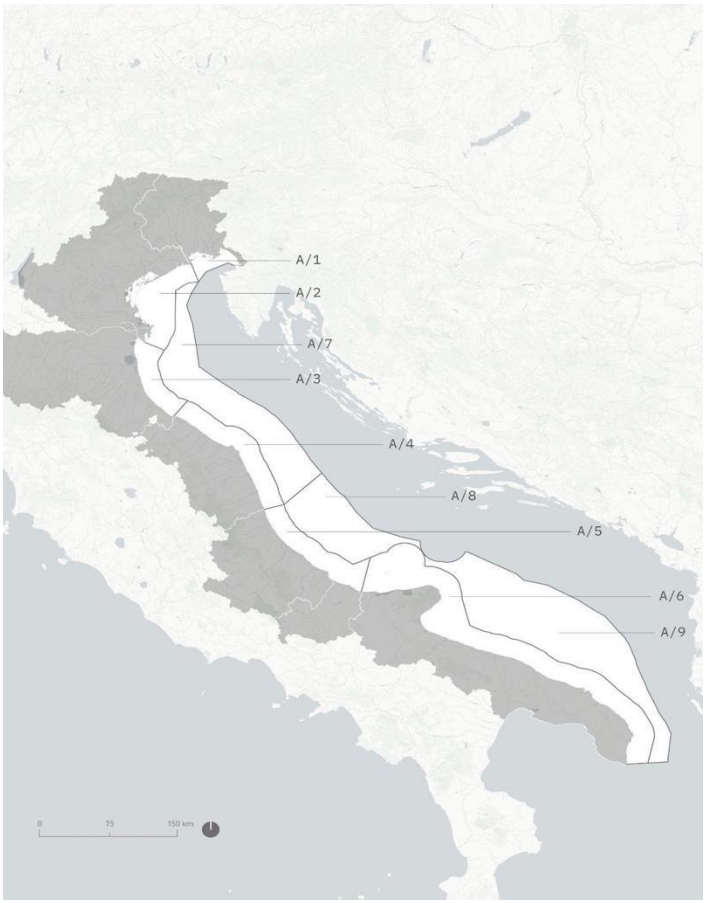

Figure 12. Italian Maritime Spatial Plans “Adriatic" maritime area

National planning approach

The Italian MSP plans consider a multi-scalar approach. Three spatial levels are considered: maritime area, sub-areas, and planning units. Maritime areas correspond to the entire domain of each of the plans. Within each maritime area, two categories of sub-areas are identified: (i) coastal sub-areas within 12 nm from the baseline and delimited by the extension into the sea of the administrative borders of coastal regions, and (ii) offshore sub-areas, located beyond the limit of 12 NM up to the agreed limit of the continental shelf and/or of the ecological protection zone. The sub-areas are defined considering a set of morphological, ecological, and use-related criteria. Within the sub-areas, planning units are identified, with different resolutions and size, according to local (environmental, ecological, and use-related) characteristics and data availability.

The multi-scalar approach is reflected also in the definition of objectives and measures: both national level (maritime area scale) and regional level (sub-area scale) are considered for plans’ objectives (strategic objectives and specific objectives are identified, respectively) and plans’ measures (national measures and sub-area measures are identified).

Four typologies of planning units are considered, expressing and increasing level of exclusiveness of the use:

- G = Generic Use: Areas where all uses are developed with the same importance, with specific and reciprocal regulatory mechanisms defined or to be defined

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according to national and international standards or sector plans, to guarantee safety, reduce and control environmental impacts and encourage co-existence between uses.
- P = Priority Use: Areas where the plans provide indications of priority use(s) (from 1 to 3, exceptionally 4). All other uses are allowed, provided they do not conflict with priority ones.
- L = Limited Use: Areas where a prevalent use is indicated. Other uses may be present, with or without specific limitations, if and to the extent they are compatible with the prevalent use (e.g. marine conservation).
- R = Reserved Use: Areas reserved for a specific use. Other uses are permitted only for the needs of the reserved use or unless granted by the entity responsible for or managing the reserved use (e.g. marine defence).

Information relating to self-consistency, structure, responsible authorities and enforceability

The Italian MSP plans are self-consistent documents. They are organised around six main chapters, reflecting the six main phases of plans' preparation:

- Phase 1 - Initial status and current and expected trends
- Phase 2 - Analysis of interaction between uses and impacts on environmental components
- Phase 3 - Vision and strategic objectives
- Phase 4 - Strategic level planning
- Phase 5 - Monitoring
- Phase 6 - Activities to consolidate, implement and update the Plan

The competent authority of MSP in Italy is the Ministry of Infrastructure and Transport. The Decree of transposition of the MSP Directive into the Italian legislation (Decree 201/2016) has identified the Competent Authority and has established an Inter-ministerial Coordination Table that adopted the MSP Guidelines (Decree of the President of the Council of Ministries n. 19/2017) providing principles and requirements for the Plan elaboration. A Technical Committee coordinated by the Competent Authority and composed by several ministries and the coastal regions has been uncharged to prepare the plans.

The plans are legally binding and provide strategic level indications and guidelines for each maritime area and their sub-areas, to be used as a reference for other planning actions (sector or local level) and for the granting of concessions or authorisations. The plans consider the following sectors:

- Fishing
- Aquaculture
- Coastal and maritime tourism
- Maritime transport
- Port activities
- Shipbuilding and repair
- Offshore renewable energy
- Oil & Gas
- Cables and pipelines
- Maritime defence
- Marine aggregates sand extraction for beach nourishment)

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- Nature protection and restoration
- Landscape protection
- Underwater cultural heritage protection
- Scientific research
- Coastal protection
- Others: Maritime safety, security and surveillance

State of play

The preparation of the MSP plans for the 1st cycle in Italy started officially on the 12 November 2018 with the first meeting of the Technical Committee but the operative starting of the process can be identified in January 2020, when the Technical Committee started to meet regularly. In the same period, a scientific team was organised and started working; this has been providing technical and scientific assistance along the entire process of the plans' preparation. The draft plans are still under finalisation, based on the results of the public consultation and the Strategic Environmental Assessment consultation which has not been officially closed.

In fact, the Ministry of Infrastructure and Transport (MIT), in compliance with Art. 9 of Legislative Decree 201 of 17 October 2016 (D. Lgs. n. 201 del 17 Ottobre 2016), published the documents related to the Maritime Spatial Management plans, which were put online for public consultation from 15 September to 30 October 2022, in compliance with the reduced deadlines provided for by the regulations in force (Art. 14, paragraph 3 of Legislative Decree 152/06). On the 29 September 2022, the Ministry of the Environment and Energy Security (MASE) opened for 45 days (with the reduced deadlines provided for by the regulations in force) the public participation through the SEA. At present, the SEA process is not concluded yet: the final report from the Strategic Environmental Assessment Commission is still pending.

6.1.2. The Italian MSP plans and the European Green Deal

The Italian MSP plans include several references to the EGD and full packages of policies and strategies encompassed by the EGD. This explicit link is due to the timing of preparation of the plans that operatively started in 2021 and therefore allowed for the possibility to link directly to the most recent policy processes and related documents.

The EU Green Deal (COM(2019) 640 final) objectives have been considered as one of the main policy frameworks for the preparation of the plans. It is explicitly considered within the strategic objectives at national level (OS_SS|03)[16], rightly focusing on the MSP contribution to the marine components of the EGD. The Sustainable Blue Economy Communication (COM(2021) 240 final) - strictly related to the maritime components of the EGD - is referenced in the vision of the plans at the level of each maritime area. It is also recalled within the section of strategic objectives at national level.
The Strategy for offshore renewable energy (COM(2020) 741 final) is considered among

[16] In the Italian MSP plans, national level objectives are identified by codes. The first two letters (OS) are included in all codes, meaning "Strategic Objective" (Obiettivo Strategico in italian). The second two letters refer to the cross-cutting principle or sector the objective focuses on, i.e.: SS = sustainable development, N = nature protection and restoration, PPC = landscape and cultural heritage protection, P = fishing, A = aquaculture, TM = maritime transport and port activities, E = energy, DC = coastal protection, T = tourism, RI = scientific research. Finally, the third part of the code is formed by a progressive number identifying the objectives pertaining to a certain cross-cutting principle or sector.

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the background documents that have been used as a basis for the plans preparation (Annex to Chapter 5 of the draft Plans). Instead, no reference is made to the REPowerEU Plan (COM(2022) 230 final) which is only indirectly (and partially) considered through the reference to the contents of the European Climate Law and COM(2020) final. The Italian MSP plans do not include direct reference to the European Climate Law or the previous COM(2020) 562. However, in their strategic objective OS_E|01, the plans clearly refer to the intermediate EU climate target set by the law aiming at the reduction of net greenhouse gas emission by at least 55% compared to 1990 levels by 2030, in line with the Italian Energy and Climate Plan (PNIEC). Reference to the EU Strategy on Climate Change Adaptation (COM(2021) 82) and the national policy documents on climate change adaptation (the Italian National Adaptation Strategy and Plan; the latter under finalisation) is made in the background documents considered for the plans preparation.

The EU Biodiversity Strategy 2030 (COM(2021) 380) has been considered as one of the main policy frameworks for the plans' preparation. It is explicitly considered within the strategic objectives at national level OS_N|02, with reference to the objectives of improving the extension of the protection of the marine environment to 30% by 2030, and of at least 10% for strict protection.

The Farm to Fork Strategy (COM(2020) 381 final) is explicitly considered within the strategic objectives at national level OS_A|01, which aims at promoting the sustainable development of aquaculture. Strategic guidelines for a more sustainable and competitive EU aquaculture (COM/2021/236 final) were considered within the background documents for defining the strategic objective OSA|02 "Promoting high quality aquaculture and fostering the process of development of AZAs - Allocated Zones for Aquaculture".

On the contrary, the strategy towards zero pollution (COM(2021) 400 final) is not referenced to in the plans; the topic of pollution prevention is targeted under other strategies and plans (e.g. River Basin Management Plans under the Water Framework Directive and the Marine Strategy Framework Directive) to which MSP plans refer to.

Circular Economy (COM(2020) 98 final) in maritime sectors is targeted as one of the strategic objectives of the plans (OS_SS|04), specifically focusing on the economic and environmental benefits that can derive from this approach. Circular economy is also referred to in strategic objectives at the sector level. OS_A|01 promotes the sustainable development of aquaculture, also referring to the circular economy Action Plan and the opportunities offered by reusing and recycling the waste generated by this activity (in a value-chain perspective).

6.2. EGD components of MSP plans analysis

6.2.1. Climate change mitigation

Climate change mitigation, and therefore the decarbonization of the maritime sectors, is considered within the vision, strategic objectives, and the measures of the Italian MSP plans, supporting the European and national decarbonization and energy transition objectives. Climate change mitigation, as well as adaptation (see paragraph 6.2.2), is perceived, within the plans, as a transversal topic that influences some specific uses: renewable energy production, storage and transportation, clean energy transition in maritime sectors, transformations in ports and blue carbon storage.

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In relation to renewable energy production and clean energy transition, the strategic objectives of the plans are mainly developed within the energy and maritime transport sectors. In particular, as stated in OS_E|01, the plans contribute to promote "the energy transition towards renewable and low-emission sources through the development of the production of renewable energy at sea". With OS_TM|01 the plans aim to promote the sustainable development of maritime transport and reduce its negative impacts. Somehow, this is targeted also in relation with fishing activities, (OS_P|01) with reference to increasing energy efficiency of fishing boats. No quantitative objectives for marine renewable energy are indicated. The current version of the plans state that Italy intends to pursue a target of covering, in 2030, 30% of the gross final consumption of energy from renewable sources in general. In particular, the objective for 2030 foresees a gross final consumption of energy of 111 million tons of oil equivalent (Mtoe), of which about 33 Mtoe from renewable sources (PNIEC, 2019).

The plans include a set of more than seventies national level measures (i.e. measures that apply to the entire MSP geographic scope. Several of them deal with renewable energy at sea, i.e.:

- The development of national guidelines for the detailed identification of suitable sites for offshore renewables (wind, solar, wave and current) and the assessment of single and cumulative impacts on the environment and the landscape (during the construction, operation, and decommissioning phases). These guidelines aim to support the: i) detailed spatial planning of renewable energy; ii) design of the plants; iii) environmental permitting phases (NAZ_MIS|52).[17]
- The development of a Decision Support System (DST) supporting the feasibility analysis, preliminary design, assessment of environmental impacts, identification of mitigation measures and assessment of the social acceptability of offshore renewable energy infrastructure (NAZ_MIS|53).
- The indication for future installation of ORE to adopt solutions to reduce conflicts and promote coexistence with other uses of the sea (e.g. permeability for shipping, fishing with fixed gears, sand extraction for coastal defence works, offshore aquaculture, managed tourism, scientific research) (NAZ_MIS|57).
- The support to research and innovation projects on offshore renewable energy production, in particular on: (i) energy production from sources other than wind (wave, tides and currents, solar, combination of different sources), (ii) offshore plants and technologies with clear added value (e.g. synergy with other sectors, energy supply in marginalised areas, management of energy demand peaks) for particular areas such as ports, remote areas and minor islands, (iii) combination of offshore renewable energy production with other uses (multi-use) such as aquaculture, tourism, recreation, fishing, environmental protection, (iv) innovative technologies aimed at minimising impacts on the environment and landscape; (v) assessment of the impacts on specific habitats and species (NAS_MIS|55).

The plans provide additional measures on clean energy transition, promoting initiatives

[17] In the Italian MSP plans, measures are identified by codes: NAZ identifies national measures (relevant for the entire geographic scope of the plans), distinguishing them from sub-national ones (relevant for a specific sub-area); In the code formulation, MIS states for measure; the code is completed by a progressive number.

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towards emission reduction with the aim of implementing fleet modernization actions (also regarding energy efficiency of fishing vessels) for all fishing segments, including small-scale fishery. The plans envisage to incentivize actions to ensure safe and decent working conditions for the fishery operators and to improve the competitiveness of the sector through training program to fishermen on sustainable fisheries (NAZ_MIS|28). Moreover, the plans underline the need to support measures aimed at increasing energy efficiency (in particular as regards the energy efficiency of vessels) and the use of renewable energies in the fisheries and aquaculture sector, considering the entire supply chain (also including processing and marketing of the fishery and aquaculture products) (NAZ_MIS|30 and NAZ_MIS|39). In relation of transformations in port, the plans promote the use of alternative fuels in ports, such as the land-based electricity grid and liquefied natural gas (LNG) through the objective OS_TM|02.

For carbon storage, in accordance with the provisions of Legislative Decree 162/2011 and in implementation of Directive 2009/31/EC, the plans favour the identification of suitable areas for the capture and geological storage of CO2, providing for the identification of exhausted hydrocarbon deposits which can potentially be used as storage as well as, as required by Directive 2009/31/EC, as an activity to promote the recovery of hydrocarbons present in the reservoir itself.

Finally, the plans provide a cross-cutting measure that is relevant for all the climate change mitigation topics considered in this section. This measure promotes the elaboration of a study on the MSP plans' contribution to the achievement of the national climate targets of emission reduction and carbon neutrality. According to the measure, the study shall consider both the maritime sectors and the protection and restoration of blue carbon ecosystems (NAZ_MIS|07).

6.2.2. Climate change adaptation

Climate change adaptation is addressed in the vision, strategic objectives, and cross-cutting measures of the Italian MSP plans. These elements tackle the considered topics of climate change adaptation in different ways:

- Anticipation of climate change effects through the cross-cutting measure described below.
- Improved coastal protection and resilience through measures focusing on green infrastructure as described below;
- Improved protection of biodiversity, habitats, and ecosystem through the package of provisions and measures illustrated in paragraph 6.2.4.

Within the coastal defence sector, the plans provide a strategic objective (OS_DC|01) that aims to enhance coastal resilience through the implementation of conceptually, environmentally, and technologically advanced nature-based solutions. This objective is completed by a specific measure (NAZ_MIS|61) aimed at reactivating the pre-existing National Coastal Erosion Table to: (i) deal with Integrated Coastal Zone Management (ICZM) at the national scale through a coordinated approach, also ensuring coherence with MSP; (ii) integrate existing strategies and plans (ICZM strategies and plans, coastal plans, flood risk management plans, etc.), (iii) promote research on the implementation of innovative measures (i.e., nature-based solutions) for climate change adaptation of coastal zones (also in synergy with mitigation objectives); (iv) stocktake and monitor innovative (NBS) interventions implemented at the national and sub-national scales; (v) foster interregional cooperation on climate change adaptation issues in coastal zones .

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Additional measures promote improved coherence among other planning instruments or initiatives, such as existing ICZM/coastal strategies and plans, implemented projects on the coastal morphology (for conservation or restoration) and the contents of the MSP plan to implement corrective actions, also taking into account the most recent climate scenarios (NAZ_MIS|62).

Still referring to coastal protection, the Italian plans identify planning units with priority use associated with the extraction of offshore sand (e.g. in the northern Adriatic) to be used for beach nourishment and coastal NBS. Availability of detailed and updated data on sand deposits location and volume is essential. To this regard, the plans envisage completing the mapping and the assessment of the quality and the quantification of the volumes of underwater sand deposits to properly plan their use, also in the perspective of increasing risk (due to climate change) of coastal erosion and flooding (NAZ_MIS|63). Finally, the plans aim to integrate the data and information available within the national database on illegal buildings to develop a study on the extent of infrastructure in the 300 metres wide coastal strip and, therefore, protect climate-sensitive coastal landscapes. The study should support measure identifications to cope with this problem (NAZ_MIS|26).

Despite all these objectives and measures, it is possible to argue that climate change adaptation is still not completely considered in the Italian MSP plans. To fill this gap, the plans provide a cross-cutting measure (NAZ_MIS|06) that intends to develop a study on the impacts of climate change on the maritime spatial plans (considering all above-mentioned topics) and on the identification of related adaptation measures, to be considered in the mid-term assessment and revision of the MSP plans. The study shall adopt a multi-scale approach, dealing with the assessment and the identification of adaptation solutions at the level of the maritime areas, subareas, and planning unit. The study will integrate the provisions of other plans (e.g., the National Plan for Climate Change Adaptation) and the outcome of other studies (e.g., Report of the "Commission on Climate Change, Infrastructure, and Sustainable Mobility," 2022).

Apart from the priority planning units for sand extraction at sea, the plans do not identify specific areas dedicated to climate change adaptation.

6.2.3. Sustainable food production

Elements related to sustainable food production in the Italian MSP plans are mainly related to the sectors “aquaculture” and “fisheries”. These elements are complemented by cross cutting ones which refer to “nature protection and restoration” and “landscape protection”.

The vision of the Italian plans foresees that fisheries and aquaculture are developed in a sustainable and efficient way, pursuing a sustainable use of fishery resources, with the objective of protecting and rebuilding stocks and promoting the development of small-scale fisheries practiced with sustainable techniques, also in synergy with other sectors (e.g. tourism, local distribution chains, processing industry), in order to add value to the product and provide benefits for the local communities.

The strategic objectives included in the plans, target the sustainability of fishing activities from multiple angles:

- Fostering the sustainable development of fish supply chains (OS_P|01);

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- Promoting the implementation of the provisions of the multi-year European and National Management Plans in the Geographical Sub-Areas (OS_P|02);
- Promoting the development and spatial management of small-scale coastal fisheries, practiced with sustainable techniques (OS_P|03);
- Promoting the creation of areas aimed at the recovery and protection of fish stocks and protection of Essential Fish Habitat (OS_P|04);
- Fostering cooperation between states in order to achieve concerted measures for the sustainable management of the activities of their respective national fisheries sectors (OS_P|05);
- Controlling and fighting against illegal fishing (OS_P|06).

As far as aquaculture is concerned, both the objectives identified within the plans include reference to sustainability aspects:

- Promoting the sustainable growth of the aquaculture sector (where reference is made to the Farm to Fork Strategy and the Circular Economy Action Plan) (OS_A|01);
- Promoting high quality aquaculture and supporting the process of defining Allocated Zones for Aquaculture - priority areas for aquaculture (where identification of areas for aquaculture is linked to increase the sustainability of the sector) (OS_A|02).

The improvement of fishery sustainability is tackled within the plans by means of an articulated package of measures. Measure NAZ_MIS|30 supports the appropriate spatial distribution of investments aimed at aligning fishing capacity with the objectives of the European and national multi-annual plans for the management of Sub-Geographical Areas, with the final goal of reducing the pressure on fish stocks and promoting their sustainable exploitation. The measure also includes the promotion of studies aimed at assessing the balance between the fishing fleet capacity and the availability of resources.

Another important measure (NAZ_MIS|34) focuses on the integrated evaluation of the status of Essential Fish Habitats (EFH) of main halieutic species, aimed at the identification of areas needing specific measures for the spatial management of fisheries and fish stocks (e.g. Fisheries Restricted Areas – FRAs). A specific focus area is identified for this assessment - and its related periodic monitoring - which should be carried out primarily within the areas within the 0-6 nautical miles from the coastline. This assessment is accompanied by a measure aimed at strengthening the fight against illegal fishing through co-management schemes and improvement of control and monitoring technologies (NAZ_MIS|37). A technological focus is also adopted in the case of studies and pilot projects to extend the use of VMS and/or AIS systems to fishery segments currently not monitored (small boats), possibly through the adoption of low-cost technological systems (NAZ_MIS|38).

Another important dimension is the one of cooperation, sustained through strengthening the multi-level governance systems, to foster the sustainable management of common fish stocks, the proper management of interactions between different fisheries systems, and the protection of protected species (NAZ_MIS|35). This is foreseen in the context of national, EU and international cooperation initiatives (e.g. FAO-GFCM, CBD). A strengthening of the international dialogue and coordination for the management of fishing activities in international waters, is also defined as an important requisite to prevent disputes and ensure the safe operation of Italian fishing

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fleets (NAZ_MIS|36).

With respect to the potential for integration with other activities, and extended value-chain, measures support the development of coastal and maritime eco-tourism initiatives also in a multi-use perspective, in particular with fishing and aquaculture (NAZ_MIS|66). Furthermore, the plans foresee the importance of synergies between sustainable fishing and environmental protection and benefits, through a promotion of agreements between small-scale fisheries and institutions managing coastal and marine protected areas (NAZ_MIS|32).

With respect to sustainable aquaculture, measures specified in the plans are primarily devoted to the integration between MSP and aquaculture zoning (sectoral) plans. This is pursued through a measure sustaining the development, adoption, and implementation of AZA (Allocated Zones for Aquaculture) plans at the sub-national (regional) scale, coherently with the MSP plans (NAZ_MIS|41). An additional measure foresees the establishment of a permanent working table aimed at supporting the integration and progressive harmonisation between sub-national AZA plans and MSPs in the different maritime areas (NAZ_MIS|42). The important topic of energy transition in aquaculture is addressed by a national level measure (NAZ_MIS|39) supporting actions aimed at increasing energy efficiency and the use of renewable energies in the aquaculture sector, considering the entire supply chain (also including processing and marketing of the aquaculture products). Finally, a cross-sectoral integration is foreseen by supporting the development of coastal and maritime eco-tourism initiatives, also involving the aquaculture sector (NAZ_MIS|66).

The maritime areas addressed by the Italian plans include several zones where management measures (different for each zone) for fishery were already in place independently of the MSP process. These have been integrated in the MSP plans and refer to: Marine Protected Areas (MPA), Biological Protection Zones (BPZ) established at the national level, Fishery Restricted Areas (FRA), deep sea (below -1000m) where trawling is forbidden and the zone within the 3NM or within the bathymetry of -50 m where trawling is forbidden). For the purpose of the MSP GREEN project the overall extension of these areas has been estimated (avoiding to double count overlapping areas) at about 314.000 km^2, corresponding to 57% of the planned area. The planning units with aquaculture priority vocation have an overall extension of about 9,170 km^2. These are planning units where aquaculture is considered as a single priority (430 km^2) or in combination with other uses (8,740 km^2). It should be noted that, as foreseen by the plans' approach, aquaculture is allowed also in any other planning units (where it is not indicated as a priority vocation) provided that it does not conflict with priority uses.

No spatial provisions or measures are specified within the Italian MSP plan regarding sustainable algae production.

6.2.4. Biodiversity and ecosystem protection and restoration

In the Italian MSP plans elements related to biodiversity and ecosystem protection and restoration are mainly included within the sector "nature protection and restoration". The EU Biodiversity Strategy 2030 has been considered as one of the main policy frameworks for the plans preparation. It is explicitly recalled within the strategic objectives at national level (OS_N|02) with reference to 30x30 objectives. The vision of the MSP plans for Italy foresees that biodiversity, landscape and cultural heritage are

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recognized as common assets to be protected, also as key resources for important human economic activities such as tourism and fishery. They are recognized as cross-cutting, overarching principles for all plan provisions.

The strategic objective OS_N|02 aims at promoting the extension of sea protection in line with the EU targets (30% by 2030, at least 10% strictly protected). By the adoption of an ecosystem approach, the plans aim to favour the development of new protected areas, in connection with the existing ones. Strengthening the connections will contribute to completing the network of Natura 2000 sites at sea, with the consequent identification of conservation, evaluation, and monitoring measures. With respect to marine ecosystem restoration the plans (strategic objective OS_N|05) aim at considering the process and objectives of restoration of marine ecosystems in the medium-long term, as indicated in the European Law on Environmental Restoration.

Several measures dealing with biodiversity and ecosystem protection and restoration are included in the plans.

With respect to measures for a coherent network of marine protected areas, the plans foresee the establishment an "MSFD-MSP" working group aimed at: (a) identify priority areas for biodiversity and ecosystem protection aimed at extending MPAs, Natura 2000 sites and OECMs, (b) promote studies for the evaluation of the ecological status, connectivity, and ecosystem services of MPAs, Natura 2000 sites and OECMs (NAZ_MIS|14). As regards the establishment of OECMs (to meet the 30% target), the Italian plans include a measure (NAZ_MIS|45) promoting a study to identify new areas of spatial management of maritime traffic (PSSAs, ATBAs, TTSs) and to strengthen existing ones, with the aim of improving the regulation of shipping and reinforcing conservation actions for marine ecosystems and biodiversity. Improvement of marine connectivity is also pursued through studies and research activities aimed at improving the spatial knowledge of land-sea interactions on areas identified as LSI hot spots for environmental protection and landscape preservation (NAZ_MIS|16). These activities are aimed at favouring the integrated implementation of existing and upcoming land/sea planning instruments.

The Italian plans also promote the coexistence between specific economic activities and ecosystem protection, aiming at developing synergies between their related needs. The measure NAZ_MIS|32 promote agreements between small-scale fisheries and institutions managing coastal and marine protected areas, to improve synergy between sustainable fishing and environmental protection and benefits for both. Moreover, NAZ_MIS|40 promotes the coexistence between aquaculture and environmental conservation, through studies and pilot projects aiming at assessing aquaculture development in Natura 2000 sites.

Regarding restoration of marine and coastal ecosystems, the measure NAZ_MIS|17 aims at elaborating a National Plan for Environmental Restoration, identifying the priority areas to be restored, the restoration measures and methods to be adopted, in synergy with the implementation and monitoring process of the MSP plans. Furthermore, NAZ_MIS|18, aims at improving the knowledge on the distribution of habitats and species relevant for the implementation of the European Law on Environmental Restoration, also through the capitalization of the results of ongoing research projects and of the National Centre for Biodiversity (co-financed by the Next Generation EU funds).

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The maritime areas addressed by the Italian plans include several zones where habitats and ecosystems are already protected, and conservation measures are in place independently of the MSP process. These include 29 MPAs covering a total extension of about 2,350 km^2 (corresponding to 1.5% of the territorial waters). Other typologies of protected zones and area-based management tools are present in the Italian marine waters, including: Natura 2000 marine sites (SCI and SPA), the Pelagos Sanctuary for Mediterranean Marine Mammals and the PSSA (Particularly Sensitive Sea Area) in the Bonifacio Strait. For the purpose of the MSP GREEN project the overall extension of these areas has been estimated (avoiding to double count overlapping areas; also note that fisheries related area-based measures are not considered in this computation as they were included in the analysis performed as part of the paragraph 6.2.3) at about 101,930 km^2 corresponding to 18.5% of the overall planned marine space (territorial waters + continental platform). The location and extension of these areas have been properly considered in the MSP plans development, specifically to identify and delimitate planning units with priority on nature protection (their definition also considered the location of already identified possible new MPAs and some high-value marine habitats).

6.2.5. Blue circular economy

The vision of the Italian MSP plans foresees that maritime activities are reorganised, exploiting the opportunities offered by the circular economy. Moreover, the plans consider the circular economy as one key component of the cross-cutting, overarching principle of sustainable development. A cross-cutting objective (OS_SS|04) is included in the plans aiming to promote the opportunities for marine and maritime activities offered by the circular economy approach, favouring, among other things, initiatives aimed at the prevention, recovery and recycling of marine waste and at the valorisation, with a view to the bioeconomy, of waste deriving from fishing and aquaculture activities and the associated product chain, in synergy with what is promoted by the National Bioeconomy Strategy.

To complement the above objective, several measures deal with the topic of circular economy. The plans aim to strengthen the role of the maritime economy within the National Strategy for the Circular Economy (NAZ_MIS|09), e.g.: (i) strengthening the links between the MSP Plans and the Strategy for the Circular Economy; (ii) detailing circular economy actions referred to the "Blue Economy" area of intervention, also including the efficient use of the maritime space among the available tools, (iii) advancing proposals for specific actions related to the sectors of the maritime economy. Regarding waste prevention, the plans include a specific measure (NAZ_MIS|48) contributing to the European and Mediterranean-wide initiatives aiming at harmonising solid waste collection on ships and their delivery to ports, to: (i) improve the existing procedures; (ii) maximise the collected recyclable fraction, (iii) contribute to the development of a circular economy supply chain. Particular attention should be given to plastic waste.

The plans also promote circular economy processes in specific sectors. They support the development of a circular economy supply chain related to ships, including activities dealing with building, repairing, refitting, dismantling, and reusing of components. (NAZ_MIS|10). A similar measure is proposed for the development of a circular economy supply chain related to pleasure, sport and fishing boats, including repairing, refitting, dismantling, and component reusing activities (NAZ_MIS|12). Finally, the plans aim to support the creation of a recovery, re-use and recycling chain for aquaculture and

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fishery by-products and waste (NAZ_MIS|11). The plans stress that all these three measures should be implemented in synergy with actions aimed at the environmental and socio-economic requalification of coastal industrial areas in crisis or under decommission.

6.2.6. Zero pollution

The vision of the Italian MSP plans foresees that their implementation should guarantee the achievement and the maintenance of Good Environmental Status of marine waters (ex MSFD). The vision also clearly states that all maritime sectors should have a role in the reduction of polluting emission, waste, and introduction of alien species in the environment. To this regard, within their strategic objectives, the plans target the minimization of pollution derived from maritime transport (OS_TM|01) and port activities (OS_TM|02), in particular.

Specific measures are identified to fill in knowledge gaps regarding some key aspects of maritime pollution. For example, a study is foreseen to identify the marine areas with highest concentration of pressures generated by maritime traffic ("hot spot" areas): air emissions, water pollution, waste dispersion, underwater noise emissions, collisions with marine megafauna. The study is also expected to identify measures for the reduction of these pressures and the mitigation of negative impacts on the environment (NAZ_MIS|44). In addition, a measure (NAZ_MIS|45) is included to support the identification and adoption within the MSP of specific spatial, behavioural, and technological measures to reduce the impacts of underwater noise on biota, in line with MSFD Descriptor 11 objectives and measures. Finally, improvement of the performance of Italian ports in relation to the standards required by given certification schemes, such as European Clean Ports, Environmental Management System (EMS), PERS (Port Environmental Review System) and Environmental Port Index is also targeted (NAZ_MIS|50).

Specific attention is paid by the pans to pollution prevention linked to the development of the marine energy sector: the establishment of an observatory on the impacts of offshore wind farms on the environment and other uses of marine space and the coasts is foreseen (NAZ_MIS|54).

The plans do not include specific reference to marine pollution remediation which is targeted by other legislation and context (e.g. remediation of contaminated sites - including those including a portion of sea - are targeted by specific initiatives at national and regional level).

6.2.7. Cross-cutting elements

Research and innovation
The plans address several knowledge and data-relevant measures at the national level, such as: supporting studies and research about land-sea interactions (NAZ_MIS|16), improving knowledge on habitats and species needing restoration (NAZ_MIS|18), improving and better structuring of data on archaeological sites (coastal and underwater) and illegal building on the coast (NAZ_MIS|23, NAZ_MIS|26), organising and systematising data on suitable sites at sea for the disposal of dredged materials (NAZ_MIS|47), launching a monitoring program about recreational boating (NAZ_MIS|67), establishing an observatory on the monitoring of the impacts of offshore

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wind farms on the environment and other uses of the marine space and the coast (NAZ_MIS|54). The plans include several measures at the national level to support research and innovation activities on a wide variety of sectors, e.g.:

- Fisheries and aquaculture, about the increase in energy efficiency and the use of renewable energies from a supply chain perspective, including transformation and marketing of the product (NAZ_MIS|29 and NAZ_MIS|39, respectively)
- Offshore renewable energy, supporting the implementation of pilot projects on the use of different sources (NAZ_MIS|55)
- Oil & Gas, in relation to the reuse of offshore platforms to be decommissioned (NAZ_MIS|60)
- Maritime transport, for example for the development and application of technologies to mitigate underwater noise (NAZ_MIS|46)
- Coastal protection, in relation to innovative NBS to improve coastal resilience (NAZ_MIS|61).

Education and learning

The plans do not directly refer to education, however the vision, with its integrated approach and the consideration of several international frameworks for sustainable development (e.g. UN SGDs), suggests that in next cycles there should be room for connections with ocean literacy for MSP and training on MSP for institutional representatives and sectoral experts, especially at the regional level.

Cross-border cooperation in MSP

The preparation of the Italian MSP plans has benefited from many cooperation projects implemented in the Mediterranean on MSP (e.g. PORTODIMARE, SUPREME, SIMWESTMED, MSP-MED) as well as on sustainable blue economy (e.g. Blue Med). Through these projects many commonalities have been developed with neighbouring countries, as well as at sea basin or subsea basin (e.g. the Adriatic Sea of the EUSAIR region) level, therefore also involving third countries, Example of cross-border cooperation actions include: the design and development of shared geoportals (i.e. Tools4MSP and the Geoportal for the Adriatic and Ionian Macro-region) with common data and tools (for Cumulative Effect Assessment and for Conflict Analysis) or the co-development and sharing of approaches for the analysis of land-sea interaction, the implementation of ecosystem based MSP, the consideration of landscape and underwater cultural heritage assets in MSP, etc. These experiences have informed and greatly eased the formal process of cross-border consultation of the Italian plans. In particular, several bi-lateral and multilateral workshops (involving experts and stakeholders) were organised within the MSP-MED project to discuss common MSP challenges.

Each Italian MSP plan highlights major elements of relevance for transboundary cooperation, e.g. related to the common sustainable management of fisheries and fish stocks, environmental conservation, the future development of ports and maritime transport.

Italy is very active in the cooperation on specific maritime sectors. In this context it is not possible to provide a comprehensive overview, so only some examples are here recalled: maritime transport (e.g. Highways of the Sea initiative within the Trans-European dei Transport Network), prevention monitoring and management of pollution at sea (e.g. through Interreg projects, European initiatives, REMPEC, etc.), biodiversity

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conservation (e.g. Pelagos Sanctuary management, Bonifacio Strait PSSA management), fishery management (e.g. through the General Fishery Commission for the Mediterranean) and sustainable blue Economy (through the Union of the Mediterranean or the BlueMed project).

6.3. Fair and just transition

The Italian plans are the results of a co-design between Ministries and Regions, aiming at getting benefits from both national and sub-national knowledge and expertise, as well as at coherently responding to the needs of the two governance levels. In such a context, coastal regions played the double role of participants in the planning process and stakeholders within the MSP process. Their insight - in some cases derived from dedicated intra-regional working groups - provided up-to-date information and data and expressed the needs of their territories. In addition, in some cases, their involvement also encompassed the engagement of other local stakeholders (e.g. port authorities, tourism operator representatives, fishing sector representatives, etc.).

Coastal regions were engaged through a series of on-line workshops, supported by the sharing of information including mapping of the distribution of main environmental components and marine uses in their areas of interest. All Coastal regions were given the same opportunity to participate in the planning process. In addition, local data about coastal and underwater cultural heritage sites and values as well as protected landscape areas were also made available at sub-national level by the superintendencies (local branches of the Ministry of Culture). During this first cycle of the MSP plans elaboration, the municipality level was not directly involved in the preparation phase, given the scale and strategic nature of the plans.

As foreseen by the national legislation, the Italian plan proposals were submitted to formal consultation, open to all stakeholders. This has run in parallel with the consultation part of the Strategic Environmental Assessment procedure.

Despite the aforementioned multilevel co-design process and the effort put in promoting the planning process via dedicated webinars and events (also within the framework of EU projects) the formal process of engagement of stakeholders in the planning process was not considered as sufficient. This emerges from many feedbacks received within the public consultation; no communication plan was made available to the stakeholders and no major public campaign was performed. However, information about the consultation process was vehiculated through the website of the competent authority and on the MSP-MED website managed by the scientific team involved in the plans' elaboration. Moreover, the relevant stakeholders for the public process were mapped and direct emails were sent to invite them to express their views. In some cases, the competent authority and the scientific team organised a set of hybrid meetings to present the drafts version of the plans to main stakeholders willing to understand the plans more in detail. The plans were also publicly presented at the lunch of the formal public consultation.

The plans include a specific measure (NAZ_MIS|01) tackling the issue of the limited engagement undertaken during the preparation phase. This measure aims at fostering the ownership and endorsement of the plans, and at strengthening the full engagement of all stakeholders in MSP. It provides for the development and implementation of a long-term strategy for the participation and involvement of stakeholders in the process

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of implementation, monitoring, evaluation, and revision of the MSP plans. In this regard, it is stressed that particular attention should be paid to the engagement of the sectors of major social relevance, local administrations, and the general public (civil society).

Given a number of operational circumstances, it was not possible to develop a socio-economic assessment of the effects of the MSP plans. To this regard, a national level measure was therefore included in the plans, foreseeing the development of methodologies and tools for the quantitative assessment of the socio-economic effects of the plan's provisions, to support the plan's adaptive management and revision (NAZ_MIS|03).

This lack of an extended engagement, combined with the lack of socio-economic studies meant that there was no evaluation of the possible planning decisions for different groups/communities, especially the ones vulnerable because of cultural ethnicity or more likely to get affected by climate change. Moreover, gender balance in the maritime sectors was not considered relevant to the plans.

The MSP plans promote a positive and cooperative framework by explicitly encouraging synergies between uses and between uses and environmental and landscape conservation. Several measures at the national and sub-national levels are included in the plans aiming at promoting coexistence and synergies. In particular, small-scale fisheries, aquaculture and marine renewable energy are considered for synergies to be developed with other sectors (e.g. tourism, as well as marine protection). In Italian seas multi-use can be retraced in terms of pesca-tourism and similar activities involving aquaculture, however there are important opportunities of further development. Moreover, the plans identify specific measures to address coexistence between the economic sector and marine conservation.

Eventually, it is worth mentioning that the plans and the data are accessible on the Competent Authority website (SID Portale del Mare).

6.4. Key challenges and obstacles identified

The following challenges and obstacles to the incorporation of EGD elements in the MSP plans have been identified through interviews with stakeholders.

The Italian plans have a strategic nature and, therefore, their provisions are also strategic and not fully operational. As a result, the plans are somehow generic and the effect of the plans is expected to be limited if more detailed provisions will not be identified during the implementation phase, complementing the ones already included in the plans (i.e. the measures). This regards also Green Deal aspects. Needed actions and provisions can directly regard the implementation of the MSP plan or be related to other specific policies and planning processes. Possible examples are: the implementation of carbon neutrality targets for maritime sectors (e.g. maritime transport in terms of improvement of the engine efficiency or use of alternative fuels); the detailed planning of offshore marine energy areas; the identification of new marine protected areas coherently with MSP provisions.

Lack of identification of areas suitable for offshore wind energy development has been identified as a main gap by many stakeholders in the context of the consultation phase. In this sense conflict management has been also pointed out as an unresolved issue: in

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order to guarantee the development of offshore marine renewable energies, trade-offs with other uses (e.g. fisheries, tourism, landscape protection) will be needed.

Data and information availability for MSP is not perceived as a major challenge in general. However, some gaps still persist for specific sectors and aspects. This is for example the case of the distribution of small-scale fisheries or of a quantitative estimation of the effects (cost and benefits, including their distribution) of the development of offshore renewable energy compared to the extraction of offshore hydrocarbons.

Social licensing at local level was missing because the plans were prepared at a high governance level, involving ministries and coastal regions but not local communities and local economic operators. According to the interviewees, more in general, stakeholder and public consultation and engagement was considered insufficient. Formal consultations were run with abbreviated procedures; the public consultation on the plans' proposal overlapped with the consultation foreseen in the framework of the SEA procedure. Limited information has been provided through the official channels of the competent authority and of the other ministries.

Issues related with limited space availability were pointed out as an important challenge for some marine areas (e.g. in the Northern Adriatic). This issue is expected to become more and more relevant with the emerging needs coming from the developments foreseen to meet the EGD objectives (space for marine renewable energy, more space for marine aquaculture, as for example).

Limited integration of climate-change impacts and adaptation in the MSP plans and their provisions has also been pointed out, specifically in relation with the formulation of climate change scenarios and projections, the identification of most impacted areas and of related area-specific measures. The issue has also important implications in terms of fair and just transition, through the needed identification of more vulnerable areas, communities, and segments of the society. Mainstreaming climate change adaptation into MSP appears quite challenging for a number of reasons. Impacts of climate change and related adaptation measures have an important local dimension while MSP plans mainly address a wider scale. The uncertainty in the future evolution of climate change and even more of their primary and secondary impacts on the marine environment and the maritime sectors is still high. The availability of adaptation measures for some maritime sectors (e.g. typically fisheries) is still limited; more research and innovation in the field is needed.

The interviewees also mentioned that lack of declaration of Exclusive Economic Zones (EEZ) by Italy could compromise the implementation of the Plans in the areas beyond the territorial waters. This put uncertainty on an important part of the Plans provisions.

A number of challenges related to the EU context in general (thus not specifically pertaining to Italy) have also been noted by the interviewees:

- MSP plans at EU level have encountered difficulties in operationalizing and effectively implementing the ecosystem approach;
- The coherent integration of the provisions of different policies is still a major challenge: multisectoral planning is still an issue both in terms of policy integration as well as of competence integration;
- Some of the MSP and EGD objectives can be somehow misaligned referring to

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policies which might include misalignments themselves (e.g. RePower EU and the biodiversity Strategy 2030);
- Some of the EU directives and strategies lack of operational guidance and criteria (e.g in relation to the development of sustainable marine aquaculture);
- There is a lack of common indicators at EU level to be applied by all member states to assess sustainability of the MSP plans.

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Chapter 7

The Green Deal component of MSP in Latvia

7.1. Background information about Latvia's MSP process and plans

7.1.1. Background information about the plan

In Latvia there is one national level long term maritime spatial plan - "The Maritime Spatial Plan for the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia" (further on MSP of Latvia), for which unofficial translation to English is available at: https://www.varam.gov.lv/en/maritime-spatial-planning.

The MSP of Latvia is located in the eastern part of the Baltic Sea basin. It covers the entire part of the Baltic Sea under the jurisdiction of the Republic of Latvia from the coastline up to the outer border of the Exclusive Economic Zone (EEZ). Total area of the Baltic Sea (including Gulf of Riga) under jurisdiction of Latvia is about 28,500 km^2, covering 668 km^2 of inland sea waters, 10,178 km^2 of Territorial Sea and 17,656 km^2 of EEZ. The Latvian marine waters border Sweden, Estonia and Lithuania.

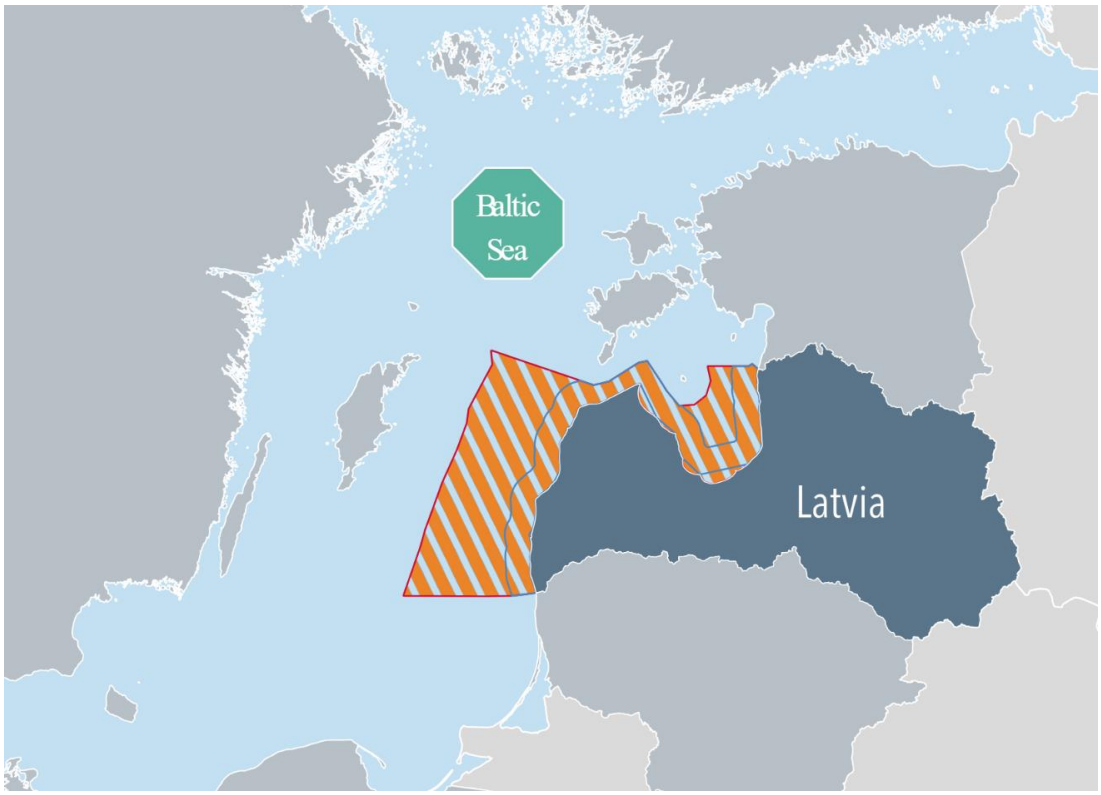

Figure 13. Territory of Latvian MSP area[18]

[18] See: https://maritime-spatial-planning.ec.europa.eu/countries/latvia

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Latvian MSP EEZ territory is under national jurisdiction, where coastal area up to 2 km in distance from the coast is also under municipal jurisdiction - according to scale, the MSP also incorporates the use of marine coastal waters in the possession of local governments.

MSP defines three categories of marine space use (zoning):

- Priority uses – includes existing and planned uses of the marine space, which are essential for ensuring the spatial interests of the priorities defined in the strategic section.
- Existing uses and objects, which are connected to the use of the marine space and whose location and management is determined by regulatory enactments.
- General use, where all sea uses are allowed (incl. fishery, shipping, tourism and leisure, scientific research etc.) which do not contravene the restrictions defined in regulatory enactments and do not cause significant negative impact to the marine environment.

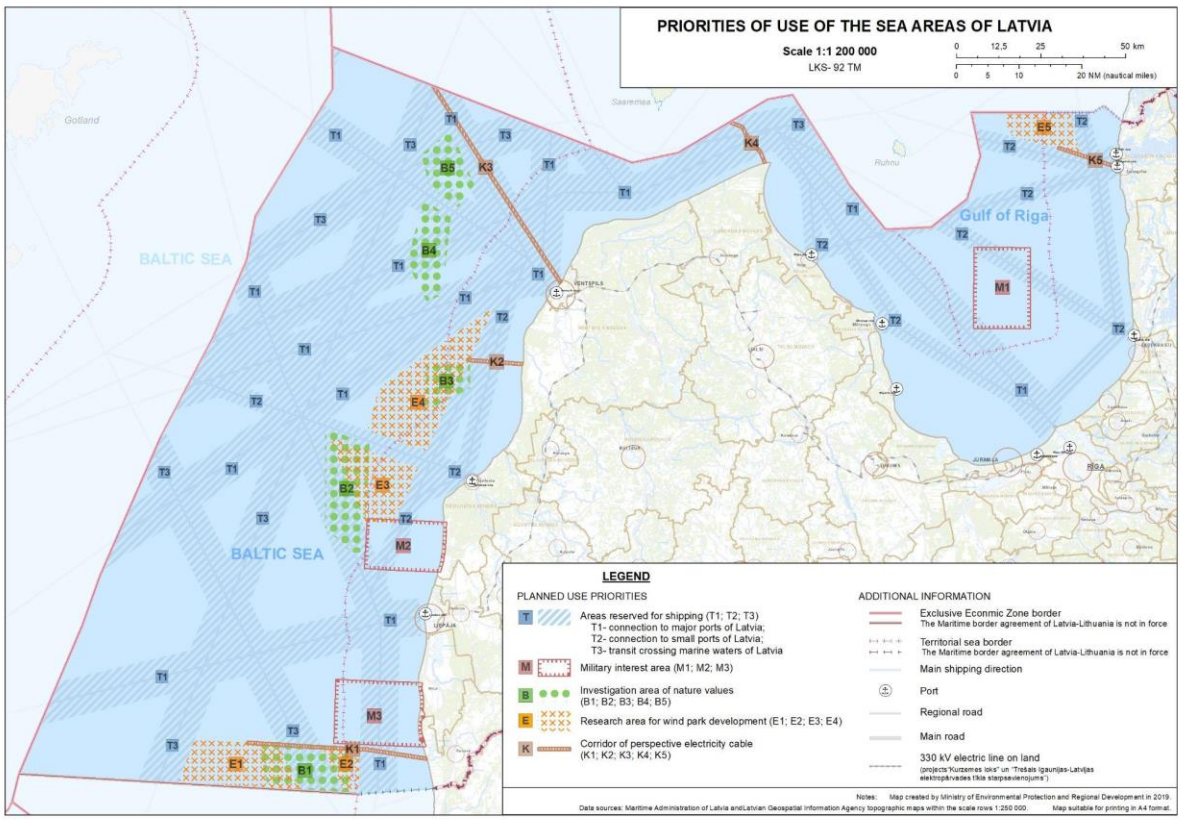

Figure 14. Priority uses of Latvian MSP area[19]

[19] Ministry of Environmental Protection and Regional Development, MARITIME SPATIAL PLAN 2030, The Maritime Spatial Plan for the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia, 2019, https://drive.google.com/file/d/1mKigVjv6N03cjgPkwR5RSItcQezsn5zY/view

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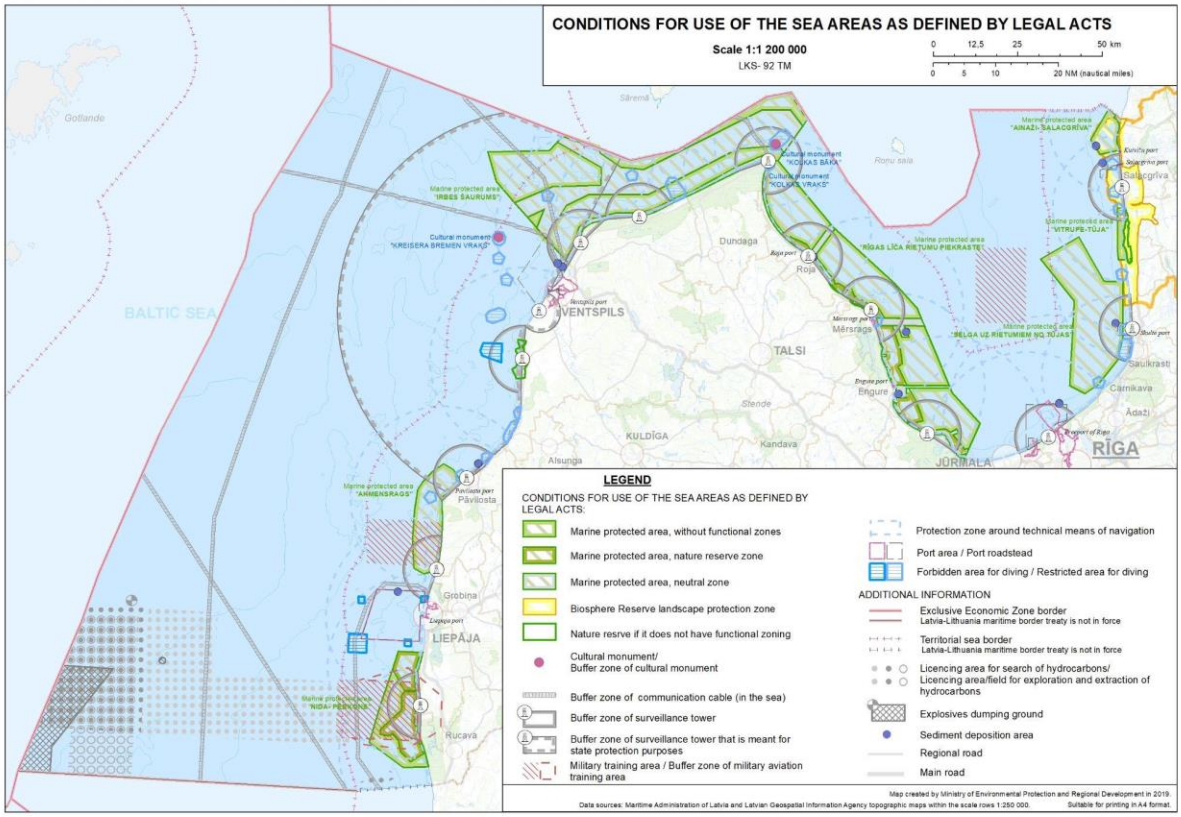

Figure 15. Existing uses of the Latvian MSP area defined by legal acts[20]

In order to initiate new uses of the sea, it is necessary to apply for a licence area, obtain a licence for exploration, carry out the environmental impact assessment (EIA) procedure and obtain a licence/permit for the construction works or/and exploitation of resources.

In the Latvian MSP there might be territorial overlap. Different areas may spatially overlap, but in general not extensively. This is seen mostly in terms of nature protection investigation areas in the context of Research areas for wind park development. It is restricted that, until these areas have been researched for values of environmental importance, wind farm development cannot be supported here.

The MSP consists of four parts: the explanatory part, strategic section, description of the permitted use of the sea and the graphical part. It is a strategic planning document, which includes long-term vision for the use of the sea and strategic priorities and MSP solutions part with zoning as well (e.g. priority uses of the marine waters). It is binding for public authorities acting as decision-makers for permitting and licensing areas.

The legal base for MSP (including the responsible authority) is laid down in the Spatial Development Planning Law of Latvia enforced on the 1 December 2011. It contains regulations of The Marine Strategy Framework Directive (Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning).

The Maritime spatial plan of Latvia 2030 was approved by the Government on

[20] Ibid.

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21.05.2019. Responsible authority for MSP development is the Ministry of Environmental Protection and Regional Development of the Republic of Latvia (MoEPRD).

Development of the plan of Latvian MSP was started in 2014 when a national MSP coordination group was established and an initial enlightening seminar about national MSP for the public was organised. MSP entered into force on 21 May 2019 (the plan was adopted by the Cabinet of Ministers of the Republic of Latvia on 21 May 2019). So far, the first cycle of MSP in Latvia consists of the elaboration of the first MSP (2014 – 2019) and interim assessment (MSP evaluation in 2023). The second cycle MSP elaboration will follow the interim assessment (starting from 2024).

7.1.2. Latvia's MSP plan and the European Green Deal

Although the EU Green Deal was launched in 2019, while Latvia's Maritime Plan has already been approved in 2019, it is considered that EGD objectives are incorporated in Latvian MSP (at least to some extent) - especially mentioning the valuable example that it includes biodiversity research territories - as one of the MSP priority areas.

The Plan is considered in line also with the Communication on a new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future, and An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future - given that the Plan considers consistency with the climate neutrality objective, fostering the priority zones for the deployment of innovative technologies and infrastructure.

In terms of other related main EGD policies/strategies, the majority of them are considered to play a role defining vision/ objectives/ zoning/ measures in the Latvian MSP, except for specific considerations made to climate change adaptation, sustainable food provision, circular economy and zero pollution which are considered to some extent.

The main condition for designating priority sea uses in Latvian MSP is that the use of the marine space must be organised in accordance with the natural conditions, ensuring the preservation of the environmental conditions, ecological parameters, and the ability of the ecosystem to adapt to changes; furthermore, creation of favourable conditions for improving the quality of the environmental conditions and marine resources must be ensured.

Thus, the long-term vision for the use of the sea outlines the desired situation for 2030, reflecting the sustainable use of marine space and without endangering the existence of the marine ecosystem. The main priorities are a healthy marine environment and a stable ecosystem, as well as national defence. Maritime development and safe shipping, sustainable fisheries, and tourism, as well as the use of renewable energy sources (RESs) at sea have been identified as priorities in the sectors of the economy.

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7.2. EGD components of MSP plans analysis

7.2.1. Climate change mitigation

Latvia's Strategy for the low-carbon development by 2050[21] draft version was considered when elaborating the Plan. The Strategy itself was approved the same year, but after the adoption of the Plan. It sets out the goal to reach climate neutrality by 2050.

Still clear targets for development of renewables in marine waters were not yet set by any other policy document, including previously mentioned strategy.

The MSP includes such statements with intent to support climate change mitigation: "In order to minimise the impact of the shipping sector on the climate, the reduction of GHG emissions from the operation of vessels should be encouraged, promoting the use of more energy-efficient vessels for example, by offering privileges (price tools, etc.) to such vessels at berths, as well as promoting the use of environmentally friendly energy resources in ports, for example, by setting up stationary electrical connections at port berths, thereby enabling vessels to use electricity in ports".

There are no specific quantitative objectives, but in the climate section of the Plan the reducing carbon emissions via port infrastructure development was noted.

Questions about blue carbon storage in Latvian MSP were not addressed and in discussions it was not identified as relevant (due to land-based structures for carbon storage).

One of Latvian MSP priorities is offshore renewable energy production – offshore wind energy. Latvian MSP considers five offshore wind farm energy zones with a total area 1,649 km^2 (6% of total MSP area). It is not indicated how much energy those areas are supposed to produce.

7.2.2. Climate change adaptation

Latvia's adaptation to climate change plan for 2030[22] sets out such relevant strategic goals: "The economy is able to adapt to the negative impacts of climate change and to take advantage of the opportunities afforded by climate change; Infrastructure and building are climate resilient and planned according to potential climate risks; Latvia's nature and cultural and historical values have been preserved and the negative impacts of climate change on them have been mitigated". Some of the identified risks are sea related, including surge risk (flooding), coastal erosion etc.

Currently the MSP considers that climate change by 2030 in general could have a relatively small but negative impact as the impacts of the change will result in a reduction in the stability of the marine ecosystem, as well as potential changes in the distribution of species and habitats, which may necessitate a reassessment of the existing and planned network of marine protected areas.

[21] Latvia's Strategy for the low-carbon development by 2050, https://www.varam.gov.lv/sites/varam/files/varamstr_121119_oma.pdf

[22] Latvia's adaptation to climate change plan for 2030, https://likumi.lv/ta/id/308330

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To some extent issues on protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes are noted like coastal erosion issues. In the Latvian MSP there are some measures regarding coastal (dune) protection in case of high erosion risk. Action plan of the MSP sets the task 3.4 to be done until 2030:

> "*To develop spatial solutions (measures) for minimising erosion effects, including identifying sites suitable for extraction of sand for beach nourishment, as well as places that require beach nourishment, without posing a risk of negative impact on the marine ecosystem*."

Tourism is a sector with high export potential, providing employment and income to the coastal areas. The sector complies with environmental quality standards for the Baltic Sea (incl. clean water, equipped swimming areas and suitable infrastructure), adapts to climate change and does not pose a threat to the coastal ecosystem, cause coastal erosion, or interfere with coastal fishery.

In Latvian MSP there are no specific areas identified to future use needs in view of climate change nor have climate change impacts been predicted very specific so far. In the current version, there are no identified or planned green infrastructure solutions (creation and maintenance of nature-based solutions, such as wetlands, saltmarshes, seagrass meadows etc.) as elements important specifically for climate change adaptation.

7.2.3. Sustainable food production

As one of six priorities defined in MSP is sustainable fisheries. Existing information on the most important fishing areas has been assessed to consider and design other sea use zones. Fish nursery areas and spawning grounds were identified. Also, fish catch data (both statistics and spatial distribution even per species) is included in the MSP.

In Latvia Multi-annual strategic guidelines for aquaculture 2014-2020 have set out a general framework for aquaculture sector development but focusing on land-based aquaculture. The main goals of it were to develop research and modernise the aquaculture industry. Little attention has been paid to the development of marine aquaculture.

The Latvian MSP does not include zoning for aquaculture as the data at that time was insufficient for quality decision-making. Still there are lists of conditions and recommendations for aquaculture development areas in the MSP and the environmental report of the strategic environmental assessment includes possible areas for marine aquaculture development. There are no specific quantitative objectives set for aquacultures.

7.2.4. Biodiversity and ecosystem protection and restoration

Long term vision of Latvia's MSP is defined as a balanced and integrated use of the marine space, which promotes the continuation of the marine-related sectors, welfare of coastal inhabitants, as well as a viable ecosystem. Healthy marine environment and stable ecosystem is one of six priorities defined in MSP of Latvia. One of three MSP strategic objectives is: the marine ecosystem and its ability to regenerate is preserved,

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ensuring the protection of biological diversity, and averting excessive pressure from economic activities. In the line of strategic objective there are lists of measures requiring qualitative assessment included in the MSP. For example, some of them: updating information on ecologically significant areas and distribution and condition of biotopes/species, based on the latest studies and monitoring data; assessment on the services provided by the marine ecosystem; updated marine data system and others. Currently in the MSP of Latvia there are no specific measures to restore marine and coastal ecosystems. Restoration could be the question in the next planning cycle.

Territories of marine protected areas are included in MSP as conditions for sea use from general legislation. The total area of marine protected areas in the MSP territory of Latvia is 4363,6 km^2 (15.4%). In addition, there are five nature investigation zones designed in the MSP of Latvia with a total area 1348,5 km^2 (4.8%). But it is not enough to meet the 30% target set out in the EU Biodiversity Strategy for 2030. The LIFE REEF project[23] is essential to have more information for decision-makers to address the 30% target. Currently changes in management plans of existing MPA and new MPAs are being elaborated in one new management plan for all marine protected areas.

The project LIFE REEF ("Research of marine protected habitats in EEZ and determination of the necessary conservation status in Latvia") aims to define justified conservation status of protected habitats and contribute to a comprehensive management system of marine protected areas in Latvia. Objectives of the project include identification of potential marine protected sites and development of proposals for new MPAs for the Natura 2000 network and assessment of the effectiveness of the MPA network (including newly assessed territories) within the Latvian marine waters.

7.2.5. Blue circular economy

The blue circular economy is a topic that has received little coverage in the Latvian MSP. The only thing where Latvian MSP sets circular economy principles can be mentioned disposal site operations.

Traditionally, sediment material from the dredging, dredging and maintenance of ports and shipping lanes has been used in construction processes or deposited at sea in officially designated disposal sites.

The dumping of sediment acquired through deepening works into disposal sites at sea, is considered as a wasteful use of natural resources. Depending on the granulometric composition of the seabed and the level of pollution, firstly, the opportunities for using these resources in construction and port development should be assessed, and also if quality requirements are being ensured for the increase in sediment transport patterns and beach nourishment, thereby reducing the risks of coastal erosion.

7.2.6. Zero pollution

The MSP includes indirectly the zero-pollution principle in the plan of measures. The MSP addresses mainly pollution prevention issues related to maritime traffic and ports, aquaculture.

[23] See https://reef.daba.gov.lv/public/eng/

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Specific measures requiring qualitative assessment can be mentioned according to zero pollution includes:

- Measure 2.6. To develop methodology for evaluation of spatial cumulative impacts from the use of the sea using good environmental status indicators and to ensure application of the methodology within the EIA process.
- Measure 3.2. By planning investments within port development programmes, to take into account the risks posed by climate change, the need to adapt infrastructure or port activities to mitigate climate change risks or to adapt to new conditions, and assess options for improving energy efficiency, building infrastructure and innovative solutions that reduce GHG emissions.

Although there are no aquaculture facilities in the Latvian sea area, MSP notes that open cage fish farming has a significant negative impact on the environment, as unused nutrients and other products from farming increase marine eutrophication and affect natural populations. Therefore, fish farming in the Gulf of Riga is not allowed due to the current level of eutrophication. However, MSP considers algae and mussel aquaculture may even have a positive impact on the environment, as the growth process absorbs nutrients and filters the water. That can be mentioned as a point according to pollution remediation considered in MSP to some extent.

The MSP includes a general statement with intent to reduce sediment pollution (by chemicals) and also marine litter (solid waste) pollution:

> "*The quality of the Baltic Sea, including the Gulf of Riga, is not currently compliant with a good environmental status. In order to achieve this, Latvia, similarly to other countries around the Baltic Sea, must reduce the total load of nitrogen and phosphorus in the Gulf of Riga and the Baltic Sea, reduce the spread of alien species and reduce marine pollution with harmful chemical compositions and solid waste as well as ensure the protection of biological diversity.*"

7.2.7. Cross-cutting elements

As data is the very basic thing necessary for reasonable planning, one of the measures defined in the MSP of Latvia is to create a maritime information system to ensure efficient and timely exchange of data on the marine ecosystem.

For now, there is a lack of planned activities to support research and technological innovation in maritime sectors. However, this has been taken into account and a proposal for such an initiative will be included in the first interim report of the MSP (prepared in 2023).

Another thing that could be improved concerns education, skills development, and training in maritime professions. This is mainly a question of limited human resources.
In terms of cooperation with neighbouring countries: MSP is developed taking into consideration the international liabilities of the Republic of Latvia and in cooperation with countries with which Latvia has a common sea border (Lithuania, Estonia, and Sweden). Interests of neighbouring countries are identified in the MSP area of Latvia. In terms of sea-basin level and macro-regional: the planning of the MSP is based on the MSP principles declared in the Spatial Development Planning Law, the EU MSP Directive (2014/89/EC) and discussed in HELCOM-VASAB MSP Working group framework.

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7.3. Fair and just transition

To ensure stakeholder participation in the MSP developing process, the Maritime Spatial Planning Working Group was established in 2014. It was established to ensure the regular involvement and participation of government institutions, planning regions, coastal municipalities, and members of the public in the marine spatial plan process, ensuring coordination and exchange of information on sectoral policy objectives and development interests.

In 2022 the working group was formed by merging two pre-existing working groups - the Maritime Spatial Planning Working Group and the Coastal Cooperation and Coordination Group, as the issues they address often overlap and involve practically the same people.

Other methods defining how relevant actors are involved in the MSP planning and management process are explored within cooperation projects. For example, the project “Land-Sea-Act" (2019 – 2021) brought together stakeholders involved in coastal management and planning, to find solutions to Maritime Spatial Planning and Blue Growth challenges around the Baltic Sea and to elaborate Multi-level Governance Agenda on Blue Growth and Spatial Planning in Baltic Sea Region.

Looking at some of the spatial aspects of the planning process and answering the question whether the plan covers all areas equally, it is noted that the data is as detailed as possible, only some layers are more detailed for the Gulf of Riga, most of them have the same representation.

A national geo-portal and a national policy document platform TAPIS are used to ensure access to MSP and MSP spatial data by relevant stakeholders. A part of MSP spatial data as web services are available also in Latvian open data portal.

During the whole elaboration process of the Plan (and the SEA process), consultations with stakeholders provided the feedback on the impacts on different groups.

7.4. Key challenges and obstacles identified

In order to gain better understanding what the challenges and difficulties are encountered in embedding EGD elements in the Latvian MSP plan (further – the Plan) and its interrelated processes, as part of the MSP-GREEN project three in-depth semi-structured interviews took place in May 2023. The interviewees represented the national governmental body, as well as non-governmental and marine research institute body representatives directly involved in the process of developing, evaluating, and elaborating the Plan. On average the interviews took 1 – 1.5 hours, accompanying the signed informed consent and a permitted recording.

From all interviews it was indicated that the Latvian MSP seems to be well aligned with the EU Green Deal objectives. In general, although it was developed before the approval of the Green Deal in 2019, it is based on the ecosystem approach and in consultation with a wide range of stakeholders, and therefore considered supportive of the Green Deal objectives. But improvements could be seen and there are significant challenges to ensure coordinated EU Green Deal implementation across interrelated MSP sectors, but also on a national scale.

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To mention, a catalogue of challenges was identified at country level – EU Green Deal objective integration regarding the Latvian MSP:

- Contrasting policy objectives (at EU, national, local level);
- Contrasts between maritime sector development and nature protection;
- Contrasting economic interest among sectors;
- Limitations in the MSP process itself (i.e. due to lack of time, human and economic resources, etc.);
- Difficulties for integrating land-sea processes;
- Societal needs;
- Issues related to data accessibility and its openness;
- Issues related to uncertainty (e.g. lack of exact forecasts regarding impact of climate change, uncertainty on economic developments);
- Issues related to coordinating cross-border processes.

One of the main challenges including EGD and related policy elements within the MSP seemed to point out contrasts between maritime sector development and nature protection. Whilst the EGD sets that biodiversity must be protected (biodiversity values are concentrated in the shoals), and at the same time it also determines that offshore energy must be developed (the most suitable location of which usually is also shoals), there is a dilemma about the development of shoals in the construction of wind farms or the protection of their ecosystems. The question is about interaction and cooperation between different interests and understanding the effects of one action and their compensating mechanisms. Moreover, it becomes important to consider how new - not very familiar, not so researched areas (e.g. wind farms and aquaculture), how such industries enter a new space where there are long-standing traditional owners. And in particular, how new sea uses may become a full-fledged participant in the game, whilst considering how to turn it into the ability to compensate between the different uses. To summarise, the future sea uses need to be properly evaluated in terms of the spatial requirements for territorial applicability, and how it compromises with existing sea uses, other marine sectoral developments and nature conservation within the changing environmental conditions.

In terms of contrasting economic interests and sector development processes, for instance it was mentioned that until now shipping and fishing have been the basis as traditional uses in the sea. But with a need for development of the energy sector, renewable energy production, this means that the traditional uses (e.g. shipping, fishing) will also have physical obstacles to free movement in the sea, which also results in environmental risks - the EIA process may therefore become more complex for potential wind farm developers.

> *"The sea as a common property and wealth of the state, it must be understood as a public interest, the whole society has the right to use this benefit - this is a question/challenge mostly related to the coastline, the scenic value of the coast; In the use of it, most of the society does not wield the sea area, but the interests are connected with recreation and its wider benefits"*

The process of maritime spatial planning itself is a complex field of negotiation - it is planning *per se*, but not classical planning in terms of land management or urban planning. It requires catching the whole field, the regulatory framework, and all policy initiatives that affect the marine space. Considering that in Latvia there is no specific

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educational degree, an academic programme developed for maritime spatial planning. it is a question of limited human resources but also the overall national budget allocation, societal awareness, and knowledge of the EGD and how sectoral cooperation drives such processes. The interviews indicated that there is an opinion that planners may not be considered as experts in specific sectors, and it will most likely be used as a counterargument against offers for more innovative solutions in the MSP. It becomes crucial - spatial planners' ability to reach compromise solutions between the sectors and to 'convince' decision makers and experts in sectoral areas. In fact, EU funded projects act as a platform for knowledge exchange, development of solutions, etc.

Several promising suggestions were indicated on how to overcome the challenges in need to be addressed. For instance, in terms of the Plan implementation, it is only possible by promoting the appropriate use of the sea space, by providing the EGD related prerequisites, and further, that there is a dialogue with the involved parties. As maritime planning itself is as a mediator between the interests of different sectors. In terms of the MSP assessment, an indication was made of the importance of following the latest information, taking the relevant actions to adapt, finding compliance with EC and national documents, and policy initiatives.

To address the fragmentation regarding the implementation of the EU Green Deal, an exemplary example for the Latvian context was considered the Maritime and Coastal Coordination Group, within which various involved sectors, NGOs, representatives of different sectoral institutions raise discussions on specific issues. Because coordination between institutions is formal, and in order to comprehend the other perspective/sectoral needs, understanding takes place through conversation – a dialogue. However, due to uncertainty in climate and ecosystem variability and complex decision-making processes, there is a need for holistic representation and assessment of complex and interrelated marine and coastal issues (land-sea interactions) through the prism of ecosystem services - to fill sectoral knowledge gaps and strengthen mutual cooperation.

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Chapter 8

The Green Deal component of MSP in Spain

This chapter has been developed based on the information provided by the desk analysis and the interviews conducted. Quotas from interviews are included in text boxes along the chapter to provide more information.

8.1. Background information about Spain MSP process and plans

8.1.1. Background information about the plan

Maritime Spatial Planning in Spain is regulated by the Royal Decree 363/2017, of 8 April, establishing a framework for maritime spatial planning.[24] The Royal Decree is a legal development of the Law 41/2010, of 29 December 2010, on the protection of the marine environment[25], which transposed the Marine Strategies Framework Directive into the Spanish legal system. Therefore, legally, MSP and Marine Strategy processes are linked and the processes are updated every 6 years. Therefore, the Spanish MSP plans (POEM for its initials in Spanish – *Planes de Ordenación del Espacio Marítimo*) would be subrogated to the environmental objectives of Marine Strategies described in the Law 41/2010.

POEM have been approved by the Royal Decree 150/2023, of 28 February, on the approval of the maritime spatial plans.[26] The competent authority for both processes is the same, the Directorate General of the Coast and Sea from the Ministry for the Ecological Transition and the Demographic Challenge (MITECO for its Spanish acronym – *Ministerio para la Transición Ecológica y el Reto Demográfico*).

The fact that, at the legal level, MSP was regulated under the law for the protection of the marine environment, helped to fit MSP under the umbrella of the achievement of environmental objectives, which can be considered as a strength in terms of the application of the ecosystem approach (MSP Competent authority).

The preparatory process in Spain started with the approval of the Royal Decree 363/2017 and the creation of an MSP Working Group (GT-OEM for its initials in Spanish – *Grupo de Trabajo en Ordenación del Espacio Marítimo)*[27], in the framework of the Interministerial Commission of Marine Strategies, to steer the process. This group is of

[24] Royal Decree 363/2017, of 8 April, establishing a framework for maritime spatial planning, https://www.boe.es/buscar/doc.php?id=BOE-A-2017-3950

[25] Law 41/2010, of 29 December 2010, on the protection of the marine environment, https://www.boe.es/buscar/act.php?id=BOE-A-2010-20050

[26] Royal Decree 150/2023, of 28 February, on the approval of the maritime spatial plans, https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-5704

[27] See https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/estrategias-marinas/eemm_eemmespana.html

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a technical nature and brings together the different units of the National Government that regulate at the sectoral level all the human activities included in the POEM plus, two technical advisory institutions. It is important to mention that the Spanish MSP has been conducted by the national government although some of the competences regarding sector management are shared with the Autonomous Communities, the regions in Spain (level 2 units in the NUTS classification).

Spanish jurisdictional waters are part of three different sea regions: the Atlantic, the Mediterranean and the Macaronesia. POEM are applied in 5 marine subdivisions/demarcations defined in the Law 41/2010. These are the same subdivisions used to apply the Marine Strategy Framework Directive (MSFD) in Spain and were defined following ecosystem criteria. The 5 marine demarcations in Spain are shown in the following figure:

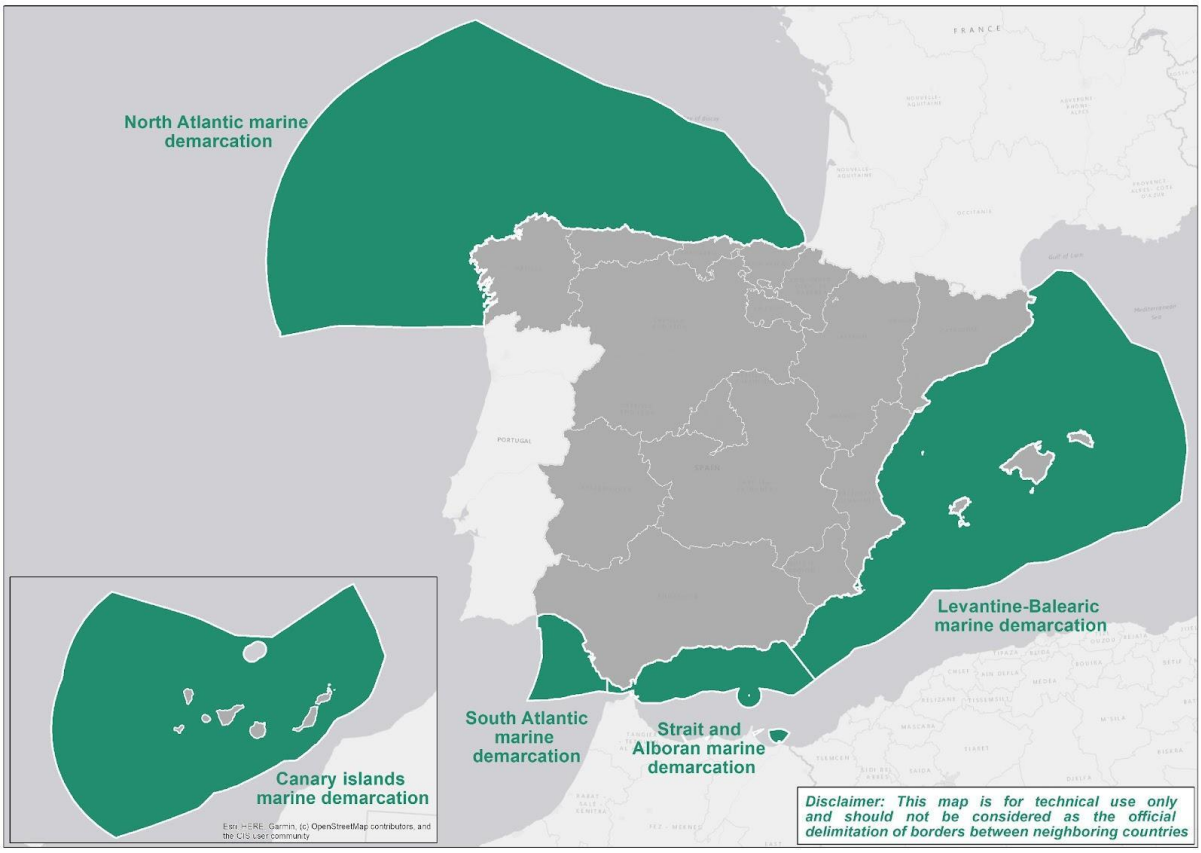

Figure 16. Subdivisions of Spanish jurisdictional water for MSP implementation

For the establishment of the objectives of the POEM, the Competent Authority sent a questionnaire to the General Directorates and organisms from the Ministries with competences at sea from the national and regional administrations. The aim of this survey was to identify: (i) the existence of different objectives of an economic, social or environmental nature in Spanish maritime sectoral policies; (ii) the existence of planning tools in place, including the environmental, social or economic objectives that have been specifically set for the activity; and (iii) the link with European policies, to what extent the activity is affected positively or negatively by other uses, as well as the funding available for the development of the policies envisaged, and the system of powers that regulates it. Additionally to the questionnaire, meetings between the Competent Authority, Ministries with competences at-sea and the Autonomous Communities were held to obtain the objectives.

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Therefore, POEM are not driven by any vision or strategy but composed their objectives from policies, plans and strategies in relation to maritime sectors and Blue Economy at European, national, and sub-national levels.

The analysis of all these objectives and strategies led to the formulation of one general planning objective and several: (1) General-interest objectives, (2) Multi-sector horizontal planning objectives and (3) Sectoral planning objectives, as can be observed in the following figure:

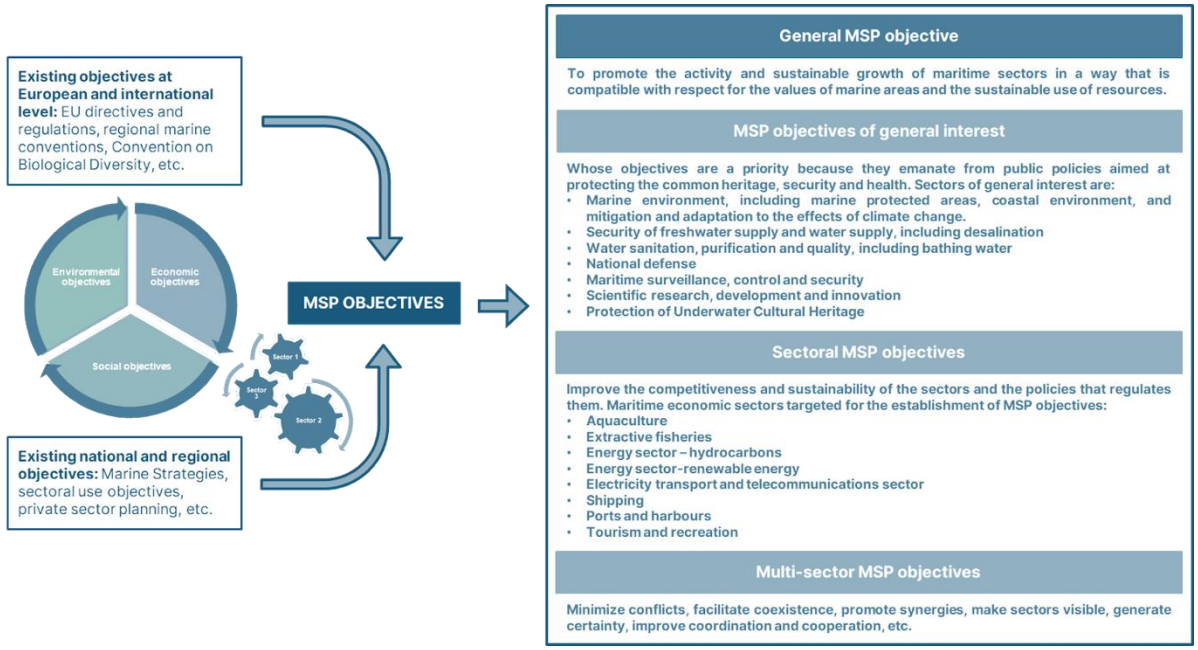

Figure 17. Process of identification of objectives for the Spanish POEM

Once the objectives were established, a diagnosis process was developed in order to identify the environmental and socio-economic characteristics that are present in the marine area in which the planning has to be carried out.

On the basis of this diagnosis, including the aspirations identified by the different users of the sea, the spatial planning of the five Spanish marine demarcations was carried out following the same conceptual scheme, as well as the same criteria and zoning categories (Figure 18). Also, specific measures have been established to be implemented in the 1st cycle of MSP.

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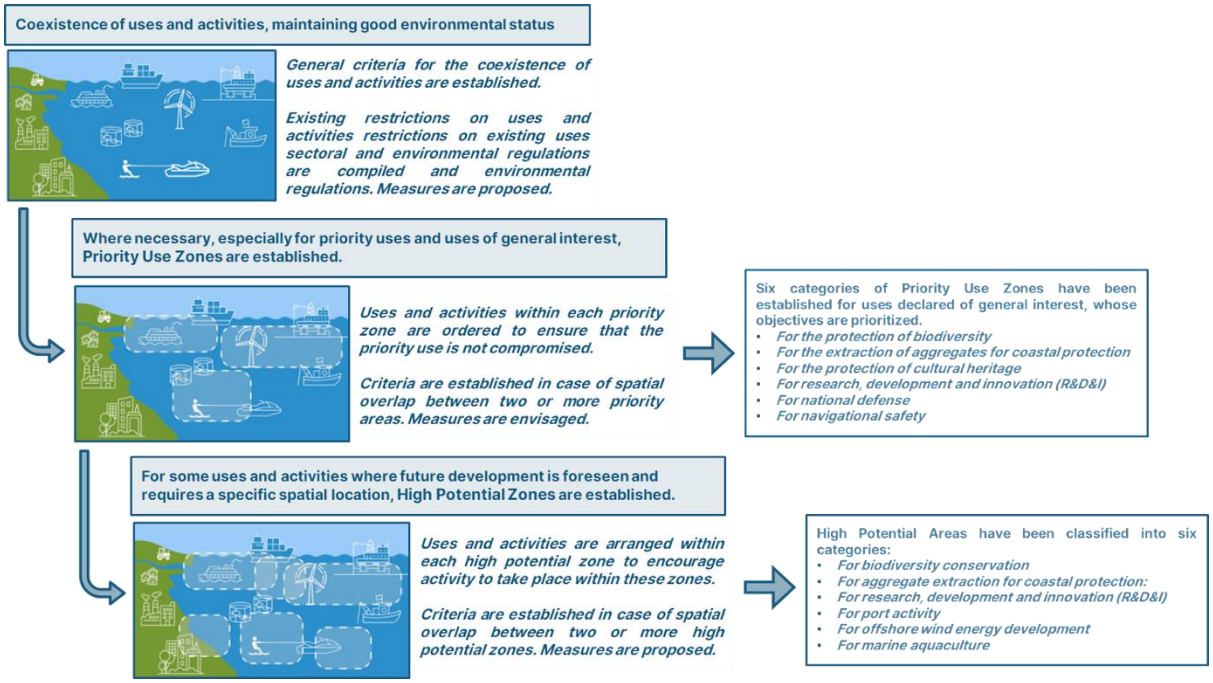

Figure 18. Zoning scheme for the Spanish POEM

8.1.2. Spain MSP plans and the European Green Deal

The European Green Deal (EGD) is mentioned in the "Preamble" of the Royal Decree which approves the POEM, and in the section "Introduction and policy framework" that analyses objectives at macro-regional scales that affect MSP. Although the POEM mention the EGD, the Spanish MSP process started before the approval of the EGD, which means that not all its aspects are totally integrated in the process, as it will be explained in the following sections.

> *"The objectives of the European Green Deal (fighting climate change, circular economy, "no place left behind") are completely aligned with what in Spain is referred to as ecological transition, which is currently the name of the ministry - Ministry for the Ecological Transition and the Demographic Challenge. (MSP Competent authority).*

Because the MSP process started in 2017, before the European Green Deal, in the POEM section "*Background: EU European Maritime Policy and international policies*", the Communication regarding Blue Growth (COM(2012) 494 is considered, however, it also mentions the "*Council Conclusions on a Sustainable Blue Economy: Health, Knowledge, Prosperity, Social Equity*" of 2021, indicating that

> "*...The implementation of marine spatial planning should be used to achieve the ambitions of the European Green Deal as well as to enhance the unique potential of maritime sectors, in terms of their sustainable growth, as a tool to facilitate the multiple use of maritime space while preserving marine and coastal ecosystems".*

Likewise, the Council of the European Union welcomes in such *Conclusions* the Communication on "*A new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future. COM(2021) 240 final".*

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With regards to the EU Strategy to harness the potential of offshore renewable energy for a climate neutral future (COM(2020)741 final), POEM explicitly refers to the objective of increasing the capacity of wind marine energy in the EU to 60 GW for 2030 and 300 GW for 2050. This development will be complemented with 40 GW of Oceanic Energy and other emerging technologies by 2050. In fact POEM are directly linked to the Roadmap for the development of offshore wind and marine energy in Spain.[28]

Regarding the conflict that may be between the development of renewable energy and biodiversity conservation, international commitments set clear objectives (30% and 10% strict protection), however, there are many different ways of fighting climate change (not only by offshore wind farms) (Rafael Sardá, Senior Research Scientist in CSIC).

The EU Biodiversity Strategy for 2030 is also considered in the prologue, in the analysis of the European Context and, the POEM actually consider their objectives in the zoning exercise. This includes High Potential Areas for 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. For this purpose, an MSP measure is included in the POEM regarding biodiversity protection – "PB": "*PB1: identification of new proposals for the declaration of marine protected areas*", which is linked to the biodiversity objectives of Spain to achieve the 30% of the jurisdictional waters under protection regime by 2030.

To guarantee the need to increase marine protected areas in each marine subdivision is of general interest in the POEM, according to the objective of 30x30, which gives it priority (MSP Competent authority).

The Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030 are considered as part of the sectoral objectives identified in the POEM. The new Pluriannual Strategic Plan for Spanish Aquaculture 2021-2030, which is under development, will be aligned to them, which, among other aspects, includes the need to work on "Access to water and space".

8.2. EGD components of MSP plans analysis

8.2.1. Climate change mitigation

Renewable energy production, storage and transportation

POEM do not have a specific objective regarding climate change mitigation by renewable energy production, storage, and transportation. POEM just include the analysis of the suitable areas for the development of offshore wind farms (OWF). However, in the Royal Decree of their approval is stated that: "*The establishment of offshore wind is by far the topic to which the most effort and energy has been devoted in the POEM, trying to meet the objectives of the PNIEC (National Integrated Energy and Climate Plan) and the Offshore Wind Roadmap, in order to reach the best possible solution that will allow us to develop the offshore sectors, taking into account strategic objectives of the country such as the protection of biodiversity or the necessary*

[28] Ministry for Ecological Transition and the Demographic Challenge, Roadmap for the development of offshore wind and marine energy in Spain, 2022, https://www.miteco.gob.es/es/ministerio/planes-estrategias/desarrollo-eolica-marina-energias/enhreolicamarina-pdf_accesible_tcm30-538999.pdf

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ecological transition towards cleaner energies".

POEM measures to facilitate the development of marine renewable energies are established in the Roadmap for the development of offshore wind and sea energies in Spain.[35]

Measures are listed and named according to the sectors (e.g. renewable energy – "ER"; maritime spatial planning – "OEM"). As a result of the evaluation of the interactions, and of the contributions received during the public consultation, the following measures related to OWF have been included in the POEM, to be developed during the first cycle of plans implementation:

- Measure ER1: *Analysis and modelling of the landscape impact of offshore wind energy use infrastructures in Spanish waters*.
- Measure ER2: *Analysis of the fishing sector potentially affected by the development of offshore wind energy in the areas proposed in the POEM*.
- Measure ER3: *Analysis of the potential effects of offshore wind farms on marine ecosystems*.

Regarding zoning, High Potential Areas for the development of wind energy have been defined in the POEM, whose total extension is indicated below, by marine demarcation:

4,948.08 km² (0.46% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
Canary	561.87	0.12
North-Atlantic	2,688.61	0.85
South-Atlantic	0.00	0.00
Strait and Alboran	1,222.61	4.48
Levantine-balearic	474.99	0.20

Table 7. Surface area occupied by High Potential Areas for wind energy development in Spain

The quantity of energy supposed to be produced in these areas is not available in the POEM documents.

The total extension of High Potential Areas for OWF is expected to cover the objectives for the marine renewable energy foreseen in the Roadmap for the development of offshore wind and sea energies in Spain (MSP Competent authority).

Clean energy transition in maritime sectors

This topic is not directly included in the POEM itself, so there are no specific objectives, nor strategic objectives in the plans. However, the POEM mention the strategies that can address it, such as the Spanish Strategy for Science, Technology and Innovation 2021-2027 (EECTI for its Spanish acronym – *Estrategia Española de Ciencia, Tecnología e Innovación*), which includes the Strategic Action on Energy and Climate Change.

Regarding measures, this topic is indirectly mentioned in the Measure OEM2 "*Study of prospective and socio-economic characterization of the different sectors of the Spanish blue economy*", that will address how different sectors can contribute to mitigate or adapt to climate change; and the Measure OEM6 "*Development of a maritime strategy/blue growth strategy at the national level*", which, complementing measure OEM2, it is considered that the blue growth strategy should be established taking into account the climate change scenario, and should establish clear lines on how the

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different maritime sectors can contribute to mitigate or adapt to climate change.

There is no zoning defined in the POEM for this topic.

Transformations in ports: The POEM mention the State Ports Strategic Plan that address this topic, but the POEM do not include specific or strategic objectives, neither measure or zoning for it.

Blue carbon storage: This topic is not included in the POEM.

8.2.2. Climate change adaptation

The land-sea interaction analysis of the POEM includes aspects related to coastal resilience to the effects of climate change (MSP Competent authority).

Green Infrastructures to enhance coastal resilience
Regarding the strategic objectives for climate change adaptation, the POEM do not specifically include the topic but the one of the general objectives of the POEM is to "*promote the sustainable activity and growth of maritime sectors in a way that is compatible with respect for the values of marine spaces, the conservation of their functionality and the sustainable use of resources*", and also, "*to ensure its compatibility with achieving and maintaining the good environmental status of the marine environment, its conservation, protection and enhancement, including resilience to the effects of climate change, and human health, through an ecosystem approach, as well as the safeguarding of underwater cultural heritage*".

This topic is included in the specific objectives of the POEM through a general-interest objective for biodiversity conservation – "MA": *"MA.1. Promote connectivity, functionality and resilience of marine ecosystems through consideration of Marine Green Infrastructure"*. For the sectoral planning objectives, indirectly, it has been included in shipping – "N": "*N.2. Ensure that the spatial location of shipping routes does not compromise ecosystem connectivity, especially migratory species corridors*". Furthermore, POEM mention the Strategy for Adaptation to Climate Change on the Spanish Coast that addresses this directly.

POEM included a measure indirectly related to climate change adaptation: *OEM3.* "*Definition and incorporation in the POEM of the set of elements that make up the Marine Green Infrastructure (MGI)*". The incorporation of some elements of the MGI in the POEM will contribute to nature-based solutions, which is one of the tools for climate change adaptation. MGI elements have been identified in the POEM and included as an annex for each marine demarcation, which describes the element in individual files, including the ecosystem services that they can provide. Therefore, they have been identified but no management or planning measures have been established for them (although some of the elements are part of other categories, as Priority Use Areas for Biodiversity Protection, for instance), which means that they might already have premises established by other means.

Some of the elements of the MGI that contribute to nature-based solutions to climate change adaptation included in the POEM are:

- Marine protected areas (Natura 2000 sites and other conservation figures established by other conservation and protection tools).

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- The natural habitats of community interest: 1110 (Sandbanks which are slightly covered by sea water all the time)[29] and 1170, which are represented in all marine demarcations; and 1120 (Posidonia beds (*Posidonion oceanicae*))[30] represented in 2 marine demarcations.
- Some geological elements that by its nature contribute to climate change mitigation.
- Some coastal areas that contribute to tackling environmental hazards.

Regarding the zoning of these elements, the total extension for MGI that contributes to climate change adaptation is indicated below:

352,689.40 km² (32.80% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
Canary	43,348.96	8.92
North Atlantic	145,163.26	46.01
South Atlantic	12,368.11	88.79
Straits and Alboran	14,541.41	53.29
Levantine-Balearic	137,267.66	59.12

Table 8. Surface area occupied by MGI that contributes to climate change mitigation in Spain

Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes

POEM do not have specific or strategic objectives regarding the topic, but it is included indirectly in 3 MSP measures (land–sea interactions – "ITM"; aggregate extraction – "EA"):

- ITM1: *National Strategic Plan for the Protection of the Spanish Coast considering the Effects of Climate Change*: The measure itself is aimed at improving coastal resilience to the effects of climate change.
- PB1: *Identification of new proposals for marine protected area declarations*: The potential of marine protected area networks to combat climate change is well known. Stability is brought to the set of marine biodiversity components.
- EA1: *Declaration of a Maritime and terrestrial public domain Reserve, if appropriate, of those sites that are considered strategic for their contribution to beaches*: The measure itself is not related to climate change, but the actions that derive from it, result in greater protection of the coast, and therefore in its adaptation and resilience to climate change.

There is no zoning defined in the POEM of this item.

Anticipation of climate change-related effects

Some specific objectives have been included in the POEM, that, indirectly, contribute to the anticipation of climate-change through the consideration of the erosion issue, that however is not only related to climate change. These objectives are categorised as general-interest objectives:

- MA.6: *To guarantee the integrity of the maritime-terrestrial public domain for its*

[29] See https://eunis.eea.europa.eu/habitats/10003

[30] See https://eunis.eea.europa.eu/habitats/10004

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own defence and conservation, as well as to favour the recovery of coastal spaces and promote solutions based on the functions of natural ecosystems.

- MA.8: *To guarantee the viability of the actions of general interest necessary to protect the integrity of the maritime-terrestrial public domain, including, among others, those of study, access, and exploitation of the aggregate extraction areas to be used for coastal protection works.*

As above, also considered in a horizontal multi-sector planning objective – "H": H.5: *To consider land-sea interactions as an additional element to be assessed in the monitoring of plans*.

And considered through some of the sectoral planning objectives as in aquaculture – "A": A.1: *To design a spatial planning of aquaculture from a medium- and long-term scale approach compatible with environmental conservation and protection of the marine ecosystem; considering new knowledge from research on marine cultures, especially algae; advances in new technologies, as well as the needs for resilience, adaptation, and mitigation of climate change*.

However, the topic has not been considered in the strategic objectives and neither measures nor zoning have been included in the POEM.

8.2.3. Sustainable food production

Sustainable fisheries: sustainable fisheries management, including area and time-based measures
In the POEM as specific objective, it has been considered in one sectoral planning objective about the extractive fishing activity – "P":

P.2: To *achieve Maximum Sustainable Yield on stocks of commercial species and reduce the negative impact of fishing activities on biodiversity*.

But there are not any strategic objectives nor measures regarding sustainable fisheries.

However, considering areas with management measures, the Marine Reserves of Fisheries Interest are a management fishing area included in the POEM as part of the Spanish MPAs network and included in the Priority Use Areas for biodiversity conservation. The aim of these areas is "*the protection, regeneration and development of fishery resources for the maintenance of sustainable fisheries, allowing the artisanal fishermen of the area to preserve their traditional way of life, objectives that are achieved through the reduction of the impact of fishing in the protected area*". In Spain, there are 28 sites managed by different authorities: the National Government manages 5 marine reserves; 6 marine reserves are partially managed by the National Government and the Autonomous Communities, and 17 sites are managed by the Autonomous Communities. The area occupied by these Marine Reserves is the following:

2,285.80 km² (0.21% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
Canary	752.47	0.15
North Atlantic	0.00	0.00
South Atlantic	399.24	2.87

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Straits and Alboran	14,541.41	0.52
Levantine-Balearic	992.93	0.43

Table 9. Surface area occupied by Marine Reserves in Spain

Sustainable aquaculture and shellfish production

Sustainable aquaculture and shellfish production is included in the plan in its specific objectives, in a sectoral planning objective:

A.1: *To design a spatial planning of aquaculture from a medium- and long-term scale approach compatible with environmental conservation and protection of the marine ecosystem; considering new knowledge from research on marine cultures, especially algae; advances in new technologies, as well as the needs for resilience, adaptation, and mitigation of climate change*.

This topic is not explicitly included in the strategic objectives; however, the general objective of the POEM entails the sustainable development of all sectors.

Regarding measures of sustainable aquaculture production – "AC" included in the POEM:

- AC2: *Elaboration of planning and management instruments for the declared Areas of Interest:* Zones of interest for aquaculture, *(ZIA) and* Zones of interest for marine cultures *(ZICM)*. These instruments determine the conditions under which these areas have been declared, establish criteria for the sustainable development of aquaculture activity, and may include criteria for the development of other activities in these areas.

- AC3: *Actions related to spatial planning in the framework of the Strategy for the sustainable development of aquaculture 2021-2030*: These actions at national and/or regional level may include: studies for the identification and selection of new areas, e.g. for off-shore aquaculture, and the updating of inventories of existing and future aquaculture uses. In addition, new development and management plans may be elaborated; carrying capacity analyses or analyses on the effects of climate change on aquaculture areas. In addition, actions for the incorporation of new farming technologies or monitoring systems may be implemented.

Regarding zoning, High Potential Areas are defined in the POEM considered to be highly suitable for the development of aquaculture facilities. They include those areas defined by the competent authorities of the Autonomous Communities. These are:

- Potential zones.
- Conditioned potential zones.
- Preferential areas.
- Zones of interest declared by the different Autonomous Communities: ZIA and ZICM. Zones defined within the service areas of the ports have not been included in this document, as these waters are outside the scope of the POEM.

It should be noted that some existing aquaculture facilities are located within these zones, and similarly other aquaculture farms are located outside the High Potential Areas for Aquaculture. Existing aquaculture uses are safeguarded under the conditions under which they have been authorised or declared. Therefore, the POEM do not

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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.

Regarding the area representing the zoning of High Potential Areas for aquaculture, is indicated below:

18,372.91 km² (1.71% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
Canary	514.60	0.11
North Atlantic	10,916.37	3.46
South Atlantic	1,349.55	9.69
Straits and Alboran	1,190.48	4.37
Levantine-balearic	4,400.91	1.90

Table 10. Surface area occupied by High Potential Areas for Aquaculture in Spain

Sustainable algae production: This topic is included in the previous section on aquaculture.

8.2.4. Biodiversity and ecosystem protection and restoration

High Potential Areas for biodiversity are the areas identified as relevant for habitats and species that are not currently protected, but maybe in the future, in order to achieve the objectives of the EU Biodiversity Strategy for 2030 (MSP Competent authority).

Elements to improve marine connectivity (e.g. among submarine canyons, reefs, etc.) and elements to achieve a coherent network of marine protected areas
The topic has a specific objective through a general-interest objective:

MA.1. *To promote the connectivity, functionality and resilience of marine ecosystems through the consideration of Marine Green Infrastructure*.

One of the strategic objectives of the POEM is to "*promote the sustainable activity and growth of maritime sectors in a way that is compatible with respect for the values of marine spaces, the conservation of their functionality and the sustainable use of resources*". And also "*to ensure its compatibility with achieving and maintaining the good environmental status of the marine environment, its conservation, protection and enhancement, including resilience to the effects of climate change, and human health, through an ecosystem approach, as well as the safeguarding of underwater cultural heritage*".

Regarding measures, the POEM include this topic by:

- OEM3: *Definition and incorporation in the POEM of the set of elements that make up the marine green infrastructure*. The National Strategy for Green Infrastructure and Ecological Connectivity and Restoration that guides the MGI identification in Spain also includes the topic of restoration.
- PB2: *Approval and development of the Director Plan for the Network of Marine Protected Areas of Spain (RAMPE for its Spanish acronym – Red de Áreas*

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Marinas Protegidas de España).

Zoning for this topic has been considered in the POEM by the designation of Priority Use Areas for biodiversity (which includes marine protected areas, including Natura 2000 Network sites, both, state and autonomous community managed), and High Potential Areas for biodiversity (including the 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 protection figure. High biodiversity potential areas are those identified as high value areas for benthic habitats, high value areas for birds and cetaceans and high value areas for species of community interest). However, in the analysis of this document, there have been a differentiation between strict protection Marine Protected Areas and Non-strictly protected areas, that have been calculate as following:

- Marine Protected Areas strictly protected (10%): In Spain, besides Natura 2000 sites (that for the purpose of this analysis are not included in this category) there are 2 MPAs: El Cachucho and the Mediterranean Cetacean Migration Corridor, located in the North Atlantic and Levantine-Balearic marine demarcations, respectively. These protected areas are also part of other conservation figures as Natura 2000 sites, and Specially Protected Areas of Mediterranean Importance (SPAMI) site, in case of the Mediterranean Cetacean Migration Corridor.

49,230.11 km² (4.58% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
North Atlantic	2,616.64	0.83
Levantine-Balearic	46,613.4	20.08

Table 11. Surface area occupied by MPA strictly protected in Spain

- Non-strictly protected areas (N2K, OECM – including candidate areas) (30%): This section includes the Priority Use Areas and the High Potential Use Areas for biodiversity protection defined in the POEM. The zoning does not include the areas of the 2 MPAs included in the previous point:

281,603.86 km² (26.20% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
Canary	134,045.72	27.58
North Atlantic	37,735.14	11.96
South Atlantic	9,055.65	65.01
Straits and Alboran	24,796.03	90.87
Levantine-Balearic	75,971.32	32.72

Table 12. Surface area occupied by non-strictly protected areas in Spain

Restoring marine and coastal ecosystems

There are not specific objectives at the MSP plans level but of course Spain has a compromise with objectives assumed from the international level. Neither strategic objectives are included, as mentioned in the previous point, it is indirectly considered in the MSP general objective of the POEM.

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Regarding measures, it is indirectly considered by the measure mentioned previously of OEM3: *Definition and incorporation in the POEM of the set of elements that make up the marine green infrastructure*. The strategies that guide the MGI identification in Spain also includes the topic of restoration, but it will be addressed during the implementation of the POEM.

No zoning for the restoration of marine and coastal ecosystems has yet been defined in the POEM.

8.2.5. Blue circular economy

Circular design: Not included in the POEM.

Waste prevention: Not included in the POEM.

Re-use, repair, upgrade, recycle: Not included in the POEM.

8.2.6. Zero pollution

Pollution prevention
Two specific objectives of general interest are indirectly related to this topic in the POEM in terms of treatment and quality of water – "CA":

- CA.2: *To ensure that land-sea discharges are carried out in such a way that they do not compromise the development of human activities or the good environmental status of the receiving coastal waters*.
- CA.3: *To ensure that present and future uses and activities do not compromise the status of coastal water bodies, in accordance with the basin hydrological plans*.

There are no strategic objectives, measures or zoning included in the POEM for this topic.

Pollution remediation: Not included in the POEM.

8.2.7. Cross-cutting elements

Research and innovation
There are a couple of horizontal multi-sectoral objectives (within the specific objectives) that can be related somehow to different aspects of the EGD:

- H.11: *To promote scientific knowledge to determine the carrying capacity of marine ecosystems for different uses and activities*.
- H.12: *To coordinate the scientific knowledge that is generated with the implementation of new uses and activities and studies in the marine environment*.

There are no strategic objectives established for research and innovation. .

Regarding measures, one measure has been included in the POEM for this topic: ZAPID-1: *Identification of potential new R&D&I areas, especially in those marine demarcations where none have been considered in the present plan: South-Atlantic marine demarcation, Strait and Alboran marine demarcation, and Levantine-Balearic marine demarcation*.

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In relation to the zoning, High Potential Areas have been established for new R&D&I areas. Many of the R&D&I initiatives/projects/activities that would be developed in these zones are related to renewable energies, and therefore would have direct repercussions on climate change mitigation. The extension of these areas is indicated as follows:

165.10 km² (0.02% of the total planning area of the POEM)		
Marine demarcation	Km²	% of the planning area of the demarcation
Canary	40.40	0.01
North Atlantic	124.70	0.04
South Atlantic	0.00	0.00
Straits and Alboran	0.00	0.00
Levantine-Balearic	0.00	0.00

Table 13. Surface area occupied by High Potential Areas for R&D&I in Spain

Education and training: Not included in the POEM.

Cross-border cooperation in MSP
Formal processes of transboundary cooperation have been carried out. Also, this aspect has been addressed through the pilot transboundary projects in which Spain has participated, as the present one.

However, no measure, objective or zoning have been included in this regard in the POEM.

8.3. Fair and just transition

Due to the distribution of competences at-sea at the national level, the process could only work with all the competent public entities involved, therefore, the first stakeholder mapping during the pre-planning phase of the Spanish MSP process was based on the governance system. Consequently, an inter-ministerial working group on MSP (MSP-WG) was created in the framework of the Inter-ministerial Marine Strategies Commission to steer the process with representatives of all ministries with competences or interest in maritime affairs. Regions (Autonomous Communities) were also represented in the MSP process through the Monitoring Committees of Marine Strategies of each marine demarcation, to ensure representation of all areas in the planning process.

During the elaboration of MSP plans, different *ad hoc* working groups were created to analyse some “hot” topics that had arisen during the development of the process”, as can be seen in Figure 19.

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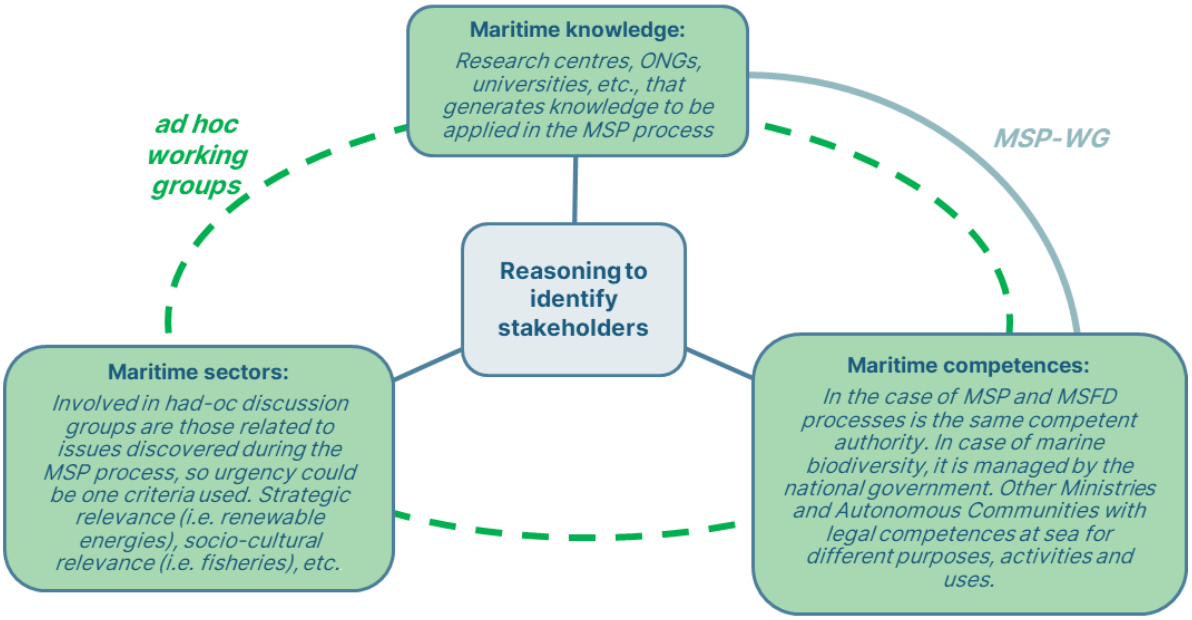

Figure 19. Spanish Stakeholder's mapping rationale

The method to involve them was holding meetings or workshops, at first face to face but due to the COVID-19 pandemic, the format turned into video calls.

Local stakeholders were not considered directly because most of the dialogues during the MSP process were at a national or regional level. In those cases, the local level was represented by a representative of the sector (i.e. the local fishermen's associations were represented by the president of the fishermen's associations in Spain).

For stakeholders outside the inter-ministerial level (both the MSP working group and the Autonomous Communities), the official procedure to participate into the MSP process was through the public consultations (SEA – Strategic Environmental Assessment and POEM) conducted through the web of the Ministry and that consisted in reviewing the official documents and sending allegations. The notification of this consultation is sent to other ministries by official communication, but not directly informed to other stakeholders or the general public.

In order to improve the stakeholder engagement during the implementation of the MSP plans, the MSP measure OEM7: "*Development of a long-term strategy for the participation and involvement of stakeholders, specially the sectors with greater social roots, local administrations, and citizens, to mitigate the difficulties of participation caused by COVID-19"* will be developed during the first MSP cycle.

Regarding the power to influence the process, for the administrative stakeholders is quite clear, as the Competent Authority for MSP only holds the competences for environmental protection and energy, issues related to other activities needed to be agreed with the respective departments of other ministries.

A particular and very significant aspect during the elaboration of the POEM has been the process of identification of High Potential Areas for the development of OWF.

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Ministerially, two entities were the main actors: the Institute for Energy Diversification and Saving in Spain, that provided the identification of the distribution of the wind resource and the viability criteria for OWF; and the Sub-directorate General of Terrestrial and Marine Biodiversity which established the spatial limits of these areas in order to assure the biodiversity protection. These two entities are part of the same ministry (Ministry for the Ecological Transition and the Demographic Challenge), which is the same ministry of the MSP competent authority. Regarding private sectors, fisheries was the most influencing sector with regards to the development and establishment of OWF areas. During the formal consultation process, an online meeting on the interactions between fisheries and OWF was held, in order to hear the fisheries sector and to try to find some solutions to issues that could emerge from the interaction of both sectors, as well as for biodiversity protection. .

After public formal consultations, many areas for OWF were changed in category so those that at the beginning of the process were declared as Priority Used Areas, after allegations were considered as High Potential Areas. Some areas were removed, and others were reduced considerably in space. In addition, three new MSP measures were included in the plan regarding the interaction of OWF with biodiversity, landscape and with the fisheries sector, which gives an idea of the power of the fisheries, tourism, and the environmental protection sectors.

Communication should be improved to align all stakeholders on the same page, manage expectations and build trust. In the Spanish context this has been proved to be very relevant for the case of the fishing sector (MSP Competent authority).

To ensure that relevant stakeholders and authorities, as well as the affected public, have access to all the information related to the plans, the Spanish MSP competent authority created an information system called InfoMAR[31], which bring together all the information generated by public administrations in the field of the application of European directives (mainly MSFD, but also the MSP Directive, the Water Framework Directive [WFD], and the Habitats and Birds Directives). This InfoMAR system is made up of several components, one of which is a geographic viewer, with all the geographical information on which maritime spatial planning is based, and the resulting zoning can be consulted.

In terms of an ecological transition towards a low-carbon economy and efficient in the use of resources, the POEM aim to contribute efficiently and equitably towards decarbonization and linked to the previous one, just transition in terms of employment, on how to benefit from the potential of this transformation for the generation of new industries and new jobs.

Regarding socio-economic information included in the POEM, the diagnosis of the current situation of the sectors tried to address the socio-economic aspects, as well as including information of the socio-economic assessment of the different human activities of the second cycle of Marine Strategies. However, implications of POEM provisions have not been addressed at this stage. This will be pursued partially during the POEM implementation by the measure OEM2: "*Prospective study and socio-economic characterisation of the different sectors of the Spanish blue economy, in detail for each of the five marine demarcations*".

[31] See https://eunis.eea.europa.eu/habitats/10004

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Although there have been steps since the beginning to have a participatory design of the POEM, this needs to be improved. There is a need to create spaces for an intersectoral dialogue to find consensus on measures and objectives, to be more transparent, avoiding bilateral negotiations, because this generates lack of transparency and trust, since this generate conflicts, as the one between the OWF development and the fisheries sector, that has been highly mediatic and has overshadowed many other aspects of the plans. This is the importance of engaging all stakeholders in the decision-making process, although at the end the decision should be taken by the Competent Authority. But this gives legitimacy to the decision and eases its application (Óscar Esparza, Marine Protected Areas Officer at WWF Spain).

No information regarding the promotion of gender balance in maritime professions was included in the POEM.

8.4. Key challenges and obstacles identified

The content of this section has been developed based on the results of interviews. Three interviews were conducted to different actors involved at different levels and in different aspects of the MSP process in Spain.

The interviewees were aware of the existence of the EGD and related policies and knew its implications in a general way, but the perception on how the EGD is linked to the MSP process is different. The knowledge about details regarding its different objectives and related policies vary from interviewee to interviewee. In general, a deeper understanding of EGD elements and how they interact with MSP seems to be still needed.

From the different elements of the EGD, the Communication on Sustainable Blue Economy seems to have the most understandable connection to MSP as it explicitly mentions MSP plans as the main governance tool to apply its objectives.

When asked about the related policies, the ones that were mostly mentioned were (besides the EGD and the Communication on Sustainable Blue Economy):

- EU Biodiversity Strategy for 2030 - Bringing nature back into our lives. COM(2021) 380 final.
- A new Circular Economy Action Plan for a cleaner and more competitive Europe. COM(2020) 98 final.
- Pathway to a Healthy Planet for All EU Action Plan: Towards Zero Pollution for Air, Water and Soil. COM(2021) 400 final.

The sense of the EGD as an umbrella (or “policy of policies”) for all these policies was shared by all interviewees.

The EGD should guide the main objectives of the POEM [...]. One of the main shortcomings I see in MSP in Spain is the lack of ambition and scope. A vision in the long term is needed, with objectives more ambitious and that it [MSP] could be a tool that could vertebrate and influence sectoral policies and strategies [...] to guide them to fulfil the EGD objectives (Óscar Esparza, Marine Protected Areas Officer at WWF Spain).

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The implications (and therefore the challenges) of the EGD for MSP are to integrate environmental concepts, as the ecosystem approach, in the development of maritime sectors. It is maybe something "new" for them and there is the need to make them understand that there are some objectives (the ones of the EGD) that need to be achieved.

Although the POEM has included, at some level, some of the aspects related to the EGD, when it comes to defining actions to implement them, it seems that still work needs to be done.

When asked about the need for improvement of national or European legislation, there were diverse opinions. Some were of the opinion that the MSPD should be more explicit in terms of how to implement the policy (that is, to give less flexibility in the method of implementation), others thought that the modification of the Directive is not the solution, that it is up to the countries to apply its provisions correctly. Somewhere in between there was the opinion that at least the Directives should define better what they mean for certain concepts as precautionary principle, ecosystem-based approach, stakeholder engagement, etc.

There is a need for prioritisation and specification in the EGD and related policies. According to some of the interviewees, right now, the EGD prioritises decarbonization over, for instance, biodiversity conservation. This may be a risk because each actor may read and interpret these policies for their own benefit.

Challenges:

When asking about challenges integrating EGD objectives in MSP, most of the answers were related to the MSP process itself and its shortcomings. In order to facilitate the understanding, they have been aggregated into the typologies provided as examples in the methodology:

Issues related to the remit/mandate of MSP and dispersed responsibilities
It is a challenge itself to give the mandate to coordinate the planning of the sectors (to apply MSP) to the Ministry of the Ecological Transition and the Demographic Challenge, which have different competences on: biodiversity protection, MSP, MSFD and energy, but not on the rest of the sectors. This means that POEM do not regulate sectors that already have their regulations. This may lead to a lack of power to influence sectoral policies and strategies, and a low level of enforceability.
Limitations in the MSP process itself
Lack of long-term vision for MSP with measurable objectives. Lack of the definition of the methodology and process of evaluation of the POEM. POEM do not include restoration areas (at the moment, as this is something that will be addressed through the measure OEM3 regarding integration of Marine Green Infrastructure).
Contrasting policy objectives (at EU, national, local level)
It is not totally clear how the objectives of the different policies can be integrated among them (referring to the EGD). Reconciling different objectives might be difficult.

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Priorities regarding the different objectives of the EGD seem not to be clearly defined (or if they had, this has not been properly communicated). POEM identify and analyse conflicts between activities and uses at sea, but they do not propose specific actions on how to solve them.
Issues related to lack of data
Considering the complex administrative governance scheme in Spain, with different institutions generating and processing different kinds of data at different scales, in order to use the best available knowledge and data, there is a need to establish a coordinated sharing mechanism. There is a limitation in data and information in the marine environment (cumulative impacts, ecosystem resilience, ecosystem services, habitats and species distribution, etc.).
Issues related to uncertainty
The unclear definition of some premises and principles may provoke that these are not fully applied (precautionary principle, ecosystem-based approach, stakeholder engagement).
Societal needs
The MSP participatory process should be improved. Managing sectors' expectations is challenging. Sometimes it is difficult to establish good communication with some sectors. It is complex to make them understand the objectives of the POEM, the information used, and the decisions taken. To make sectors understand that are objectives (those of the EGD) that need to be achieved and which affect them (i.e. 1-3 GW produced by OWF or the 30% of MPAs) is challenging.

Table 14. Challenges for integrating EGD objectives in MSP identified in Spain

Although some of the responses received relate to the challenges of the EGD, most have focused on the limitations of the MSP process and the development of the POEM. So, either is too soon to know, or the EGD does not impose new challenges besides those already present in the process of MSP itself.

"From challenges sometimes opportunities also arise, and this is the case of the development of infoMAR" (public geoportal providing all available information used and generated in the Marine Strategies and POEM processes) (MSP Competent authority).

Recommendations

Following the same exercise as for the challenges', the interviewees answers regarding

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recommendations have been classified by topic:

Legal framework
Policies take a long time to get changed. Besides the policies (laws and legal texts), it is important to try to improve the process itself (within the legal context). For instance, in the following cycle of MSP there are changes that need to be carried out in sectoral planning. Of course, this will depend on the ability of the MSP Competent Authority (CA) to negotiate with other Ministries with competences at-sea the needed changes in sectoral policies. It is really important to improve coordination with the MSFD and other sectoral policies' implementation with MSP.
MSP process
Cyclical planning sometimes needs a bit of running-in too, however, it is important the application of the precautionary principle. There is a need to evaluate the efficiency in the application of the principles defined in the legislation and the POEM, such as the ecosystem-based approach (EBA), precautionary principle, sustainability, identifying external criteria (EU, EGD), etc., and, if needed, define them and their application properly, but not to unbalance them, give them the correct priority. With regards to biodiversity conservation, first, the best knowledge should be consulted to identify the most valuable areas for biodiversity conservation and, from there, to start analysing compatibilities with uses. Accordingly, to clarify what are the priority objectives (i.e. biodiversity conservation vs OWF development). To consider that technology will advance and where now it is not feasible to install OWF, in the near future it could be (and maybe that is not such a valuable area for biodiversity conservation). Firstly, the objective of the 30% of protected areas should be accomplished and then, OWF could be developed. It is important not to rush.
Integration of EGD
If the POEM cannot enforce certain actions, it should be done the other way around, it should serve so that the sectoral policies are modified to integrate the EGD objectives. MSP should be the tool to integrate objectives that are difficult to reconcile (as may be the ones addressed by the EGD in some cases). To define measurable objectives aligned with the EGD and analyse which sectoral strategies should be modified accordingly. In order to evaluate the EGD objectives through the POEM, quantitative indicators should be designed aligned to the different EGD objectives.
Participation
To ensure good communication with all sectors, to make sure that they understand what the objectives of the plan are, what has been the information used, what are the decisions taken, how they have been taken and how this will affect them.

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Table 15. Recommendations for integrating EGD objectives in MSP identified in Spain

"It is not about having a stricter Directive but to enforce what the Directive already says [...] to improve its transposition (and implementation)" (Óscar Esparza, Marine Protected Areas Officer at WWF Spain).

"To ensure compliance with the MSP legislation, applying the ecosystem approach and the precautionary principle is needed" (Rafael Sardá, Senior Research Scientist in CSIC).

Regarding the need to improve coherence among policies at the European or the national level, there were different opinions from the interviewees. Although all interviewees agreed that this coherence could be improved, some argued that the EGD is unclear, mixed, unrealistic, contradictory and not clearly defined.

The EGD is an example of effort to align policies, however there are still some aspects that could be improved. For instance, the MSFD pre-dates the EGD and the MSPD, so it does not include any reference to them. The MSPD although speaks about EBA, does not make a clear link to Marine Strategies, in fact not all the countries have transposed MSPD under the environmental umbrella of MSFD. If these policies were more explicitly linked among them, every country would probably follow a similar path (MSP Competent authority).

In any case, it is important to consider that the plans have been approved recently and it should be waited in order to have results on all these aspects. This kind of planning that goes in cycles sometimes needs a bit of running-in.

I think the EGD answers the need to integrate certain sectoral policies [...] but what is needed is a clarification of what the objectives of these policies really mean. What GES means (beyond indicators)? what means "do not harm the environment"? and to clarify who makes the decisions [...] the problem is the implementation of the law, the law is clear (Rafael Sardá, Senior Research Scientist in CSIC).

As in the case of the challenges, most of the interviewees answered regarding the MSP process itself, rather than the integration of EGD objectives in it.

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The Green Deal component of the EU MSP Plans

Appendix 1 - Common framework to analyse the MSP plans

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Common framework to analyse the MSP plans

1 Context

The present document is prepared in the framework of Task 2.1 as it aims to inform the analysis of the MSP plans of the partner countries to be developed in the context of Task 2.2 of the MSP-GREEN project.

2 Objective

The present document presents a methodology to analyse the consideration of the European Green Deal (EGD) components in the national MSP plans of the **partner countries**. Application of a common analytical framework will allow comparability and integration of results across countries.

Before its full application, the methodology will be **tested on the German EEZ MSP plan** by the associated partner BSH.

This methodology considers the approach undertaken in the study "Assessment of the relevance and effect of the Maritime Spatial Planning Directive in the context of the European Green Deal" (Wageningen Research, Deloitte & Ramboll, 2022). The basic elements of analysis considered by that study are useful to be capitalised in the context of MSP-GREEN. The fundamental research question of that study and some related sub-questions are relevant for MSP-GREEN as well: *how can the MSP Directive 2014/89/EU contribute to the achievement of the EU's objectives under the European Green Deal and related actions?* and

- *What are the interactions between the MSP Directive and the European Green Deal and related actions looking at the **MSP plans objectives**?*
- *What are the interactions between the MSP Directive and the European Green Deal and related actions looking at the **implementation of the MSP plans**?*
- *What actions can be taken to stimulate **synergetic relations between MSP plans and the European Green Deal**?*

The analysis provided through that study, although informative and relevant, has been limited to a general level, with identification of the mentions to EGD in the MSP plans and in literature, and some additional information, provided through interviews, regarding prospects for future integration of EGD in the plans still under preparation, or in the future.

Within the MSP-GREEN project a more in-depth analysis is needed in order to identify opportunities and gaps for MSP plans to concretely contribute to EDG and to provide practical recommendations to member states on how to strengthen this link.

With this objective, starting from a general analysis, similar to the one undertaken under the study cited above, the present methodology aims to gather additional details regarding visions/strategic documents, objectives, measures, as well as a spatial analysis of EGD related marine areas, as detailed below.

The methodology aims to incorporate some quantitative knowledge too, particularly in relation with the extension of areas dedicated to EGD related uses (e.g. offshore

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renewable energy production) and any quantitative objective that can be included in MSP plans (e.g. total energy production targeted from marine renewable sources, total extension of areas expected to be dedicated to sustainably managed fisheries).

It is worth noting that, with regard to the ecosystem-based approach, recognized as the overarching principle for MSP, this is very relevant also in terms of connections between EGD and MSP. Challenges and good practices of application of ecosystem-based approach to MSP have been/are extensively studied in many dedicated projects. For such a reason MSP-GREEN does not directly consider this aspect, which is however related to many of the elements identified in this methodology.

3 Methodology

The proposed methodology consists in a list of operative guidelines to be applied for MSP plans analysis.

The occurrence of EGD components is assessed based on a **list of EGD core elements** that have been identified in the main policy documents related with EGD:

- The European Green Deal. COM(2019) 640 final
- A new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future. COM(2021) 240 final
- An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future. COM(2020) 741 final.
- REPowerEU Plan. COM(2022) 230 final
- An European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy in accordance with the Paris Agreement (2019/2582(RSP))
- EU Biodiversity Strategy for 2030 - Bringing nature back into our lives. COM(2021) 380 final
- A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final.
- Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil". COM(2021) 400 final
- A new Circular Economy Action Plan for a cleaner and more competitive Europe. COM(2020) 98 final.
- Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030 COM/2021/236 final

The main marine relevant objectives and thematic areas have been identified from the above documents and a list of EGD core elements has been derived, articulated into three levels of detail. They are reported in **Table 1.**

The analysis to be undertaken in Task 2.2 will include the following three elements: desk analysis, interviews, integration and comparative analysis of results across countries.

3.1 Desk analysis

The analysis of MSP Plans is organised into two parts:

- Part I concerns with analysis of textual elements of the Plans, in relation to their different parts (vision, objectives, zoning measures);
- Part II considers quantitative data regarding zoning for some specific EGD related sea uses and it is implemented only in the countries where zoning and identification of uses per zone has been defined.

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3.1.1 Desk analysis: part I

Part I begins with a brief introduction (20 lines maximum) where the plan and the national regulatory context related to it are presented, the plans structure is described, and the links (if any) with other documents (e.g. MSP strategy) or MSP tools (such as MPA management plans, licensing) are highlighted. The structure of the plan is commented also in relation to the analysis provided by the Fact-sheets: e.g. if the plan does not have a vision, if the plan does not include measures/actions, etc.

After that, the analysis of MSP Plans is based on the compilation of a series of fact-sheets, aiming at summarising essential elements and allowing comparison across countries.

The following fact-sheets will be prepared:

- Fact-sheet 1: General features of MSP plans
- Fact-sheet 2: Operational elements
- Fact-sheet 3: EGD analysis – Policy context
- Fact-sheet 4: EGD analysis – Vision
- Fact-sheet 5: EGD analysis – Objectives
- Fact-sheet 6: EGD analysis – Measures
- Fact-sheet 7: EGD analysis - Fair and just transition
- Fact-sheet 8: EGD analysis - Cross-cutting elements: research and innovation and cross-border cooperation

Templates for the fact-sheets are provided here below.

Note to Fact-sheets compilation: the left-hand column can be used to insert information about the plan specificities: e.g. different terminology used, articulation or declination of that topic in the plan and any other information supporting the interpretation of the results described in the Fact-sheet. These comments can eventually refer to / echo the plan features described in the introduction.

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Fact-sheet 1: General features

Country	
Sea Basin(s)	
Number of MSP Plans developed by the country	
Titles of the Plan(s)	
Responsible authority	
Legal dimension of the Plan(s): e.g. legally binding/guiding, strategic, etc.	Please specify the legal dimension
Geographic scope of the Plan(s): e.g. terrestrial and marine, only marine, marine and the coastal terrestrial strip	Please include here a textual description of the geographic scope
Total marine area interested by the Plan(s) (in km^2)	
Map representing the geographic scope of the Plan(s)	
Starting date for Plan(s) preparation	
Date of adoption/enter into force	
Round of MSP (1^{st} cycle, 2^{nd} cycle), starting? (specify year)	
Additional relevant information on MSP process e.g. interim assessments, in-progress or foreseen anticipated revisions, etc.	

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Fact-sheet 2: Operational elements

How are the Plan(s) documents organised? Are the Plan(s) self-consistent or do they refer to other strategic documents?	Please provide a textual description. Please specify whether the Plan(s) refer(s) to other strategic documents.
Sectors and uses of the sea considered by the Plan(s) – See **Table 2**	
Does the Plan consider a multi-scalar approach[1]?	Yes/No. Please include here a textual description of how this aspect is considered. Provide examples, if the case. Provide figures or any graphical supporting element – in Annex – if the case.
Does the Plan include zoning of the sea space? How does the Plan distribute uses in the different zones? Is zoning prescriptive (i.e. exact directions or instructions are pr= "this should come here") and 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.	Yes/No. Please include here a textual description of how this aspect is considered. Provide examples, if the case. Provide figures or any graphical supporting element – in Annex – if the case.

[1] Based on the characteristics of the sea space under national jurisdiction national MSP authorities may decide to adopt a multi-scalar approach to MSP and prepare distinct plans for different marine areas. The multi-scalar approach includes a variety of situations: different areas can spatially overlap or not; different plans can be under the responsibility of the same or different authorities; and there can be a hierarchical relationship between plans. Additional details available here.

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Fact-sheet 3: EGD analysis – Policy context

Policy context This part of the analysis is aimed to identify the main EGD related policies/strategies the Plan is based on and that have been considered to define vision/ objectives/ zoning/ measures. Check whether reference is made in the Plan(s) to the main EGD related policy documents. **Describe findings**. Please indicate other relevant EU/International policies/strategies of relevance for the Plan(s), when linked to EGD objectives (including older versions of EU policy elements), as well as of national relevance, **Describe findings.**	The European Green Deal. COM(2019) 640 final Yes/No. A new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future. COM(2021) 240 final Yes/No. An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future. COM(2020) 741 final. Yes/No. REPowerEU Plan. COM(2022) 230 final Yes/No. An European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy in accordance with the Paris Agreement (2019/2582(RSP)) Yes/No. EU Biodiversity Strategy for 2030 - Bringing nature back into our lives. COM(2021) 380 final Yes/No. A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final. Yes/No. Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil". COM(2021) 400 final Yes/No. A new Circular Economy Action Plan for a cleaner and more competitive Europe. COM(2020) 98 final. Yes/No. Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030 COM/2021/236 final Yes/No.

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Fact-sheet 4: EGD analysis – Vision and/or strategic documents

Vision Check whether reference is made to the main EGD related topic areas in the vision or in any strategic document providing guidance to the Plan(s). **Describe findings.**	A. Climate change mitigation Yes/No. Description.
	B. Climate change adaptation Yes/No. Description.
	C. Sustainable food production Yes/No. Description.
	D. Biodiversity and ecosystem protection and restoration Yes/No. Description.
	E. Blue circular economy Yes/No. Description.
	F. Zero pollution Yes/No. Description.
	G. Fair and just transition Yes/No. Description.

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Fact-sheet 5: EGD analysis – Objectives

Objectives Check whether reference is made in the objectives to the main EGD related topic areas and their main articulation. **Describe findings.** In the case your Plan(s) identifies **different levels of objectives** (e.g. strategic, specific) you can undertake the analysis for each of the levels, if appropriate. Please specify **quantitative objectives** indicated in the Plan(S), e.g. with reference to energy production, aquaculture production, sea surface to be protected, etc. In the case the Plan(s) links up with **other policy areas** for specific topics please indicate this and describe findings in relation with the specific policy documents.	For all the elements, specify Yes/No and describe findings. A. Climate change mitigation A.1 Renewable energy production, storage and transportation A.2 Clean energy transition in maritime sectors A.3 Transformations in ports A.4 Blue carbon storage Quantitative objectives: Y/N. Describe findings.
	For all the elements, specify Yes/No and describe findings. B. Climate change adaptation B.1 Green infrastructures to enhance coastal resilience and/or to enhance marine connectivity B.2 Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes B.3 Anticipation of climate change-related effects Quantitative objectives: Y/N. Describe findings.
	For all the elements, specify Yes/No and describe findings. C. Sustainable food production C.1 Sustainable fisheries C.2 Sustainable aquaculture (both for fish and shellfish) C.3 Sustainable algae production Quantitative objectives: Y/N. Describe findings.
	For all the elements, specify Yes/No and describe findings. D. Biodiversity and ecosystem protection and restoration D.1 Elements to improve marine connectivity (e.g. among submarine canyons, reefs, etc.) and elements to achieve a coherent network of effective marine protected areas D.2 Restoring marine and coastal ecosystems Quantitative objectives: Y/N. Describe findings.
	For all the elements, specify Yes/No and describe findings. E. Blue circular economy E.1 Circular design E.2 Waste prevention

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	E.3 Reuse, repair, upgrade, recycle Quantitative objectives: Y/N. Describe findings.
	For all the elements, specify Yes/No and describe findings. F. Zero pollution F.1 Pollution prevention F.2 Pollution remediation Quantitative objectives: Y/N. Describe findings.
	For all the elements, specify Yes/No and describe findings. G. Fair and just transition[2] G.1 Stakeholder participation G.2 Representativeness of diversity of stakeholders at different levels G.3 Public access to data and plans Quantitative objectives: Y/N. Describe findings.
	Cross-cutting / Other EGD related aspects (if any) Quantitative objectives: Y/N. Describe findings.

[2] This component is further analysed in the dedicated Fact-sheet 7, while all the others are further analysed in Fact-sheet 6 (Measures)

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Fact-sheet 6: EGD analysis – Measures

Measures Check whether reference is made in the measures to the main EGD related topic areas and their main articulation. Refer to **Table 1 for a list of possible categories of measures**. **Describe findings** (list relevant measures by category). Additional elements can be added to the description when those indicated in Table 1 do not include the type of measures you need to indicate.	For all the elements, specify Yes/No and describe findings. A. Climate change mitigation A.1 Renewable energy production, storage and transportation *See Table 1 for a list of elements to be searched* A.2 Clean energy transition in maritime sectors *See Table 1 for a list of elements to be searched* A.3 Transformations in ports *See Table 1 for a list of elements to be searched* A.4 Blue carbon storage *See Table 1 for a list of elements to be searched*
	For all the elements, specify Yes/No and describe findings. B. Climate change adaptation B.1 Green infrastructures to enhance coastal resilience *See Table 1 for a list of elements to be searched* B.2 Protection of climate-sensitive marine and coastal biodiversity, ecosystems and landscapes *See Table 1 for a list of elements to be searched* B.3 Anticipation of climate change-related effects *See Table 1 for a list of elements to be searched*
	For all the elements, specify Yes/No and describe findings. C. Sustainable food production C.1 Sustainable fisheries *See Table 1 for a list of elements to be searched* C.2 Sustainable aquaculture *See Table 1 for a list of elements to be searched* C.3 Sustainable algae production

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	See Table 1 for a list of elements to be searched
	For all the elements, specify Yes/No and describe findings. D. Biodiversity and ecosystem protection and restoration D.1 A coherent network of marine protected areas *See Table 1 for a list of elements to be searched* D.2 Restoring marine and coastal ecosystems *See Table 1 for a list of elements to be searched*
	For all the elements, specify Yes/No and describe findings. E. Blue circular economy E.1 Circular design *See Table 1 for a list of elements to be searched* E.2 Waste prevention *See Table 1 for a list of elements to be searched* E.3 Reuse, repair, upgrade, recycle *See Table 1 for a list of elements to be searched*
	For all the elements, specify Yes/No and describe findings. F. Zero pollution F.1 Pollution prevention *See Table 1 for a list of elements to be searched* F.2 Pollution remediation *See Table 1 for a list of elements to be searched*

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	Cross-cutting / Other EGD related aspects (if any) Quantitative objectives: Y/N. Describe findings.

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The analysis will also check if the principle of ensuring a fair and inclusive transition to sustainable blue economy is considered in MSP plans and whether and how measures pay attention to the regions, industries and workers who will face the greatest challenges in the EGD transition.

This analysis will be undertaken at desk level too, based on project partner knowledge. Document consultation will not be limited to plan documents. External documents, supporting documents, SEAs, communication documents, websites will be also considered as sources of information. In case some aspects cannot be answered, partners will consider the possibility to ask experts/stakeholders on very specific matters. The fact sheet to support this part of the analysis is reported here below.

Fact-sheet 7: EGD analysis – Fair and just transition

Just and inclusive transition: "No one left behind" - Stakeholder participation Describe findings	**WHO** • Who were considered as stakeholders in MSP and how were they identified? • What type of reasoning was behind the identification of participants? For example, proximity, urgency, power, and/or legitimacy? • Were the characteristics of the stakeholders (e.g., gender, class, ethnicity, age and/or disability) considered in stakeholder participations? Were disadvantaged groups identified and/or considered? • Were local participatory initiatives (such as community-led local development groups, fisheries local action groups etc.) arranged/considered? • Was particular attention paid to the role of/support the EU's outermost regions (where pertinent) • Was sufficient sectoral/group representation of stakeholders ensured in the planning process? • Does the Plan promote gender balance in maritime professions? • Does the Plan promote synergies between economic sectors?
	WHEN • In what phase or which phases of the MSP process was stakeholder involvement organised? • Was it made clear how and at what stages stakeholders can participate in the planning process? Was there an interaction plan?
	HOW • How was local and expert knowledge integrated? How were citizen science perspectives considered? • What methods were used in participation (workshops, scenarios, matrixes of use and interactions etc.)? Was the communication different with different actors? • What was the capacity of participants to influence planning decisions?

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Just and inclusive transition - "Leave no place behind" - Spatial aspects of the planning process	• How was the representation of all areas ensured in the participatory planning process? • Does the plan cover all areas equally? For example, is the data equally representative of all areas within the plan? • Are areas most likely to be affected from changes identified? Are mitigation measures considered for these areas?
Accessibility and impacts of the plan	• How does the plan consider accessibility requirements? As described by the Accessibility directive (2019/882) • How is it ensured that relevant stakeholders, authorities, and the public have access to the plan and to the data the plan was based on? • Were the socio-economic implications of the Plan(s) assessed and considered in the final plan? Is just distribution of benefits and costs considered in the plan? Including different environmental, economic, and social gains and losses and how do they affect different communities, groups, or sectors? • How were the impacts of the planning decisions for different groups/communities evaluated?

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In addition, some relevant, cross-cutting elements, with importance in view of EGD implementation are also collected, within the fact sheet included here below.

Fact-sheet 8: EGD analysis – Cross-cutting elements

Research and innovation Describe findings	• Does the Plan(s) foresee objectives and/or measures to increase the availability of reliable, high-quality ocean and maritime data. Do the Plan(s) include objectives and/or measures for their harmonisation and sharing? • Does the Plan(s) foresee objectives and/or measures to support research on the marine environment? • Does the Plan(s) foresee objectives and/or measures to support research and technological innovation in maritime sectors?
Education and training	• Does the Plan(s) foresee objectives and/or measures to address education, skill development and training in maritime professions?
Cross-border cooperation in MSP Describe findings Please consider the following scales: Cooperation with neighbouring countries Sea-basin and/or macro-regional cooperation Regional coordination and cooperation with 3rd countries	Topic: • Was cooperation undertaken before/during/after the plan preparation (e.g. data sharing, common approaches, common tools) • Is cooperation on specific actions/sectors (e,g. pollution prevention, biodiversity protection, fishery management, energy transition) foreseen by the Plan(s)

3.1.2 Desk analysis: part II

In part II information and quantitative data regarding zoning for some specific EGD related sea uses are collected. The following Fact-sheet is compiled.

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Fact-sheet 9: EGD analysis – Zoning

Zoning Provide information on identification of areas with EGD features. Describe features of these areas in terms of management of uses and measures in place. Provide total extension in km^2 of each typology in the entire Plan spatial domain and the relative percentage.	1. Offshore renewable energy Yes/No Description Total extension [km^2] % with respect to the total Plan area How much energy those areas are supposed to produce (if available in the plans)
	2. Aquaculture managed areas Yes/No Description Total extension [km^2] % with respect to the total Plan area
	3. Areas with fishery management measures (e.g. , fishery restricted areas, no trawling areas, areas dedicated to small-scale fisheries or artisanal fisheries, etc.) Yes/No Description Total extension [km^2] % with respect to the total Plan area
	4. Areas dedicated to Green Infrastructures and Nature-Based Solutions to cope with climate-change impacts, including Blue carbon areas Yes/No Description Total extension [km^2] % with respect to the total Plan area
	5. Areas identified to future use needs in view of climate change Yes/No Description Total extension [km^2] % with respect to the total Plan area
	6. Marine Protected Areas strictly protected (10%) Yes/No Description Total extension [km^2] % with respect to the total Plan area

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	7. Non-strictly protected areas (N2K, OECM – including candidate areas) (30%) Yes/No Description Total extension [km^2] % with respect to the total Plan area
	8. Areas identified for restoration Yes/No Description Total extension [km^2] % with respect to the total Plan area
	9. Multi-use. Areas allocated for multiple use of the sea with different activities to be run in close synergy Yes/No Description Total extension [km^2] % with respect to the total Plan area
	10. Areas identified as Generic Yes/No Description: please mention if these areas are not assigned to specific uses in order to (1) left space free to allow for future development of new or existing uses, (2) left space free for existing uses to move in relation to climate change, (3) left space free to allow planning by future generations; because of (4) lack of knowledge, (5) lack of strategic objectives for the area, (6) other reasons - to be explained. Total extension [km^2] % with respect to the total Plan area
	11. Other typologies

3.2 Interviews

Interviews are aimed at understanding what are the **challenges and difficulties** encountered in embedding EGD elements in MSP plans. Interviewees (**between 3 and 5 per country**) will be identified, based on **country specific criteria**, among planners, competent authorities, other authorities involved and main stakeholders involved in the planning process. Interviews aim to complement project partners knowledge and experience about the country's MSP process.

Consenting forms will be prepared and collected from interviewees.

Interactions with interviewees are organised in two steps.

Step 1. Semi-structured interviews will be conducted, considering the following tentative list of themes (see **Table 3** for a tentative list of questions):

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1. The EU Green Deal: **knowledge about this policy framework, its main objectives and the policy initiatives related to it**(e.g. how would you define EGD? as a strategic policy framework? other?).
2. **Challenges** related with the inclusion of EGD and related policy elements within the MSP plan (both looking backward to the plan preparation and forward to recent updates)
    - Contrasting economic interest among sectors
    - Contrasts between maritime sector development and nature protection and between maritime sector development and landscape and underwater cultural heritage protection
    - Challenges related with limitation of space availability
    - Difficulties in facing the transitions by the maritime sectors (lack of technology, finance, know-how, etc.)
    - Difficulties in facing the transitions by the weakest stakeholders (e.g. fishermen, local communities)
    - Contrasting policy objectives (at EU, national, local level) making difficult or precluding EDG elements incorporation in MSP
    - Issues related to lack of data and knowledge
    - Issues related to uncertainty (e.g. lack of exact forecasts regarding impacts of climate change, uncertainty on economic developments)
    - Issues related to the remit/mandate of MSP and dispersed responsibilities
    - Limitations in the MSP process itself (i.e. due to lack of time, human and economic resources, etc.)
    - Lack of (stakeholder) awareness and understanding of the EGD (and its implications)
3. **Suggestions on how to overcome the challenges**: e.g. during implementation, with plan revision, with improvements of policy coherence (at EU or national level)

With reference to point n. 2 above, a list of challenges will be compiled from each interview by project partners. Then all lists will be integrated and a **catalogue of challenges identified at country level** will be prepared.

Step 2. Interviewees will be contacted again (via email or with a second very brief interview) and invited to **score the full catalogue** (by thinking of their own country or sea basin) in order to obtain a prioritisation of the challenges/difficulties/gaps. Interviewees will be invited to **prioritise the elements twice**: (I) the most challenging element; (II) the most urgent to be resolved.

From the interviews **the following documents will be elaborated**:

- a note (2-3) pages with summary of findings at country level, with regard to points 1, 2 and 3 of the interview
- a table with the list of challenges prioritised at country level (see template below).

Challenge	Priority as level of difficulty	Priority as urgency to be overcome

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Challenge title	Position in the list e.g. 3rd	Position in the list e.g. 1st

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SUPPORTING TABLES

Table 1 – Core EGD elements derived from EGD and related policies: a MSP-EGD TAXONOMY

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"

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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

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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

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E.2.1	Upgrade, strengthening of waste collection systems in ports
E.2.2	Upgrade, strengthening of waste collection systems in coastal touristic sites
E.2.3	Collecting, transhipping and disposing of waste from ships and other port industries
E.3	Re-use, repair, upgrade, recycle
E.3.1	Development of vessel repairing, refitting, dismantling services in ports
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

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Table 2 – Suggested wording for sectors and sea uses

Fishing
Aquaculture (bofh 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)
Others: to be specified

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List of questions for interviews

The following questions are provided for guidance purposes. They will be adapted to the country specificities and to the interviewees.

Questions 1: Knowledge about the EU Green Deal

1.1. Are you aware of the EU Green Deal, its main objectives and the policy initiatives related to it? Particularly, do you know about the "Communication on Sustainable Blue Economy"[3]?

1.2. Do you know about its main objectives?

1.3. Do you know about the policy streams related to it? Can you give examples?

Suggested policies to mention during the interview:

- The European Green Deal. COM(2019) 640 final
- A new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future. COM(2021) 240 final
- An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future. COM(2020) 741 final.
- REPowerEU Plan. COM(2022) 230 final
- An European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy in accordance with the Paris Agreement (2019/2582(RSP))
- EU Biodiversity Strategy for 2030 - Bringing nature back into our lives. COM(2021) 380 final
- A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final.
- Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil". COM(2021) 400 final
- A new Circular Economy Action Plan for a cleaner and more competitive Europe. COM(2020) 98 final.
- Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030 COM/2021/236 final

In your view, what are the main implications of the EGD for MSP / MSP plans?

In your view, how does the maritime spatial plan consider the objectives of the Green Deal?

Questions 2. Challenges related to the inclusion of EGD and related policy elements with the MSP plan

What kind of challenges can you see in including Green Deal elements in MSP plans (both looking backward to the plan preparation and forward to recent update)?

The following points can be used as prompts but the interviewer should wait for the interviewee to suggest their own challenges first. Running through this as a kind of checklist afterwards would also be good to make sure we cover everything.

A list of possible challenges is indicated here below, for example:

[3] A new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future. COM(2021) 240 final

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- Contrasts between maritime sector development and nature protection and between maritime sector development and landscape and UCH protection
- Challenges related with limitation of space availability
- Societal needs
- Contrasting policy objectives (at EU, national, local level)
- Issues related to lack of data
- Issues related to uncertainty (e.g. lack of exact forecasts regarding impact of climate change, uncertainty on economic developments)
- Issues related to the remit/mandate of MSP and dispersed responsibilities
- Limitations in the MSP process itself (i.e. due to lack of time, human and economic resources, etc,)

Questions 3: Suggestions on how to facilitate inclusion of Green Deal elements in MSP plans preparation, implementation and revision

Looking back at the most recent planning process, what would you do differently/what would you recommend planners should do to include the EGD or elements of it in the preparation/revision of a plan? How MSP Authorities and/or other authorities involved could ease incorporation of EU Green Deal elements in MSP plan IMPLEMENTATION?

How MSP Authorities and/or planners could ease incorporation of EU Green Deal elements in MSP plans ASSESSMENT AND REVISION?

Can you think of any measures of success for including EU GD elements in MSP plans? How do we know we've done a good job?

Do you see a need to better align the EU policies in order to facilitate MSP to become an enabler of the EU Green Deal?

Which EU policies or legal acts should be improved (sectoral EU strategies, MSP Directive, Marine Strategy Framework Directive)? What are the main issues to improve from your perspective?

Do you see a need to improve your country's national policies in order to facilitate MSP to become an enabler of the EU Green Deal?

Which national policies could be improved to facilitate this process? The MSP one? Other policies? Which ones? How?

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DELIVERABLE N°2.1.

The Green Deal component of the EU MSP Plans

Appendix 2 - Workshop on exchanging results from analysis of the Green Deal component of MSP plans – Workshop report

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Workshop on exchanging results from analysis of the Green Deal component of MSP plans – Workshop report

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Workshop on exchanging results from analysis of the Green Deal component of MSP plans – Workshop report

1. Introduction

This workshop report presents the key observations from the *MS6 Workshop on exchanging results from analysis of the Green Deal component of MSP plans* and describes the methodological approach used. The workshop was organized in Turku, Finland from 19th to 20th of June 2023. 24 participants from seven countries and 11 different project partner organizations and from the Finnish Ministry of Environment attended the event. The attending project organizations were CORILA, CNR-ISMAR, IUAV, CEREMA, IFEMER, UBO, IEO (CSIC), MoEPRD, FI RCSW, BSH and CCMS.

The aim of the workshop was to exchange results between partner countries from the work done during the spring of 2023 in *task 2.2 Analysis of the Green Deal component of MSP plans.* In addition to the desk analysis of the existing MSP plans of the countries and how they took into consideration the European Green Deal (EGD) and its objectives, the partner organizations had interviewed MSP related actors from their countries to provide further detail on the MSP process and challenges in making MSP the marine enabler of the EGD. To structure the analysis work, project partners defined a common methodological framework (see Appendix 1 to D2.1) where seven thematic categories from the EGD that are relevant for MSP are identified. The themes are: climate change mitigation, climate change adaptation, sustainable seafood production, biodiversity and ecosystem protection and restoration, blue circular economy, zero pollution, and fair and just transition.

The thematic categories were also used to structure the work during the workshop. During the meeting, three interconnected workshop activities were organized. They are described in more detail in chapter 2.

The sharing of experiences and knowledge and the structured discussions and group work held during the workshop supported the summary analysis of the results from all partner countries and provided direct input to the deliverable 2.1 report. This workshop report is included as an Appendix to deliverable *n°2.1 The Green Deal component of the EU MSP Plans* of the MSP-GREEN project.

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2. Methodology

2.1 From country level key findings to cross-cutting observations

The work started with the presentation of the key findings from the analysis of the national MSP plans of each of the seven partner countries. The presentations followed a Pecha Kucha format, where the presenters have 6 minutes and 40 seconds of time to present their work with the help of slides containing only pictures, photos, or graphics (Lulut 2016). The format was modified to give each presenter seven minutes of time to highlight key issues using a slide set consisting of predominantly visual imagery. The goal was to guide the presenters in organizing their presentations in a way that they are easy to follow, and the main message of each slide is easy to capture by the audience. Content wise the aim was to give all the participants an overview of how MSP and the EGD are connected in the different countries.

After the presentations each of the participants wrote down three observations, that preferably were relevant for more than one country, that caught their attention. These observations were then shared in smaller working groups and discussed; finally, the highlights of the group work were shared to all the participants for further discussion. The aim was to form the basis for a productive workshop session on the second day by guiding the participants into thinking about the differences and commonalities between countries and raise informal discussion during the rest of the day.

The first part of the workshop worked nicely as a trust building exercise by familiarizing all the participants not only with each other but also with the context that they are working in. Spending the first day in an informal setting on an excursion to the island of Seili aimed to create an inspired and creative atmosphere for the rest of the workshop. In addition, the excursion placed the participants in the middle of the Archipelago Sea and through this on-site visit the participants were better able to contextualise a part of the environment where MSP is done in Finland and reflect on the importance of context for MSP. The globally unique Archipelago Sea with its more than 41 000 islands is, among other things, a hotspot for biodiversity, maritime industry, maritime cultural heritage, and recreation. At the same time the sea is burdened by eutrophication. MSP needs to take all these issues into consideration.

2.2 Learning café on thematic categories of maritime European Green Deal

The second workshop session applied a world café approach (Brown & Isaacs, 2005). World café is a simple and effective format of discussing complex topics by dividing larger groups of participants into smaller groups, in this case 3 to 4 participants. These groups or individual members of the groups will then circulate among thematic tables. It is a flexible method, which can be modified to fit the purpose at hand. In this workshop, the participants from the hosting organization worked as facilitators for the discussion and stayed at the same table for the whole session while the groups moved from table to table.

The goal was to discuss the seven thematic EGD categories based on the observations from the analysis from each of the partner countries and personal experiences as

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experts in MSP. The participants were instructed to think about how the categories are present in their MSP plans and what kind of success stories and gaps can be identified. To better understand why and how certain themes were or were not considered in the different countries, participants were asked to describe how MSP and related processes are organized in their countries and how this affects the thematic categories.

In each of the tables, the partners used sticky notes to write down the success stories and possible gaps. Each group started at one table, where it spent 30 minutes. After this the groups spent 20 minutes in each of the following tables. The facilitator briefly filled the next group in on what had been discussed so far. This was followed by discussion that aimed to complement the topics already discussed and to add new missing topics. After circling all the tables, the groups gathered in their starting tables to identify key observations from the discussions, which were then presented to the whole group.

For practical reasons, the seven thematic categories were regrouped into five tables: (1) climate change mitigation and blue circular economy, (2) biodiversity and ecosystem protection and restoration and climate change adaptation, (3) sustainable seafood production, (4) zero pollution, and (5) fair and just transition. In two tables, two thematic categories were combined based on the likely interconnectedness of the topics.

2.3 Map exercise to understand marine and coastal systems

In the third activity, participants were divided into country groups to discuss spatial aspects of the EGD objectives using a non-space specific 3D landscape drawing, i.e., a diagram (figure 1) that represented sections of marine environment from coastal waters to open sea including the land-sea interface. Using colour-coded sticky-notes the countries discussed the different thematic EGD categories and the more specific subcategories within them (see D2.1 Appendix 2 for full list of the subcategories). The main task was to: 1) identify how different EGD related activities are located on marine and coastal areas of each country and mark them on the map with a sticky-note. Thereafter, 2) the interlinkages between different activities were drawn on the map. Country groups were encouraged to add other relevant information too, such as related stakeholder groups. After the map exercise, each country presented their main results to the whole group for open discussion.

The aim of the 3D map work was to develop more systematic thinking through an understanding of the socio-ecological context of different marine activities, with a particular focus on land-sea interactions. According to the social-ecological systems (SES) approach, all individuals, communities, and societies operate in social systems that are embedded in the biosphere and ecological systems; thus, humans all exist within SES. Current research indicates that the interwoven, changing, and complex nature of the marine social-ecological systems needs to be better appreciated to provide potential sustainable pathways (Stenseth et al. 2020).

In the first round of Finnish MSP, the SES approach has been recognized as a tool with which the dynamic role of local actors, systems thinking, and co-creation of shared knowledge has been emphasized. Furthermore, it proved to be a successful approach to implement the intentions of the MPS Directive, including the Ecosystem-based

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Approach and Land-Sea Interactions (Lähde et al. 2023). Accordingly, the aim of the map exercise and implementation of SES approach was to encourage a joint reflection on how MSP should consider parallel processes and activities in the marine areas and promote their coordination to contribute to the EGD objectives.

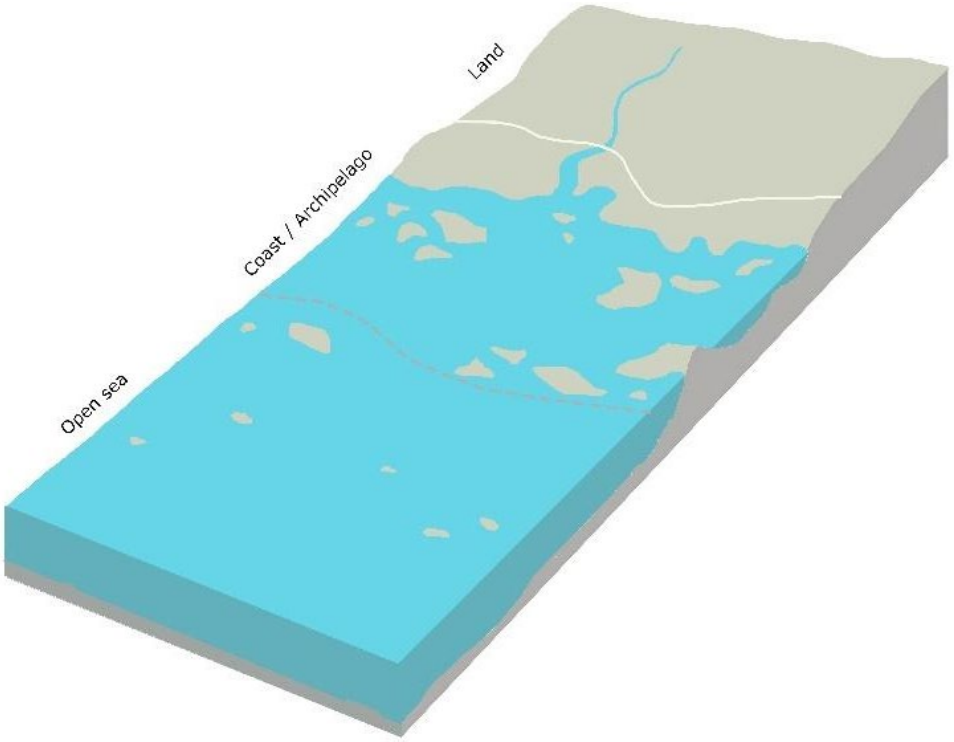

Figure 1 - 3D landscape drawing used in the workshop.

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3. Results from the workshop

3.1 Results from country level analysis and comparison workshop

The presentations of the country level analysis showed similarities and differences in the ways that the EGD themes are considered in the national MSP plans. The planning context, type of the plan (binding/non-binding, strategic, zoning, etc.), spatial coverage of the plan and the mandate of MSP vary from country to country and affect the way EGD themes are considered.

From the thematic EGD categories climate change mitigation (mostly offshore wind energy production), biodiversity and ecosystem protection and restoration and sustainable sea-food production are most evidently present in the MSP plans of the participating countries. While there are differences in the ways that these themes are covered, common to all the countries is a strong pressure for offshore wind energy development and the idea that MSP should be enabling it. The rest of the categories (blue circular economy, zero pollution and climate change adaptation) are considered less often and/or extensively. Some noted that these topics are under the responsibility of other authorities, while MSP is more in a supportive role. Stakeholder participation is an important part of all the plans, but it remains unclear what a fair and just transition specifically means for MSP.

Some key points from the country presentations are presented below.

Bulgaria: Bulgarian MSP plan is strategic and non-binding and was approved on May 11, 2023. Its preparation started in 2019 when EGD was published, and it was reflected in *Specific objective 2.1. Coordination of sectoral policies in support of the Green Deal*. The Plan does not envisage designation of new or extended MPAs, as it does not have the remit to do so, but it will reflect new areas designated by the Ministry of Environment and Water. No specific measures are provided to offshore renewable energy, but the MSP plan refers to renewable energy as a key field for development. No future areas are preserved for specific species or sectors due to climate change (e.g., fisheries and aquaculture). The Plan supports MPAs coherence, but without specific objectives for improving marine connectivity or for blue corridors. Sustainable sea-food production and stakeholder participation are widely considered, however blue circular economy, zero pollution and climate change adaptation need to be considered more thoroughly in the future. All interviewees highlighted the importance of integrating EGD objectives in the MSP plan and still limitation of space availability, lack of data and operationalisation of the MSP plan as the key challenges.

Finland: Although the Finish MSP plan was mostly developed before the EGD, many of the EGD themes are central to the plan today. The plan is strategic and non-binding and spatially indicates existing significant and future potential areas for various marines uses, which affects how the plan can enable the EGD objectives. Climate change mitigation and biodiversity and ecosystem protection are considered through the identification of potential areas for offshore wind energy development and ecologically significant marine underwater areas. While sustainable seafood production and stakeholder participation are widely considered in the plan, blue circular economy, zero pollution and climate change adaptation need to be considered more thoroughly in the future. Finland has an extensive collection of valuable data that supports decision making in MSP. This being said, further knowledge on complex topics, such as the

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impacts of climate change and evaluation of the combined effects of multiple activities at sea on the marine environment, is required to make long-term sustainable decisions in MSP.

France: Four MSP documents (*Documents Stratégiques de Façades - DSF*) are available. Each of them is associated with a macro-planning unit called Façade. All MSP documents implement the 2017 National Strategy for the Sea and Coast (NSSC) at a sub-national level (*façade*). All four MSP documents are composed of strategic and operational parts. The strategic ones were published in 2019, before the publication of EGD. Each strategic part includes an indicative zoning exercise, known as "vocation maps", that assign priority sectors and functions to sub-planning units. The operational part of the plans consists of a monitoring mechanism and an action plan. The first were published in Autumn 2021 and the second in Spring 2022. French plans address all the key generic themes considered in MSP-GREEN although both the NSSC and the strategic documents were published before EGD. However, discrepancies exist across sub-thematic topics and from one façade to another. For instance, within sustainable seafood production, while sustainable fishing is included in all plans, mentions of sustainable algae farming and production remain limited. As France jointly implements the MSFD and the MSPD, the environmental pillar of plans (DSF) mostly consists of elements directly derived from the MSFD. A number of environmental objectives, such as generic considerations relating to MPAs or concepts like green marine infrastructure, are falling outside of the MSFD scope are therefore not included in the plans. The development of offshore renewable energy recently led to changes in the legal mandate and approach to MSP in France. The new generation of plans (DSF) will be expected to feature a precise zoning of future offshore wind farms. The revision process of French MSP plans is ongoing. The new NSSC is anticipated by Autumn 2023. Public consultation for offshore renewable energy and MSP should be held jointly at façade level from Autumn 2023 onwards.

Germany: The first German MSP for the EEZ of the Baltic Sea and North Sea came into force in 2009. The current plan (2021) was developed over a period of 2 years and uses planning principles and objectives (translating into priority and reservation areas) to balance spatial development. Although the EGD already existed, the current plan (with the exception of UNCLOS and the MSFD) mostly refers to national policy. Direct reference is made to some EGD topics (climate change mitigation, biodiversity, fisheries) and indirect reference to others (zero pollution), while some are not referred to at all (circular economy, aquaculture). This is because some topics (such as ports) are not relevant in an EEZ context; for others like the circular economy MSP has no remit, and still others (aquaculture) are not yet planned for in the EEZ. National renewable energy policy is the strongest driver of the plan and offshore wind the strongest sector. Nature conservation is also important in terms of area designations but less recognised than offshore wind; fishery is the weakest sector in the EEZ context. Just transition is mostly considered in the context of participation and the planning process but not by assessing the distributional effects of the plan. A key point is that the plan relies on other sectoral instruments for its implementation, which is where many of the measures are situated that allow EGD policy goals to be translated into practice.

Italy: Italy has developed three MSP draft plans (hereafter referred as "plans") made available for public consultation on September 15th, 2022. The vision of the Italian plans touches upon all the main topics of EGD. This results from the way they have been developed: by integrating and connecting the main strategic objectives from maritime sectors as well as from some transversal principles (nature, landscape and underwater

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cultural heritage protection and sustainable development). Similarly to the vision, the strategic objectives of the plans link very well to the EGD topics. This is also the result of the fact that the plans have been drafted recently and they have been able to integrate the most recent policy evolution. The plans include 42 strategic objectives, quantitative targets are not set for any of the sectors and activities, including those relevant for EGD. No reference to elements related to fair and just transition are included in these objectives. Italian plans include 71 measures of national level. The correspondence with the EGD element is very good because the measures directly descend from the objectives. Several measures do not specify plans' provisions but indicate actions to be undertaken to allow the identification of specific provisions. This is due to the fact that a number of knowledge, organizational and coordination gaps have been identified. According to Italian legislation, MSP plans are prepared by a Technical Committee, coordinated by the Competent Authority, and participated by other four ministries and the representatives of the 15 coastal regions. All these entities had the opportunity to actively collaborate since the beginning of the process by providing data and expressing their planning needs and priorities and decisions in terms of the contents of the plan. Some coastal regions undertook consultations with local stakeholders. In addition to the regions, superintendencies at local level were also involved. The main identified challenges related to EGD integration are: (i) operationalization of concrete measures to contribute to EGD, in addition to the strategic measures; (ii) lack of identification of areas for offshore renewable developments, (iii) lack of some data and assessment, e.g. about the distribution of small scale fisheries or the evaluation of the contribution of offshore renewable energy to the overall national energy budget; (iv) lack of stakeholder participation at local level and at the level of civil society; (v) limited spatial availability in some areas: EGD requires more and more space for new targets; (vi) limited integration of several climate change aspects into the plans, e.g. in terms of climate change impacts on sectors and nature conservation and identification of needed adaptation options and measures.

Latvia: The Latvian MSP covers Marine Inland Waters, Territorial Sea, and Exclusive Economic Zone (EEZ) Waters of the Republic of Latvia. The MSP of Latvia entered into force on 21st of May in 2019. It is binding for public authorities acting as decision-makers for permitting and licensing areas. The planning of the MSP is based on the MSP principles declared in the Spatial Development Planning Law, the EU MSP Directive (2014/89/EC). Although the EU Green Deal was launched in 2019, while Latvia's Maritime Plan has already been approved in 2019, it is considered that EGD objectives are incorporated in Latvian MSP (at least to some extent).

Long term vision of MSP: balanced and integrated use of the marine space, which promotes the continuation of the marine-related sectors, welfare of coastal inhabitants, as well as viable marine ecosystems. To promote the implementation of the long-term vision and strategic priorities, three strategic objectives have been set and six priorities as well (offshore renewable energy production, developed maritime sector and safe shipping, national defence, healthy marine environment and stable ecosystem, sustainable fisheries, sustainable tourism, and recreation).

In terms of other related main EGD policies/strategies, majority of them are considered to play a role in defining vision/objectives/zoning/measures in the Latvian MSP, except for specific considerations made to climate change adaptation, sustainable seafood provision (especially referring to aquaculture), circular economy and zero pollution. Whereas the interviews indicated that specifically cross-sectoral cooperation and defining specific relational mechanisms is necessary to foster EGD integration into the

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MSP, which also was a major point of discussion during the workshop.

Spain: The Spanish MSP plans (POEMs, for its initials in Spanish - *Planes de Ordenación del Espacio Marítimo*) are somewhat strategic, although they include zoning, and are binding by law. The plans include the definition of Priority Use Areas and High Potential Areas for different uses. The objectives of the POEMs are structured in one MSP general objective and 3 main groups of specific objectives: general-interest objectives, sectoral objectives, and multi-sector objectives). For these objectives, measures have been proposed to be applied during the first cycle of MSP. The development of the Spanish MSP plans started before the EGD approval, however some of the objectives of the EGD are considered in the measures and the zoning of the POEMs (such as the objective to protect 30% of the marine areas, climate change mitigation and adaptation, and sustainable aquaculture development). Regarding fair and just transition, although there have been consultations for the general public, the most involved actors pertained to competent authorities or specific sectors. Data has been made publicly available through a specific geoportal which includes MSP data, among other marine data. Regarding this, best available data comes from Marine Strategies and from the involvement of research and technical institutions in the process. There is a gap when it comes to the assessment of socioeconomic implications and the prospective analysis of the blue economy sectors in the POEMs but a measure to develop a study for this topic will be implemented in the first cycle of the process.

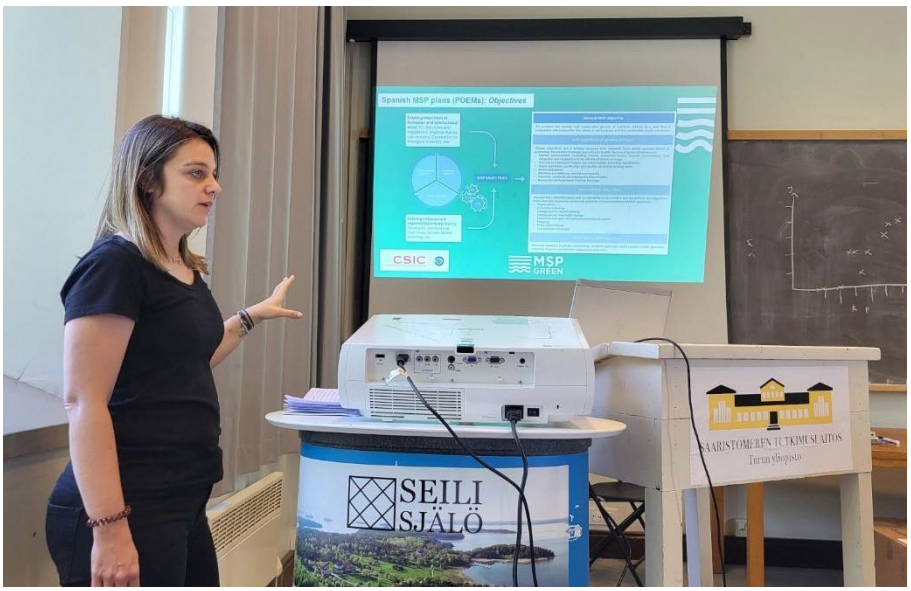

Figure 2 - Country level results presentation from Spain.

The workshop resulted in multiple cross-cutting observations from the key findings of the national analysis. The way that MSP is done in different countries and how this affects the way in which the plans can support the EGD was widely discussed. The peculiarities of the different countries need to be taken into consideration when looking at MSP plans as enablers of the EGD. The following text describes central observations from the summary session of the discussions. The thematic categories are covered in more detail in the chapter 3.2. of the workshop results.

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Figure 3 - Discussion on the observations from the country presentations.

The way that MSP plans are developed and the stage the plans are at in the different countries affects how they can work as enablers of the EGD. Whether the plan is binding or non-binding and whether the plans are strategic or include zoning of the sea space affect not only the planning process but also what can be achieved through the plan and its implementation. In the discussions the need for more binding plans to really guide the actions that support the EGD was raised. The scale of the plan defines at what detail different topics are considered and what kind of measures and objectives are set. The national objectives set for MSP to some extent define which organisations are involved and which themes are considered in the planning process. Additionally, the national context affects how MSP is linked to other processes such as the implementation of the MSFD. MSP cannot cover everything that is on-going at sea or the coast. Therefore, to reach the objectives set by the EGD, other strategies and policies are needed. MSP can work as an umbrella for all marine EGD themes and support discussions and stimulate processes related to them.

Many of the MSP plans were developed before the launch of the EGD. In the upcoming revisions planners need a new approach for including the EGD objectives into the plan. In addition, new short and long-term visions are required. For example, climate change is a global challenge faced by all EU countries. MSP needs actions in both climate change mitigation and adaptation, which consider both the short- and long-term changes to the marine environment and the marine sectors. In other words, climate change needs to be integrated into all thematic topics covered by MSP. Further consideration is also required on how the cumulative effects of climate change are approached in MSP.

The thematic categories identified from the EGD are considered to different extents in MSP. In the summary discussions the role of blue circular economy and zero in MSP was

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further reflected on: how should they be supported or applied through MSP and what are the connections to other strategies and policies. The role of MSP as a tool to stimulate discussion can enable the consideration of these themes as a part of the MSP process even though the main responsibility for their advancement is elsewhere. The groups also discussed the fair and just transition: what does it mean for MSP and how to support it in practice? There is a need to make MSP more accessible and increase the public engagement and sense of ownership of the MSP process for all stakeholders and the public.

As the sea areas are crowded with users, availability of space is a challenge, due to which it is difficult to identify space for all the activities that support the EGD objectives. Multi-use of the sea space is crucial, and planning needs to take it into consideration. At the same time, supporting and implementing multi-use in practice is a new topic where there is an ongoing active search for suitable solutions. Also, identifying the optimal locations for certain actions (also related to EGD objectives) can be challenging due to lack of knowledge or data or conflicts with other uses of the sea.

The discussion recognised that a lot has been achieved in terms of data availability and operationalisation of tools. However, there are still related issues to be solved for MSP, also from the perspective of enabling the EGD. A strive towards common tools on the EU level should be supported. Further understanding is required on how to collect and gain access to data and at the same time, on how to use the data and what type of questions does MSP need to answer with the data. Data harmonization and sharing across national borders also need to be considered. In other words, more knowledge and understanding on how data can be used to enable the EGD in MSP is required.

All the factors described above will guide the implementation of the plan and therefore affect the impact of the plan on achieving the EGD objectives. The crucial step is to go from planning to operational implementation: MSP needs to take into consideration what will happen once the plan is ready. More concrete indications on how the planned objectives and measures will turn into concrete actions that support the EGD are needed.

3.2 Main observations from the thematic categories of the maritime European Green Deal

The second workshop session on the thematic categories of maritime European Green Deal identified both similarities and differences between the participating countries. While some of the thematic categories are strongly present, others are considered less thoroughly. The MSP plans are often connected to other national policies or strategies related to the EGD themes. The rest of this chapter covers each of the seven thematic categories and the main points from each of the thematic discussions individually.

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Figure 4 Group working on sustainable seafood production.

Zero pollution

The zero pollution group discussion started from a generally shared view that the theme had received relatively little attention in MSP plans across the participating countries. Some mentions of reducing pollution and recommendations on avoiding, for example, dredging or underwater noise pollution in different sectors do exist in the plans. However, there are mostly no specific measures or objectives directed at pollution prevention. Currently, for example, addressing soil dumping is widely lacking in MSP plans. The lack of extensive consideration was seen as a reflection of the fact that zero pollution is not a central target of MSP and is instead considered in other frameworks.

The connections of MSP to the Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD) were seen as crucial for the zero pollution goal. The participants considered the WFD and MSFD as the main frameworks to tackle this challenge, although other relevant national policies were also identified. It was noted that cooperation among the directives enhances synergies in the marine planning and management while minimising the risk of redoing work already done and MSP putting in place actions already considered elsewhere. For instance, the fight against contamination already exists in other relevant frameworks, such as HELCOM and the Barcelona Convention, which opens the door for considering these dimensions more widely.

Through the spatial operation mechanism of MSP, the focus could be steered towards, for example, spatial hotspots of marine traffic and other maritime sectors. MSP has a position where it can also provide recommendations for sectors. Ports and port management were brought up as a major actor in fighting pollution. The opportunities of collecting litter, offering waste management services for ships, and organizing initiatives around the zero pollution issue in general can be promoted in port hub areas. As a rule, ports are out of the scope of MSP, which means there is a need for engaging port authorities in these efforts.

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The group also discussed the many forms of pollution at sea. There is a need for better defining what the fight against pollution in fact entails for MSP. For example, noise, litter, wastewater, air pollution and eutrophication are all sources of pollution that require their own specific considerations. Another example is offshore wind energy production, which is likely to help in reducing air pollution, but at the same time will produce underwater noise pollution to the marine environment. Additionally, the maintenance of the turbines requires chemical treatments adding to the pollution load at sea. Pollution issues are transboundary and cross-sectoral. Cooperation over sectoral and international boundaries need to be considered in MSP to achieve zero pollution.

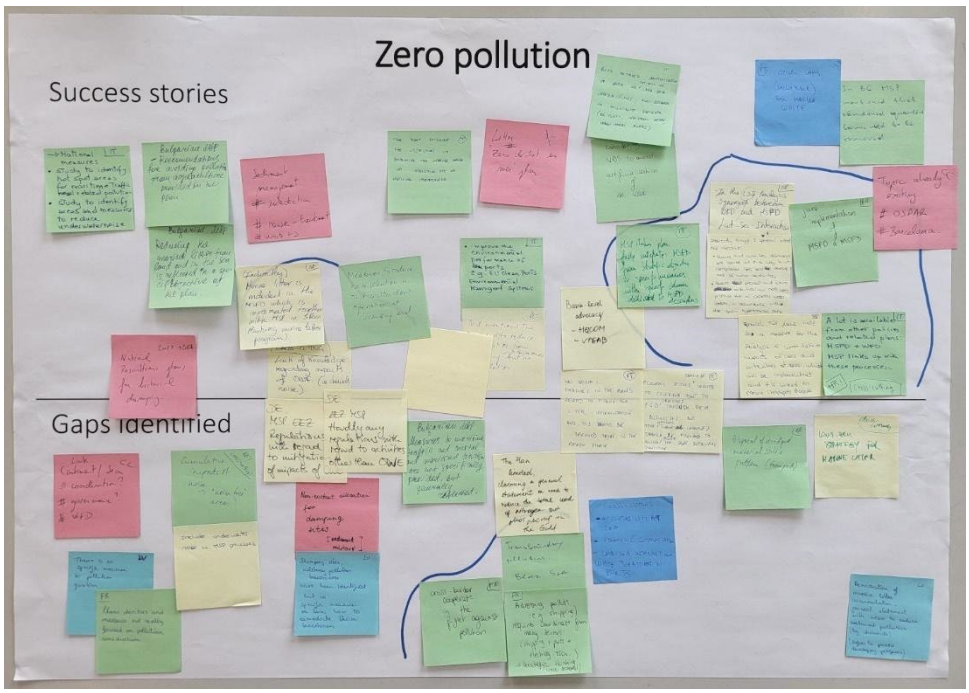

Figure 5 - Results from the Zero pollution theme.

Climate change mitigation

In the climate change mitigation discussion, offshore wind energy was a central topic. The ways that areas for wind energy are identified varied between the participating countries: some identify potential or priority areas for offshore wind energy production, others designated areas for energy production, and some included no spatial demarcation due to lack of data, for example. Some participants saw the approaches used for the identification of suitable areas to be something that should be shared as best practices. The distribution of energy from the production sites at sea to land was less considered in the plans; this issue raised discussion on the linkage of offshore wind energy to ports and shipyards and on the cables transmitting the energy to land.

The discussion noted that there is currently strong societal and political pressure to promote the green energy transition at sea. Some participants noted that their plans identify targets for offshore wind development while others do not. This discussion led to further consideration on the need for alignment of EU countries to meet the decarbonization and offshore wind energy production objectives.

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As there is a lack of space for new activities, the multi-use of sea space and coastal areas was identified as a relevant issue for offshore wind energy. Some plans identify multi-use as an overarching principle for all MSP processes, others integrate the principles of multi-use to all energy production and in some cases the principles of multi-use are just starting to be considered in MSP. The participants saw the inclusion of all stakeholders into the discussions on multi-use as an important aspect in ensuring a fair and just transition to sustainable energy production. Especially the interaction with and the consideration of the needs of the fisheries sectors was highlighted.

Outside of energy production, decarbonization of other maritime sectors, such as shipping, ports and fisheries, and the promotion of blue carbon sinks were identified in the discussions as approaches to enhance climate change mitigation in MSP. However, some participants noted that the focus in MSP is mostly on energy production and that especially ecosystems as blue carbon sinks have not yet been extensively considered as a climate mitigation action within MSP. The groups also discussed that promoting blue carbon sinks needs to simultaneously consider the importance of conserving and restoring valuable biodiversity and ecosystems.

Blue circular economy

Blue circular economy discussions led to a consensus that the topic is covered to some extent in the plans with, depending on the country, some specific objectives identified. The connection of the MSP plans to other sectoral strategies related to the theme was discussed and some participants noted that the link to national strategies could be made stronger in the future. The discussions identified sustainable blue economy as a key approach to circular economy. From the perspective of the sustainable blue economy strategy, there was discussion on the lack of indicators of the positive results of the actions: the work should go forward from listing challenges to identifying positive opportunities for actions.

Ports and shipyards were identified as key hubs for the blue circular economy. As different authorities oversee actions and development of ports, it is not possible to completely integrate the planning of circular economy actions in these areas into MSP. The participants discussed that MSP needs to define its role in supporting the planning of these actions and defined the ways of how to do it in practice. Current measures on, for example promoting ship maintenance and recycling, dredging material use and waste collection in ports are identified in some of the plans.

The discussions identified a need for more and improved communication in the circular economy. Success stories of using MSP as a discussion tool for disseminating sustainable circular economy topics, that supported the work done in national sectoral strategies, were shared by the participants. To guide the actions and plan the communication on the topic, a need for clear EGD policies and documents on circular economy was identified. The discussions also identified a link between circular economy and climate change mitigation. For example, the lack of connection between MSP and National climate contributions (NDCs) was highlighted as a limitation.

Climate change adaptation

While the MSP plans do anticipate effects of climate change on the seas and the coastal areas, the ways, and levels of detail at which these topics are considered significantly

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varies. Nature-based solutions and blue-green infrastructure were identified as central solutions, but these have not been operationalized yet. Some of the participating countries identify measures to promote adaptation objectives, while others have considered them in a more general level in the MSP plans. Topics such as climate sensitive marine biodiversity protection, climate change impacts on ecosystem services and blue-green infrastructure to enhance marine connectivity and restoration were highlighted as possible future considerations in most cases. Some participants also noted that the mid-term nature of the plans makes it more challenging to look some decades into the future and prepare for the long-term climate change impacts.

Land-sea interaction from a climate change adaptation perspective is considered in some of the plans, for example through the protection of climate sensitive coastal biodiversity. The protection of the important coastal ecosystems is also considered as an approach to protect the coasts from the effects of climate change. For example, in the Mediterranean countries' protection of coastal areas from erosion and sea level rise is highlighted.

However, climate change adaptation was considered mostly as a technical issue, where industries are looking for solutions and holistic, strategic actions are somehow missing. For example, the relevance of biodiversity can be secondary to economic or other topics. The participants thought that it is important to learn from success stories of nature-based solutions and identify where interventions may be targeted to restore habitats. The discussions identified that data and a more comprehensive understanding of the effects of climate change on marine nature and different marine sectors is needed to be able to plan such actions. The prevailing challenge is that climate change is already altering local conditions and actions need to be carried out with an incomplete knowledge base leading into post-normal science conditions.

Climate change adaptation was also seen as an important part of fair and just transition. Involvement of the coastal communities most vulnerable to the changes can provide key information on expected changes in the environment and improve their capacity to adapt to the changes. The participants identified a need for capacity building and communication to support the climate change adaptation actions in the future.

Biodiversity and ecosystem protection and restoration

The way that marine protected areas (MPAs) are considered in the plans vary between countries: in many cases new protected areas are not identified in the plan, especially no demarcation of the strict protection areas, but these areas are still taken into consideration in the planning process and the MSP plan itself. The participants noted that MSP plans contribute substantially to biodiversity and ecosystem protection through the mapping of valuable sites or of priority areas for biodiversity conservation. The valuable areas can be in some cases considered as possible protection areas in the future, but they are also areas where other marine sectors need to take the nature values into consideration. Marine restoration is considered to a lesser extent in MSP plans: some have started the process, but a lot remains to be done.

MSP was identified as a tool that puts all marine activities into the same context to support discussion on synergies and challenges across all marine sectors and, at its best, considers marine and coastal areas as whole, therefore also including biodiversity and ecosystem protection and restoration. In addition, MSP could work as a channel for raising awareness on the protection targets. In many of the partner countries the lack

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of space in marine areas creates major challenges in reaching these targets. In the discussion, the 30 by 30 target was mentioned as a significant issue. It was emphasized that to reach the 10% strict protection target more discussion and awareness raising on the details of nature protection at seas is required. Regarding the definition of the other 20% of targeted protection by 20230, clear indications, examples and piloting are needed. In addition, cross-border cooperation on networks of MPAs needs to be considered in the future.

The lack of data and understanding was identified as a gap in several of the participating countries. For example, this was seen as a major challenge to identifying blue corridors or coherent networks of MPAs for marine species. Due to this lack of data, the topics have not been considered in the MSP plans.

Biodiversity and ecosystems were also considered from the perspective of ecosystem services. Participants noted that it is challenging to comprehensively understand ecosystem services and the way they can be integrated within MSP. In particular the role of regulating and supporting services and how they function as a basis for many ecological processes, and provision and cultural services is still not understood widely enough. In addition, there is a need for improved capacity building about the interconnections between climate change adaptation and biodiversity conservation and restoration (especially through nature-based solutions). For example, investments on coastal restoration are not always recognized as climate adaptation actions that can have a positive impact on the local economy too.

Sustainable seafood production

The discussions on sustainable seafood production highlighted that fishing and aquaculture are different actions and required different planning solutions in MSP. The participating countries have different approaches about how fishing is considered in the plans. Due to the mobile nature of the activity, the places where fishing is done is dependent on where the fish stocks are; some of the analysed plans have not identified specific areas for fishing whereas others identify the most important fishing zones. The discussion also raised the point that due to the mobility of fish stocks and the possible effects of climate change and increase in activities at sea, it is challenging to ensure a sustainable future for the sector. MSP needs to be flexible to be able to consider the changing circumstances for this sector. From the perspective of aquaculture, fish and mussel farming were commonly considered in the plans, at least as a potential for the future. While seaweed cultivation is less commonly considered, its future potential has been identified in a few of the plans. The participants noted that the way aquaculture activities are planned is dependent on the context of the country and the sea areas in question, in particular whether the activity takes place at the coastal area or open seas.

When considering sustainable seafood production, MSP is commonly connected to other national and international policies and strategies, for example EU level quotas for fishing. The discussions noted that the way the policies and strategies are considered in MSP is dependent on the country context and strongly affects how MSP can influence the planning of sustainable fishing. For example, fishing area restrictions or fishing regulations are managed by other responsible authorities. Additionally, some participants said that the responsible authority for fisheries and aquaculture is under a different ministry or is managed at a different scale than MSP, which can limit the consideration of sustainable sea-food production in MSP.

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The participants noted that there are very different actors involved in seafood production from large companies to small-scale actors. A challenge for MSP is to represent everyone equally as it is plausible that different actors have contradictory views on how to develop the sector. Especially, the consideration and participation of local small-scale fisheries is challenging and data on their activities are lacking. In some cases, the scale of MSP plans can make it challenging to consider the local scale needs. Participants agreed that for a fair and just future, further emphasis on participation and communication is needed, also for the fisheries and aquaculture sectors. Actors outside of fisheries and aquaculture, such as offshore wind energy producers, also need to be included in the discussions.
As there is a limited amount of space for all activities at sea in many of the countries, new activities will often take up space from fishing. Therefore, more research is needed to better understand how to include fishing into the multi-use of sea space. Some parts of the sea area, most often in coastal areas, are heavily used and often also the most valuable nature areas are located there. MSP needs to identify areas for all activities and find sustainable solutions. For example, nature protection of sea areas can take up space from fishing, but at the same time can be beneficial for fisheries by ensuring the protection of spawning areas. MSP plans can support the identification and protection of these areas.

Data and knowledge gaps make the planning of fisheries challenging. There is a need to know where the fish stocks are and how they behave once there are changes in the environment, either from other activities at sea, such as offshore wind energy production, or from climate change.

Fair and just transition

In the discussion on fair and just transition the key observations were clustered under three main topics: stakeholder participation, representativeness of diversity of stakeholders at different levels and public access to data and plans. Cross-border issues and cooperation were identified as cross-cutting topics. The following text describes the central observations from the discussions and the identified actions that should be taken in MSP to support the fair and just transition.

Stakeholder engagement requires investment of significant resources to go beyond formal participation to a more holistic approach where intersectoral, interministerial and interregional dialogue at different levels is supported. Participation needs to move towards co-development of the MSP plan and its objectives. MSP can provide a platform for dialogue that supports the fair and just transition. The momentum for MSP is strong and MSP is seen as one of the tools to support the whole society in tackling the challenges we are facing. At the same time, MSP cannot overlook geopolitics. Changes in geopolitics will change how the sea is used and MSP needs to be able to adapt to the changing circumstances. The discussions emphasized the need for global, EU and sea-basin level collaboration. Cross-border issues are important from the perspective of exchanging MSP expertise: seeing what others are doing and how it provides reliability for planning. There is also a need to collaborate with non-EU countries. MSP has the responsibility to consider the fair and just transition outside of the EU and to share good practices and expertise.

Communication and engagement are important to build trust and support ownership towards the MSP process and the plan. Timing is important and stakeholders need to be taken on-board in the early phases of the planning process. Room for negotiation

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and evening out unbalanced power relations is needed. It is important that MSP planners are willing to answer all questions in a welcoming environment to explain openly what the situation is and why certain planning decisions are considered. In addition, continuing the stakeholder participation during the implementation phase of the plan is equally important. The discussion identified the engagement of the general public to be more challenging than the involvement of authorities or experts. From the perspective of the future, MSP needs to consider the youth and support ocean literacy activities. To reach all these goals, new methods for public participation should be developed.

Representativeness of the diversity of stakeholders at different levels of planning is key for improving equality in MSP. Currently socio-cultural and economic dimensions of the plans need improvement. Understanding what the economic and socio-cultural impacts of MSP plans are and how they affect the wellbeing of not only the marine sectors, but also the coastal communities and the wider society, is important. An assessment of the costs and benefits of the plans is needed to identify who will lose and who will benefit. Having everyone on-board is important for making the planning adaptive to changes in the ways that the sea is used.

Public access to data and the plans supports acceptance and transparency of MSP. MSP relies on high quality scientific data, which can be difficult to access and understand by the public. On the other hand, human, economic, political, and sociological aspects are considered in MSP, and they need to be cherished and brought to the forefront of planning. The discussions noted that there is also a lack of socio-economic data, especially spatial data, which can be relied on in planning. Citizen science was identified as a possible solution to partially fill in some of the missing gaps. Further discussion is needed on good practices of collecting participatory data on topics such as personal values or small-scale fisheries.

To sum it up, the participants discussed that MSP needs to crystalize its role both nationally and globally and define what it aims to achieve as regards to fair and just transition and how these aims should be clearly communicated. The discussion identified a possible need for a common approach on how fair and just transition should be tackled by MSP and how this should be done without losing national characteristics. In addition, MSP needs to support systemic thinking: seas and coastal areas form socio-ecological systems where humans' role is important. Co-creation involving both marine sectors and nature protection authorities can support sustainable planning. Communication with stakeholders on how the sustainable blue economy relies on the good status of the marine environment needs to be done carefully, while also showing the benefits of good environmental status for the different sectors. Some sectors have direct connection to the local biodiversity and ecosystem functions, while some do not or have only indirect connections. These connections and their interactions need to be considered. Finally, MSP needs to look into the future and plan for the future, which requires a strong vision on what MSP is supporting and how.

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Figure 6 - Results from six themes discussed in the workshop.

3.3 Observations of map exercise to understand marine and coastal systems

The results of the map exercise were unfurled first by each country presenting their map and thereafter by joint discussion. All the maps show clear land-sea interactions and evident connections between the different EGD thematic categories. The maps set the basis for understanding the interplay and links between different sectors and the thematic EGD categories. This knowledge can be used in MSP to identify and resolve potential synergies and conflicts in marine and coastal areas.

In the joint discussion participants highlighted how the exercise had helped them to discuss social-ecological-technical interactions on marine and coastal areas and how successful implementation of EGD targets would need understanding of these systemic relations. Stakeholder involvement was highlighted and, the need for interministerial and interregional dialog was recognized. Participants also noted that similar exercises could be repeated in their own national processes to raise awareness and systems thinking among a variety of stakeholders.

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Figure 7 - Presenting the results from the 3D map work.

Some key observations from the country level work are presented below. They aim to follow the narrative describing the EGD themes, their spatial interconnections and the land-sea interaction presented by the country groups. The results are not aimed to be comprehensive descriptions of everything that is going on at sea and on land and how these actions are connected to EGD objectives; they rather provide a common understanding about good practice, persisting gaps and future challenges for EGD integration into MSP, in particular related to land-sea interaction aspects.

Bulgaria: The quality of water has improved in recent years due to action on water restoration and filtering by seagrass. Main flow of pollution is from the land areas and management of pollution issues fall under other directives which MSP refers to. Offshore wind energy is considered in the plan and national level development is underway. Grid connections to land areas need careful planning. For climate change mitigation transformations and new innovations are needed also at ports. Mussel farms near the coast provide sustainable sea-food production, while the option to move the farms onshore is considered. Currently 8 % of the waters are protected mostly near the coast as the deeper sea bottom does not contain valuable nature areas. MSP supports the coherence of MPAs and their enlargement. There have also been discussions of a possibility of MPAs in cross-border areas with Romania.

Finland: From the perspective of nutrient flow to the sea, largest quantities come from different land-uses and point sources on land. Lowering the amount of nutrients is a key priority affecting for example the development of fish farming. Co-location of algae and fish farms and fishing as ways of nutrient removal are supported. The ecologically significant marine underwater areas (EMMAs) make underwater nature values visible in MSP. These values have been considered when considering the location of activities in

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the marine areas. In addition, EMMAs function as fish spawning sites and provide coastal protection from climate change impacts. When it comes to offshore wind farms, the MSP coordination has brought together actors from multiple fields to look at solutions for co-locating energy production with other marine activities, such as fishing and algae cultivation. The wind farms are connected back to the coast by cables bringing even more pressure on coastal areas, which needs to be taken into consideration also in MSP. The political situation has created pressure for the development of offshore wind energy affecting all other activities at sea.

France: At the coastal areas, ports are identified as major issues for pollution prevention, while coastal tourist activities have a minor impact. Litter and organic pollution from ports is mostly from human activities. In outer sea areas challenges arise from pollution from maritime transports and fisheries. A network of MPAs forms a continuity between the different valuable nature areas. Offshore wind energy is located mostly further away from the coast, not solely in wind parks. Placement of the wind parks to preserve nature is a key issue to consider. In the energy production the connection to the coast through cables and the sufficient grid structure on land needs to be considered.

Germany: While the German plan covers only the Exclusive economic zone (EEZ), connections between land and sea are still present. This mainly relates to linear infrastructure such as shipping (connections to ports) or cables/pipelines, but also other themes such as the impacts of EEZ developments on small-scale (coastal) fishery. Strictly speaking, land-sea connections in Germany are a cross-border issue as territorial waters are under the mandate of other authorities, meaning communication is needed between the different authorities, for example when planning offshore wind areas and connecting cables that pass through territorial waters. Awareness-raising is needed to more effectively deal with land-sea connections and the socio-economic impact and perceived fairness of EEZ developments. Actions within the EEZ also have a wider transboundary dimension, for example in biodiversity monitoring, blue corridor planning and cumulative impact assessment. Much more consideration needs to be given to dealing with the impacts of climate change, biodiversity restoration and implementing the 10% strict protection target, as well as to co use/multi-use and generally more effective collaboration with sectors and stakeholders. Some elements of the EGD that are relevant for coastal areas, such as sustainable seafood production, blue circular economy or zero pollution must be considered in MSP for the EEZ even if on that planning level no specific regulations are put forward.

Italy: The Italian plans include a detailed analysis of land-sea interactions and related hot spots such as ports, river mouths, coastal cities, or contaminated sites. The ports are considered key hubs of actions for a circular economy, which is particularly approached for shipping, fishing, and aquaculture in the Italian plans. Need for offshore sand extraction (and therefore related mapping of offshore deposits) is identified as particularly important to improve coastal resilience through nature-based solutions. While the plans do not identify new MPAs, nature protection is a key topic for MSP in Italy. Priority areas for marine biodiversity and ecosystem protection are identified. Sustainable seafood production is a central topic of the plan, both in relation to fishing and aquaculture, also considering the extension of the latter. Climate change is a cross-cutting theme of the whole plan covering all areas and themes. Safety and security at the Mediterranean Sea are key issues and priority areas and migrants' issues are considered.

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Latvia: For offshore wind energy the current situation and future opportunities have been identified. Areas identified for energy development, including for example energy transmission, cables and connections to ports highlight the sea-land interaction. In the context of climate change mitigation and adaptation, the potential of blue carbon sinks and green infrastructure elements in coastal areas is not sufficiently recognized. 15% of the MSP area has been identified as MPAs. In addition, there are five nature investigation zones designed in the MSP of Latvia (with some spatial overlap with offshore wind energy areas), but it is still not enough to meet the 30% target set out in the EU Biodiversity Strategy for 2030. Biodiversity and ecosystem protection and restoration increases coastal resilience and highlight once again the interaction between different areas and themes. Existing information on the most important fishing areas has been assessed to consider and design other sea use zones. For blue circular economy development and transformation in ports is identified as one of key challenges for the future. Reusing sediments from port areas highlights the importance of thinking about the interaction between sea and land.

Spain: The map is divided by the spatial application of different policies and the governance scheme that explains competences at the national, regional, and local levels, in order to understand how the themes are addressed. For climate change mitigation, offshore wind energy areas have been identified. From the perspective of zero pollution, underwater noise and its impact on nature is considered. MPAs are identified in the current context but also as future areas to be protected due to the presence of important habitats and species. Marine green infrastructure (MGI) works both as blue carbon sinks and as a form of coastal protection increasing resilience. Also, some elements of the MGI have been identified for connectivity and will be identified for restoration areas. Blue corridors highlight the need for transboundary cooperation. Sustainable sea-food production promotes multi-use of sea space, while anticipating the effects of climate change on fisheries and other sectors highlights the need to identify areas where the activities are located in the future and to foster the coexistence between sectors.

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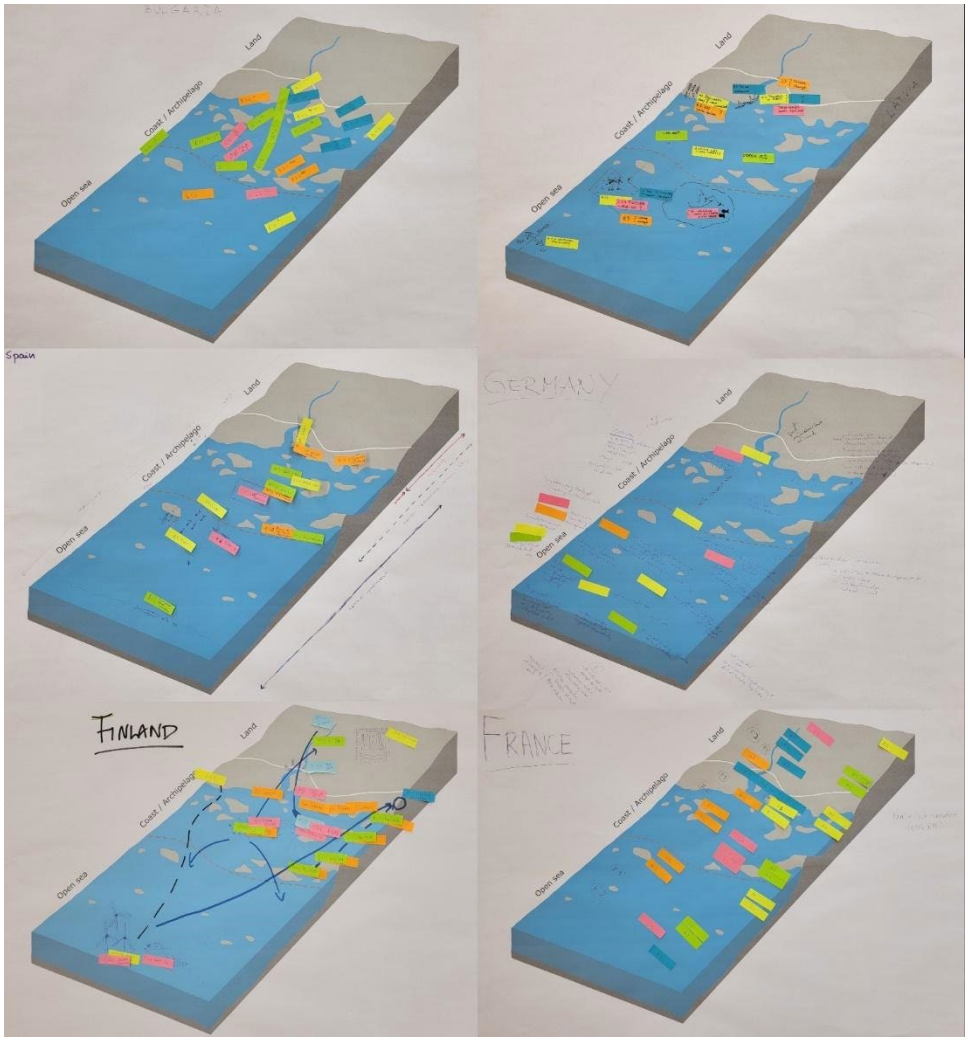

Figure 8 - Results from the 3D map work from Bulgaria, Latvia, Spain, Germany, Finland and France (starting from top left and going row by row).

3.4 Key findings from the workshop

The results of the workshop show that in many cases the thematic EGD categories are currently considered in the MSP plans of the participating countries. The country presentations and issues shared in the discussions show that there are both similarities and differences in the ways that the EGD categories are considered in the MSP process and the plans. Cross-cutting key findings on the role of MSP as an enabler of the European Green Deal are presented below.

Context matters: the way that the MSP process is organized in a country affects which of the thematic categories of the EGD are considered in the plan and how they are promoted. If something is missing from the plan, it does not mean that it is not considered elsewhere (for example by other cross-cutting or sector plans). Some specific EGD aspects can be outside of the scope of the MSP process. The next phases of plans' revision and update could provide the opportunity to take into account within MSP some of the missing elements of the EGD. There is no one size fits all solution for enabling MSP to support the objectives of the EGD.

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The role of MSP in enabling the EGD: Depending on the national context, MSP has different levels of capacity to support the objectives of the EGD. For several EGD topics, MSP has a direct role. In other cases, MSP might not have a mandate to influence actions and therefore cannot directly enable certain objectives of the EGD. These depend on the topic/sector and the way it is regulated at the international and national level, but also on the specific national context. In any case, MSP can still raise awareness, support discussions, and provide recommendations. MSP was identified as a tool for bringing together all marine sectors for cross-cutting discussions and analysis on the future use of the sea areas.

Variety in how the thematic categories are considered by MSP: while some of the categories are extensively covered by the MSP plans, others are covered to a lesser extent. Climate change mitigation (more precisely renewable energy production), biodiversity and ecosystem protection and sustainable seafood production are often at the centre of the MSP plans. This might be because of their spatial dimension and long history in spatial planning. Blue circular economy and zero pollution are covered to various extents, but the role of MSP to guide these topics is still under consideration and other actors and sectoral policies have a strong mandate for their development. Climate change adaptation and biodiversity and ecosystem restoration are relatively newer topics with a lot of discussion on-going; currently they are still less considered by the plans.

Fair and just transition: Stakeholder participation and inclusive communication are at the heart of MSP to support ownership towards the MSP process and the plan. MSP can enable discussion across regions, ministries, sectors, nations, sea basins and globally to work as a platform for dialogue supporting the fair and just transition. How stakeholders are involved, at what phase of planning, at what level, how is equal representation of actors secured and who is considered as stakeholders are key issues to consider in the future. At the current moment MSP still needs to fully define what is its role in supporting a fair and just transition: what kind of objectives should be set for it and what kind of planning approaches and methods of engagement would best serve the set objectives.

Cooperation and learning from each other: Collaboration at the regional, national, sea basins, EU and Global scale is important for enabling the objectives of the EGD in MSP. Sharing of experiences and good practices will not only result in learning from each other, but also increase the reliability and coherence of the selected planning approaches in MSP. Setting of common objectives, communication strategies and ways to approach challenges in MSP is important, but they need to be implemented in a way that they are flexible enough to be adapted to the different national contexts. In some cases, binding international objectives could be beneficial to guide MSP towards the EGD vision.

The need for more data and understanding: Lack of data and understanding about some specific themes is still considered a challenge towards science-based planning also in support of the EGD objectives. Ways to gain more data on small-scale actors and themes outside of natural sciences such as economic and social data, especially in a spatial format, needs to be considered. The lack of information can also lead to some themes not being considered in the MSP plans. Cross-border collaboration creates the opportunity for sharing and harmonizing data to make sustainable decisions coherent at the sea-basin scale.

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Interconnections between EGD thematic categories: The workshop highlighted that to reach the objectives set by the EGD, MSP needs to take a cross-sectoral approach, which indeed is an intrinsic characteristic of maritime spatial planning. Marine activities are interconnected and easily affect each other. Such interconnections can result in conflicts and synergies, to be respectively managed and supported by MSP. In this regard, multi-use of the sea space is perceived as a possible solution, although work must still be done for its operationalisation. To plan and support stakeholder collaboration in multi-use, discussion across sectoral borders is crucial. Considering the sea and coastal areas as socio-ecological systems where marine sectors and protection of the environment are interlinked can guide MSP in identifying synergies and solving conflicts.

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4. Pictures from the workshop

Figure 9 - Group photo of workshop participants at Seili island.

Figure 10 - Discussions on board M/s Norrskär.

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Figure 11 - Breakdown discussion of the central observations from the country presentations.

Figure 12 - Working on key findings from the country level analysis.

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Figure 13 - Group discussion on sustainable sea-food production.

Figure 14 - Presentations of the results from the fair and just transition table.

Figure 15 - Presentation of the 3D map workshop.

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5. Program of the workshop

Monday 19th of June – Visiting Seili island

"Seili is known for its history as home to Finland's best-known leper hospital and mental asylum in the 1600s and 1700s. Seili church and surrounding graveyard still remind of the destinies of Seili's patients. The mentally ill were treated on Seili until 1960s, when the former asylum was converted for the use of the Archipelago Research Institute, Centre for Environmental Research of the University of Turku." https://www.visitseili.fi/en/

9.15 Meet at the departure point of the boat at Läntinen Rantakatu 37
- Welcoming words by Pierpaolo Campostrini

9.30 – 11.45 Boat M/S Norrskär to Seili
- Professional guide for presenting the archipelago

11.45 – 16.00 at Seili
- Lunch
- Key findings of the analysis from partner countries at the Seili main building
- Getting to know Seili

16.00 – 18.15 Boat from Seili back to Turku
- Breakdown of the results of the key findings from partner countries

19.30 Dinner at Blanko, Aurakatu 1

Tuesday 20th of June – Workshop at Regional Council of Southwest Finland at Linnankatu 52, meeting room Tammi

8.45 – 9.00 Coffee

9.00 – 9.30
Welcome to the Regional Council of Southwest Finland - Heikki Saarento
A presentation of the MSP process in Finland & Greetings from eMSP NBSR Helsinki week - Mari Pohja-Mykrä.

9.30 – 12.00 Workshop on exchanging results (including a coffee break)

12.00 – 13.00 Lunch at Nooa, Läntinen Rantakatu 57

13.00 – 15.30 Workshop on exchanging results (including a coffee break)

15.30 – 17.00 Time reserved for project coordination and other current issues

- Discussion on deliverable 2.1
- Project management: currents issues
- Project communication: where are we now and what does the communication team need from the WPs

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19.00 Self-paid dinner at Teini, Uudenmaankatu 1

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THE GREEN DEAL COMPONENT OF MSP PLANS

As part of the MSP-GREEN project, partners from Bulgaria, Finland, France, Italy, Germany, Latvia, and Spain, assessed whether and how their national Maritime Spatial Plans consider the European Green Deal (EGD) objectives and identified which are the major gaps, the challenges encountered, and the trade-offs accepted in mainstreaming EGD into MSP.

The complete study is included in the *MSP-GREEN Deliverable N°2.1: The Green Deal component of the EU MSP Plans.*

EGD

MSP

Climate change mitigation

The plans mostly address climate change mitigation, in particular by promoting energy transition at-sea, through offshore wind energy.

Some plans also approach energy transition from the perspective of promoting efficiency and new fuels in the maritime sectors and ports.

Example

The German EEZ plan includes both spatial and energy production provisions for offshore wind development. The plan dedicates a total of 16.5% of the EEZ to offshore wind in order to achieve federal targets of 20 GW by 2030 and 40 GW by 2040.

Circular Economy

The way the plans incorporate blue circular economy varies greatly based on the national scope and mandate of MSP and cover a wide range of maritime sectors.

This is also influenced by the relationships established with other national policies, e.g. regarding circular economy or recycling.

Example

All French plans include blue circular economy at a strategic and operational level with provisions targeting for example the ship industry (eco-design , repair, sustainable decommissioning, and recycling) but also citizens for instance through ocean literacy.

Climate change adaptation

The plans often include indirect provisions to support climate change adaptation.

Some plans provide measures concerning nature-based solutions to strengthen coastal resilience to erosion and floods or to improve fisheries adaptation.

Example

In Spain, Marine Green Infrastructures (including protected areas) occupy 32.8% of the total planning area of the plans contributing to climate change mitigation.

Fair and Just Transition

Example

In Finland, Stakeholders were engaged in the co-creation of future scenarios for the marine areas included in the MSP plan, from the early stage of the process. This approach has increased the stakeholders capacity to influence planning decisions.

Whether and how MSP addresses the Fair and Just Transition is mostly linked to stakeholders engagement. All analysed MSP processes widely engaged stakeholders to find the best possible balance among sea uses and related area allocations. Regardless, further exploration of the role of MSP in supporting the topic is strongly needed.

Working groups, knowledge co-creation, inclusive communication and online data services are common engagement actions. Challenges were identified in reaching the local scale actors.

Biodiversity and ecosystem protection

Example

The Latvian MSP plan includes the existing Marine Protected Areas (15.4%) and 5 new investigation zones of nature values (4.8% , which is a good basis to move closer to the 30% target set out in the EU Biodiversity Strategy for 2030 with support of the LIFE REEF project

Biodiversity and ecosystem protection are cross-cutting or overarching objectives in all plans. While the designation or extension of MPAs is generally considered outside of the scope of MSP, its supports extended conservation in several ways.

Some plans include biodiversity-oriented zoning measures, such as the identification of priority and reservation areas for nature conservation. Provisions on OECMs and marine connectivity are less common.

Zero Pollution

Example

According to the MSP vision and objectives, the Italian plans shall guarantee the achievement and maintenance of the Good Environmental Status of marine waters (ex MSFD). All sectors should reduce polluting emissions, waste and introduction of alien species: specific measures are foreseen e.g. identification of marine areas with high pressures generated by maritime transport.

Several plans consider pollution issues from the perspective of achieving the Good Environmental Status therefore referring to the MSFD implementation.

While all plans consider pollution drivers and pressures, zero pollution provisions mostly focus on prevention and remain sector-specific.

Sustainable seafood production

Example

In line with the Common Fisheries Policy implementation, the Bulgarian plans sets up measures for effective control on fishing areas, science-based definition of quotas for exploited species and control on unregulated fishing.

All plans incorporate sustainable food production, through provisions relating to fisheries and aquaculture (fish and shellfish farming), and more rarely to seaweed production.

Some plans do not regulate fisheries per se but include provisions supporting sustainable fisheries. Others include measures that more directly regulate fishing, for instance on bycatch, licensing or fight against illegal fishing.

MSP GREEN

EGD elements in MSP plans

The inclusion of EGD elements has been assessed for each project country in objectives and measures (excluding Germany*), based on the screening of the MSP plans.

Are EGD elements considered in the MSP plan?

- YES
- PARTIALLY
- NO

OBJECTIVES		MEASURES*
Climate change mitigation	Renewable energy production, storage and transportation	Climate change mitigation
	Clean energy transition in maritime sectors	
	Transformations in ports	
	Blue carbon sinks	
Climate change adaptation	Green Infrastructures to enhance coastal-resilience	Climate change adaptation
	Protection of climate-sensitive marine and coastal biodiversity/ecosystems, and landscapes	
	Anticipation of climate change-related effects	
Sustainable seafood production	Sustainable fisheries: management, including area and time-based measures	Sustainable seafood production
	Sustainable aquaculture and shellfish production	
	Sustainable algae production	
Biodiversity and ecosystem protection	A coherent network of marine protected areas	Biodiversity and ecosystem protection
	Restoring marine and coastal ecosystems	
Circular Economy	Circular design	Circular Economy
	Waste prevention	
	Re-use, repair, upgrade, recycle	
Zero pollution	Pollution prevention	Zero pollution
	Pollution remediation	

*The German EEZ Plan does not present measures

Key challenges for MSP to work as an enabler of the EGD

- Implementing the EGD may result in or reinforce spatial competition among uses at sea.
- The implementation of some EGD objectives through MSP faces obstacles relating to data gaps, fragmentation or lack of interoperability.
- Uncertainties stemming from difficulties to project into the future and unclear planning principles can hamper action from EGD stakeholders.
- The geographic scope, approach and mandate of MSP define its capacity to address the EGD.
- Contrasting policy objectives can make it difficult to articulate EGD within MSP.
- Process limitations such as lack of resources, time or participation can limit the ability of MSP to address the EGD.

Deliverable N°2.1 The Green Deal component of the EU MSP Plans
Annexe 3 Infographic with synthetic elements
Graphic project: Soffietti F.- IUAV
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DELIVERABLE N°2.1.

The Green Deal component of the EU MSP Plans

Appendix 4 - Summaries of key findings at country level

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Summaries of key findings at country level

1 Introduction

The present collection of factsheets wishes to support the accessibility and promotion of the extensive research presented in the main body of "Deliverable 2.1-The Green Deal component of the EU MSP Plans". The key findings of European Green Deal elements in the Maritime Spatial Plans of the analyzed countries are briefly presented according to the common taxonomy developed by the project and presented in Annexe I.

The documents are summaries of the results available in the Country chapters of D2.1. They are organized in one page per project country, to allow for dissemination, as single documents, through the project web page (www.mspgreen.it) and/or the EU MSP Platform. The limit of one page clearly impose a great degree of simplification and elision, the interested reader is invited to access the extended version of results.

Summaries are made available in national languages on the project website and the partners websites to facilitate dissemination among national and sub-national authorities.

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COUNTRY SUMMARIES: BULGARIA

MSP in Bulgaria

Bulgaria developed one single Maritime Spatial Plan of the Republic of Bulgaria for the period 2021-2035, which is strategic and has indirect impact through guiding effects. At sea the Plan includes the internal waters, the territorial sea, the contiguous zone, and the Exclusive Economic Zone (EEZ). The land boundary is determined at the municipal level or by beach boundaries for recreational purposes. The Plan features four types of zoning of the sea space: restricted for use; with specific conservation regime; multifunctional zones; and areas for future use. It includes main strategic goals and specific objectives, aligned with the key international, EU and national policies. The Plan has four scenarios for future development: i) A – Economic growth; ii) B – Ecology; iii) C – Social balance; and iv) D – Integrated (EU, local, national and regional priorities). The MSP Authority is the Ministry of Regional Development and Public Works (MRDPW). The Plan is supported by Environmental Impact Assessment and a document by the Ministry of Environment and Water (MOEW) with additional measures to reach the targets of EU Biodiversity Strategy 2030. The Plan was approved on 11 of May 2023 by the Council of Ministers of Bulgaria.

The European Green Deal in Bulgarian MSP Plan

1. Climate change mitigation

Climate change mitigation is not directly addressed in the vision, strategic objectives and measures of the MSP Plan. It is generally considered as a transversal topic: from renewable energy production, decarbonisation of maritime sectors, to green transformations in ports and blue carbon storage. The Plan highlights the potential for developing offshore renewable energy, however without formulating explicit quantitative objectives or allocation of reserved areas. No quantitative objectives are foreseen for clean energy transition, transformations in ports or to blue carbon storage.

2. Climate change adaptation

Adaptation is addressed in the Plan through the National Strategy for Adaptation to Climate Change and Action Plan (2019). It is mainly tackled in relation to expected impacts of climate change, such as risks of sea floods, accelerated coastal erosion and applying more nature-based solutions for coastal protection. Green infrastructures to enhance coastal resilience and marine connectivity are not reflected in the Plan's goals/objectives and no specific measures are foreseen. Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes is indirectly reflected – through the provisions of the MSFD and Programme of Measures, fully integrated in the Plan. No areas are identified to be used in the future by specific sectors due to climate change (e.g., fisheries, aquaculture, MPAs, etc.).

3. Sustainable seafood production

The Plan`s strategic goals and specific objectives aim to ensure that fisheries and aquaculture are developed in a sustainable and efficient way based on the ecological, economic and social pillars of the blue economy. It is addressed by various measures in line with the Common Fisheries Policy implementation: effective control on fishing areas, science-based quotas for exploited species and control on unregulated fishing, diversifying aquaculture production by tapping in economic synergies with tourism, recreational fishing and enhanced environmental services in MPAs, and promoting good aquaculture practices and market expansion. The Plan integrates the current EU and national legislation on fisheries and aquaculture. No future (reserved) zones for aquaculture are envisaged in the Plan.

4. Biodiversity and ecosystem protection and restoration

Biodiversity, ecosystem and cultural heritage protection are considered in the Plan's goals and scenarios as cross-cutting and overarching priorities, referring to the implementation of MSFD, WFD and environmental national legislation. The Plan integrates all existing MPAs (nationally designated and Natura 2000), it does not envisage areas for new or extended MPAs, as it is in the remit of the MOEW. The Plan supports reaching the targets of the EU Biodiversity Strategy 2030 and progression of the MPAs network, also additional measures are included in the document by the MOEW. The new designated MPAs will be reflected in the Plan in the course of its revisions, however no measures on restoration or ecological blue corridors are envisaged. The Plan does promote synergies between economic sectors and ecosystem protection, through the foreseen multifunctional zones, based on the Multi-Use concept and the EMFF MARSPLAN-BS II project case study results (e.g. tourism, underwater cultural heritage and environmental protection).

5. Blue Circular Economy

The Plan recommends applying principles of the circular economy in the Black Sea region and some of its strategic goals and specific objectives do support circular economy. For example, waste prevention is addressed by a list of measures through the provisions of the WFD, the MSFD and Programme of Measures, as well as in the context of cross-border cooperation to reduce pollution. The Plan states the need to encourage investment, innovation and technological transformations in support to development of the blue economy emerging sectors.

6. Zero pollution

The Plan`s vision foresees reducing the pollution, mainly through the Bucharest Convention for the Black Sea and by achieving the Good Environmental Status of sea waters with the implementation of WFD and MSFD (Programme of Measures). The specific objectives of the Plan also include a package of measures to prevent pollution, mostly related to reduction of pollutants from all maritime sectors and all types of pollutions to levels that are not harmful to marine ecosystems by preventing accidents at the sea, introduction of alien species and by effective management of land-based sources of pollution and waste. In this context, the Plan also envisages measures on the minimization of waste and marine litter originated from the maritime transport and port activities.

Fair and just transition

Stakeholders' involvement took place via formal consultations and dialogue at all stages of the Plan`s elaboration, by means of thematic round tables, focus groups, interviews and public discussions. Sectoral representation of all stakeholder groups was not ensured in the planning process and mostly key governmental/state stakeholders were directly involved. The Plan does not consider gender balance in maritime professions and does not include a socio-economic assessment of its effects on different sectors, communities or groups.

Challenges and obstacles identified

Being a strategic and guiding document, the MSP Plan is more generic, and its effect is expected to be limited if more detailed and legally binding provisions are not set up during its implementation phase. Issues related with limitation of space availability and lack of high-resolution data, are pointed out as important challenges. Operationalisation of the recently adopted Plan, is considered as the most urgent challenge to be overcome. More focus on climate change impacts, offshore renewable energy and biodiversity protection will facilitate the inclusion of the EGD objectives in the Plan's implementation and revision. Involvement of all stakeholder categories in the implementation phase is key to provide up to date and accurate data, and to take all stakes in the process. There is also a need for improved articulation on the integrating role of MSP to create a practical blueprint for sea use and ecosystem conservation.

COUNTRY SUMMARIES: FINLAND

MSP in Finland

The Finnish Maritime Spatial Plan 2030 was approved in December 2020. The plan has been prepared in parts in three planning areas (Northern Bothnian Sea, Quark and Bothnian Bay, Archipelago Sea and Southern Bothnian Sea, and Gulf of Finland) and covers the whole sea area of Finland starting from the coastline and including territorial waters and the EEZ. Eight coastal regional councils together with the Ministry of the Environment are responsible for the plan preparation. The MSP plan is a strategic document with an indirect impact on planning through a guiding effect on the plans of the Finnish land use planning system. Additionally, the impact arises from the linkages with other policy guidelines and strategies, regional programmes and from supporting the goals of regional development projects and other maritime management, conservation, and restoration plans. The MSP plan does not set any quantitative objectives.

The European Green Deal in Finnish MSP Plan

1. Climate change mitigation

In the Finnish MSP plan climate change mitigation is mostly considered by the promotion of offshore wind farms (OWF) and the use of new technologies and innovations in maritime sectors. The 2030 vision for the sustainable use of marine areas foresees a transition to a low-carbon and resource efficient society mainly through these methods. On the objective level, the plan aims to improve the operating environment for OWF by promoting topics such as the role of the government and regional land use plans in supporting and guiding the development. The plan map identifies potential areas for OWF development. To support the energy transition in the maritime sectors and ports the plan considers objectives for the use of new technologies and supporting research and innovation.

2. Climate change adaptation

Climate change adaptation as a concept is not used in the Finnish MSP plan, but there are direct and indirect references to the topic. A central measure is the identification of significant underwater natural values which are considered key areas for the provision of ecosystem services such as the protection of coastal areas in the future. The plan also includes many areas with no strategic objectives identified, providing flexibility regarding the future. To achieve the objective of a good status of the marine environment in the long-term, further consideration of how to adapt to climate change is needed. The impact of climate change on marine sectors will be further considered during the second cycle of MSP in Finland.

3. Sustainable seafood production

The plan identifies fisheries and fish farming as the main actors in sustainable seafood production in the visions, objectives, and measures. The vision identifies them as sustainable and climate-friendly sources for food in the future. The objectives support sustainable fishing that has a positive impact on the status of the marine environment and the continuation of the fishing profession. Eutrophication is a challenge for fish farming: to reduce the nutrient loads the plan identifies multiple objectives to support both technological and practical solutions. The plan map identifies potential areas for professional coastal net fishing and open sea trawl fishing. The MSP plan considers the aims of the Finnish Aquaculture Strategy to increase production and identifies potential areas for fish farming with a generalised strategic map marking. Mussel and algae farming is challenging due to the environmental settings, but the plan does address them to a lesser extent.

4. Biodiversity and ecosystem protection and restoration

One of the main objectives of the Finnish MSP plan is to support the achievement of the good status of the marine environment. This topic together with biodiversity and ecosystem protection are considered in the visions, objectives, and measures of the plan. The plan aims to create an overview of the network of valuable marine nature areas and ecological connections but does not suggest new conservation areas. The plan does not promote any potential marine uses that are likely to lead to conflict with significant nature values.

The plan map identifies areas with significant underwater natural values, where special focus needs to be put on the preservation of the characteristics of the underwater habitats when developing marine uses. Restoration of marine and coastal ecosystems will be further investigated during the upcoming planning cycles.

5. Blue Circular Economy

Blue circular economy is to some extent considered a cross-cutting theme for many of the sectors covered by the plan. The vision promotes a future where resource-efficient and circular economy solutions form the basis for a sustainable blue economy. To some extent, the objectives consider solutions for promoting circular economy actions in the sectors. The MSP plan considers other relevant strategies and policies related to the maritime sectors, such as the Finland's Strategy for the Baltic Sea Region, but is not directly connected to their objectives.

6. Zero pollution

Zero pollution is considered to a lesser extent in the MSP plan. The refences to the topic in the visions and objectives mostly focus on pollution prevention in the different marine sectors. For example, the plan considers the risks of oil and chemical accidents which could occur in maritime traffic. The MSP process examined the future needs for dredging of ports and merchant shipping fairway and the most suitable banking sites for dredging masses in terms of protecting the marine environment.

Fair and just transition

The Finnish MSP plan was formed through a collaborative planning process. All authorities and organisations whose areas of activity are covered by the plan and the public interested in MSP were engaged in the plan preparation. The aim was to secure equal representation of stakeholders and the planning areas. The actualization of this goal was also followed throughout the process. The involvement of the coastal regional councils supported the promotion of regionally important actions. In practice, national and regional events were organized in all stages of planning, starting with the definition of a common approach for MSP in Finland. The aim was the co-creation of knowledge and the formation of a shared understanding and vision for MSP. The resulting MSP plan aims to cover all areas equally, by considering the operating environment for different sectors in all parts of the planning area. The planning process included an examination of the impacts that the realisation of the plan would have on multiple socio-environmental aspects such as human living conditions, biodiversity, and natural resources.

Challenges and obstacles identified

The EGD adds new objectives that MSP needs to adapt to. For example, the societal pressure to guide the green energy transition at sea requires fast and adaptable planning. MSP is a new planning tool and the ways that it can support the EGD in practice are still developing. Although Finland has extensive experience and a collection of valuable data regarding the marine topics, lack of information or understanding supporting sustainable planning decisions was identified as one of the most difficult and urgent challenges to overcome. Further assessment of the cumulative impacts of planning solutions is needed, but achieving this is challenging due to the complexity of the marine environment and the multiple new sea uses. Understanding the national and regional environmental context is crucial to solving these challenges.

COUNTRY SUMMARIES: FRANCE

MSP in FRANCE

In France, four MSP documents (*Documents stratégiques de façade – DSF)* are prepared corresponding to each sea-basin/*façade* (South Atlantic, Mediterranean, North Atlantic-West Channel, East Channel-North Sea). All DSF implement the National Strategy for the Sea and the Coast (NSSC, 2017) and address the requirements of both MSP and MSF Directives. The strategic part (2019) of the plans includes an indicative zoning assigning priority sectors*)* and functions to sub-planning units (*vocation areas)*. The operational part includes monitoring mechanisms and an action plan (last one published in 2022). The drafts of the four DSF were elaborated by the administration and were discussed within the *Façade* Maritime Councils, regrouping the main stakeholders and specifically established for this consultation. The final versions of the plans were submitted to online public consultation (8000 connexions/384 advices). The revision process of the plans is ongoing and the new NSSC is anticipated by Autumn 2023.

The European Green Deal in French MSP Plans

1. Climate change mitigation

Climate change (CC) mitigation is mostly addressed by MSP plans (hereon: the plans) in an indirect manner. This topic is considered in a transversal manner including objectives and measures for offshore renewable energy (ORE) production, storage and transportation. Quantitative energy targets are established through a national sectoral policy (the Multiannual Energy Plan).Besides ORE, all plans include measures and objectives targeting the clean energy transition in maritime sectors (low-carbon maritime fuels or sustainable maritime transportation). None of the plans includes provision on blue carbon.

2. Climate change adaptation

CC adaptation is included in the vision and/or strategic objectives measures in all plans. CC adaptation is addressed from the coastline perspective, covering issues such as coastal erosion, sea level rise and risk management (including nature-based solutions referred to as "*soft*" or "*flexible*" management). CC adaptation provisions beyond the coastal context are limited, and concern issues such as the adaptability of fisheries and the development invasive species.

3. Sustainable seafood production

Sustainable seafood production is included in the vision of three out of four plans and concern mainly fisheries and aquaculture, without making any explicit reference to sustainable algae farming/production. The plans' strategic and specific objectives include sustainable seafood production as well as several specific measures to improve regulations, control bycatch and reduce the environmental impact of fishing gears, among others. Within vocation maps, this topic stands out as a main priority in three out of four *façades*.

4. Biodiversity and ecosystem protection and restoration

Biodiversity and ecosystem protection and restoration is considered in the plans' vision, particularly referring to the achievement of Good Ecological Status (GES). This issue is addressed in one plan through the lens of ecosystem services (benefits for society) provided by the environment. The plans' objectives and measures for biodiversity and ecosystem protection are based on MSFD and its descriptors. Thus, non-MSFD relevant issues such as connectivity and MPA networks or overall restoration of degraded ecosystems, are not often directly addressed in the plans' objectives. From a spatial perspective, plans recognise existing tools such as MPAs. Since june 2023, state and MSP authorities have proposed indicative targets and modalities for the designation of Highly Protected Marine Areas (HPMAs).

5. Blue Circular Economy

All plans include blue circular economy in their vision, although in some cases it is limited to key topics such as naval repair, sustainable decommissioning or recycling. In terms of strategic and specific objectives, all plans cover blue circular economy including circular design, waste prevention/reduction in maritime sectors and collection/valorisation of industrial waste. Some specific actions also involve the general public through ocean literacy and citizen-science related provisions.

6. Zero pollution

From a general perspective, zero pollution objective of the EGD is not directly focused in the four MSP plans. However, two plans identify pollution prevention and remediation objectives in their vision, and various strategic objectives encompass pollution-related matters. This topic is approached both by considering the impacts of land-based activities on the environment and referring to pollution prevention in maritime sectors. These objectives are included because of MSFD environmental objectives.

Fair and just transition

Consultations were organized at all stages of the French MSP plans development. At the first stage (consultation of the draft version), state and territorial authorities, users of the sea, NGOs, Unions and representatives of maritime sectors were included. The second stage consisted in an online public consultation (final version) and *"citizen workshops*" involving the general public and other groups of people. While diversity and inclusion are not explicitly mentioned in the plans, some references to gender balance perspectives in maritime sectors are included in plans' measures. MSP process in France aims to foster synergies between maritime stakeholders across all key sectors, as for example the promotion of collaborations between scientists and citizens. Regarding this issue, some specific objectives focus on data availability and open access to scientific resources for the general public.

Challenges and obstacles identified

Challenges linked to the complexity of scaling MSP in France have been raised, including the difficulty faced by some stakeholders in conceptualizing planning at a *façade* scale and the lack of precise mapping of vocation areas (considered too broad). Some stakeholders considered the plans as a general framework rather than a planning document, most likely not easily comprehensible for the general public. Other challenges concern the procedural mismatch between French planning timeline and EGD objectives; the lack of consideration of ongoing changes in maritime economical sectors (e.g. ORE) concerning the medium-to-long-term vision of the plans; the absence of harmonization and dissemination of available data, and the problems of availability of space in relation to emerging activities promoted by EGD (e.g. ORE).

COUNTRY SUMMARIES: GERMANY (EEZ)

MSP in Germany

Germany borders two seas, the North Sea and the Baltic Sea. In line with Germany's federal structure, responsibility for MSP is divided among four MSP authorities. Three (at State level) are responsible for MSP in the territorial seas and one (at the federal level) is responsible for the EEZ. The Federal Ministry for Housing, Urban Development and Building (BMWSB) is the authority in charge of MSP for the EEZ, with the Federal Maritime and Hydrographic Agency (BSH) responsible for coordinating the planning process. For the EEZ, the first MSP plan came into force in 2009, prior to the existence of the EGD. The current plan is a second generation MSP plan and has been in force since 1 September 2021.

The European Green Deal in Germany's EEZ Plan

1. Climate change mitigation

Renewable energy production is regarded as the central tool for climate change mitigation and a key driver of the German EEZ plan. The plan designates priority and reservation areas for offshore wind in line with the federal government's expansion targets for offshore wind (20 GW by 2030 and 40 GW by 2040). In total, 10.1% of the EEZ have been designated as priority area for offshore wind and 5.9% as reservation area, securing enough space to allow the 40 GW target to be met. For implementation, the plan largely relies on the (sectoral) Site Development Plan for offshore wind which specifies the areas to be developed and in what order. The plan indirectly refers to the clean energy transition in maritime sectors through the provisions it makes for shipping and references to existing conventions such as MARPOL and the MSFD. There is no reference to blue carbon storage as this is prohibited under current German legislation.

2. Climate change adaptation

The plan does not contain any specific objectives related to climate change adaptation, although some of the general principles for protection and improvement of the marine environment also meet adaptation objectives (protecting climate-sensitive marine and coastal biodiversity and ecosystems). As the plan does not cover territorial waters there is only indirect reference to green infrastructures or coastal resilience. No reference is made to anticipating the effects of climate change, although shipping route designations are to some degree anticipatory (Northern routes). There are no priority or reservation areas specifically dedicated to Green Infrastructures or Nature-Based Solutions.

3. Sustainable seafood production

The plan does not refer to sustainable food production as an overarching or strategic objective, and fishing and marine aquaculture are covered by the same strategic principles as other uses. Fishing is not regulated by MSP, which is why the plan does not restrict fishing directly. A reservation area for Norway lobster has been designated to ensure this area remains available for fishing by keeping it free of incompatible uses. Currently there is no aquaculture in the German EEZ, but there is a planning objective for aquaculture which aims to encourage co-use with existing installations (such as offshore wind farms).

4. Biodiversity and ecosystem protection and restoration

MSP has no direct remit for nature conservation or biodiversity management but is tasked with contributing to protection and improvement of the marine environment. Although the plan does not specifically refer to restoration, climate refuges, ecosystem services or similar, the plan does cover EGD biodiversity and ecosystem protection objectives. The total extension of all priority and reservation areas for nature conservation amounts to 44.10% of the EEZ, with non-strictly protected areas (N2K, OECM – including candidate areas) amounting to 30%. No specific areas have been set aside for restoration. No specific mention is made of improving marine connectivity, although provisions are made for migratory species (birds and mammals). In the context of avoiding barrier effects for marine mammals, explicit reference is made to the MSFD. The plan also contains a planning objective designed to preserve the EEZ as a natural area and for preserving the marine landscape without visible large-scale infrastructure. There are no quantitative objectives for any of these elements.

5. Blue Circular Economy

Circular design, waste prevention, and reuse, repair, upgrade, recycle are not covered by the German EEZ plan as they are dealt with at the level of licencing for individual projects. Consequently, there is no mention of the blue circular economy in the EEZ plan.

6. Zero pollution

Pollution prevention and remediation are regulated at the level of sectoral planning and licencing for offshore wind or other projects. Nonetheless, some of the plan's objectives do have impacts on pollution prevention, including noise pollution and the reduction of pollutants in the water/air. The framework for these policies is not the EGD or a zero pollution target but other international conventions (MAROPL, OSPAR, HELCOM) and policies (MSFD).There are no quantitative objectives.

Fair and just transition towards EGD

Planning is designed with fairness in mind as it aims to balance the various uses of the sea in the best possible way. Aspects of fairness and equity are also covered by the planning process, where representation of stakeholders is an important consideration. At the same time, there are no targets for stakeholder participation, or any definitions of representative-ness or diversity criteria, nor any specific attempts to include disadvantaged groups. No socio-economic impact assessment was carried out (e.g. as part of the SEA), and no distributive effects of the various provisions of the plan were considered. Requirements to ensure public access to data and the plans themselves are set out in the Federal Spatial Planning Act. An important aim was also to generate greater understanding and acceptance of the plan by stakeholders by making planning options transparent and laying out the planning process in a series of logical steps.

Challenges and obstacles identified

The EGD is perceived as rather abstract by stakeholders and in need of interpretation by national policy. It is also perceived as contradictory with respect to its goals: since there is not enough space in the German EEZ to deliver on all EGD objectives, priorisation and trade-off decisions are needed. Smaller sectors are concerned that they may lose out against larger more powerful sectors. A national maritime strategy could help to decide how to deal with contradictory objectives. For planners, one of the key challenges is that the maritime spatial dimension of EGD objectives is not always apparent. There is also the limited scope of MSP: While the plan can achieve direct steering effects through area designations, it relies on other tools to implement some of its policies and with this EGD objectives. A challenge specific to the German EEZ plan is its lack of a direct connection to the coast which restricts the relevance of some EGD topics. The plan also had to include aspects that contradict the EGD, such as making provisions for hydrocarbon extraction.

COUNTRY SUMMARIES: ITALY

MSP in Italy

Italy has developed three MSP draft plans (hereafter referred as the plans), made available for public consultation on September 15th, 2022. The three plans refer to the following maritime areas of the Mediterranean Sea: the "Tyrrhenian - Western Mediterranean", the "Ionian - Central Mediterranean" and the "Adriatic". The plans apply to the territorial waters up to 12 NM (nautical miles), the continental shelf and the ecological protection zone (West Mediterranean, Ligurian and Tyrrhenian Sea). The plans consider a multi-scalar approach with maritime areas, sub-areas, and planning units (the latter providing MSP zoning). This approach is reflected also in the definition of objectives and measures: both national and regional level (sub-area scale) are considered for plans' objectives (strategic objectives and specific objectives, respectively) and plans' measures (national measures and sub-area measures are identified). The draft plans are still under finalisation, based on the results of the public consultation and the Strategic Environmental Assessment consultation which has not been officially closed yet.

The European Green Deal in Italian MSP Plan

1. Climate change mitigation

Climate change mitigation and decarbonization of maritime sectors are considered in the vision, strategic objectives and measures of the plans, supporting the European and national decarbonization and energy transition objectives. Climate change mitigation is considered as a transversal topic: from renewable energy production, storage and transportation to clean energy transition in maritime sectors, transformations in ports and blue carbon storage. No quantitative objectives for marine renewable energy are foreseen by the plans that, for this purpose, refer to the current version of the National Integrated Plan for Energy and Climate (PNIEC) and its next evolution.

2. Climate change adaptation

Climate change adaptation is addressed in the vision, strategic objectives and measures of the plans. Adaptation is tackled in relation to differen aspects: need to improve the understanding of climate change effects on MSP (cross-cutting measure); improved coastal protection and resilience through measures focusing on green infrastructures; improved protection of biodiversity, habitats and ecosystem through a specific package of provisions and measures. Concerning the first aspect, to strengthen its provision in relation with climate change adaptation and fill the current gaps, the plans include a cross-cutting measure foreseeing the development of a study on the impacts of climate change on the plans and on the identification of adaptation measures, to be considered in the mid-term assessment and revision of the plans.

3. Sustainable seafood production

The vision and objectives of the plans foresee that fisheries and aquaculture are developed in a sustainable and efficient way, pursuing a sustainable use of fishery resources, with the objectives of protecting and rebuilding stocks and promoting the development of small-scale fisheries practiced with sustainable techniques, also in synergy with other sectors, in order to add value to the product and provide benefits for the local communities. Sustainability of both fisheries and aquaculture are targeted by various measures of the plans. The plans integrate the existing fishing management measures already in place within: Marine Protected Areas (MPA), Biological Protection Zones (BPZ), Fishery Restricted Areas (FRA), deep sea (below -1000m) and the zone within the 3NM or within the bathymetry of -50 m where trawling is forbidden. Some planning units have been assigned with aquaculture and/or fishery as priority use. In all others these activities are always allowed, where not specifically forbidden.

4. Biodiversity and ecosystem protection and restoration

The vision of the plans foresees that biodiversity, landscape and cultural heritage protection are recognized as cross-cutting, overarching principles for all plan provisions. Several measures dealing with biodiversity and ecosystem protection and restoration are included in the plans. The plans also promote coexistence between specific economic activities (e.g. fishing and tourism) and ecosystem protection, aiming at developing synergies between their related needs. The plans target the ecosystem restoration by foreseeing the preparation of a National Plan for Environmental Restoration. The plans consider all areas at sea aready identified for natural protection (inclusing MPAs and Natura 2000 sites) and do not identify new MPA but indicate nature conservation as a priority in large areas having suitable characteristics to considered for nesignation of new MPAs.

5. Blue Circular Economy

The vision of the plans foresees that maritime activities are reorganised, exploiting the opportunities offered by the circular economy. The plans consider the circular economy as one key component of the cross-cutting, overarching principle of sustainable development. In addition, circular economy is addressed by a rich package of specific sector measures targeting e.g. shipbuilding and repair, fishing and aquaculture.

6. Zero pollution

The vision of the plans foresees that their implementation should guarantee the achievement and the maintenance of Good Environmental Status of marine waters (ex MSFD). The vision also clearly states that all maritime sectors should have a role in the reduction of polluting emission, waste and introduction of alien species in the environment. To this regard, within their strategic objectives, the plans target the minimization of pollution derived from maritime transport and port activities, in particular.

Fair and just transition

The Italian plans are the results of a co-design process involving Ministries and Regions, aiming at getting benefits from both national and sub-national knowledge and expertise, as well as at coherently responding to the needs of the two governance levels. Local data about coastal and underwater cultural heritage sites and values as well as protected landscape areas were also made available at sub-national level by the superintendencies (local branches of the Ministry of Culture). The planning process did not include a socio-ecomic assessment of the plans' effects; a specific measure is included in the plans to fill this gap in view of their future adaptation.

Challenges and obstacles identified

The plans have been commented to be somehow generic and their effect is expected to be limited if more detailed provisions will not be identified during the implementation phase. Lack of identification of areas suitable for offshore wind energy development has been identified as a main gap in the context of the consultation phase. Issues related with limited space availability were pointed out as an important challenge for some areas. Some gaps still persist regarding some spatial data: this is for example the case of the distribution of fishing areas of small-scale fisheries that was tnot possible to documente in the plans. Limited integration of climate-change impacts and adaptation in the MSP plans and their provisions has also been pointed out, specifically in relation with the formulation of climate change scenarios and projections, the identification of most impacted areas and of related the relative area-specific measures.

COUNTRY SUMMARIES: LATVIA

MSP in Latvia

In Latvia there is one national level long term maritime spatial plan - "The Maritime Spatial Plan for the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia".

The Maritime spatial plan of Latvia 2030 was approved by the Government on 21 May 2019. Responsible authority for elaboration, implementation and assessment of the MSP is the Ministry of Environmental Protection and Regional Development of the Republic of Latvia (MoEPRD). The legal base for MSP (including the responsible authority) is laid down in the Spatial Development Planning Law of Latvia enforced on 1 December 2011. The Latvian MSP consists of four parts: the explanatory part, strategic part, description of the permitted use of the sea and the graphical part. It is both a strategic and legally binding planning document which includes long-term vision for the use of the sea with strategic priorities and MSP solutions part with zoning as well (e.g. priority uses of the marine waters). So far, the first cycle of MSP in Latvia consists of the elaboration of the first MSP (2014 – 2019) and interim assessment (MSP evaluation in 2023).

The European Green Deal in Latvian MSP Plan

1. Climate change mitigation

Latvia's Strategy for the low-carbon development by 2050 draft version was considered when elaborating the Plan. One of Latvian MSP priorities is offshore renewable energy production – offshore wind energy. Latvian MSP considers 5 offshore wind farm energy zones (6% of total MSP area), but it is not indicated how much energy those areas are supposed to produce. There are no specific quantitative objectives, but in the climate section of the Plan the reducing of carbon emissions via port infrastructure development is noted.

2. Climate change adaptation

Currently the MSP considers that climate change by 2030 in general could have a relatively small but negative impact as the impacts of the change will result in a reduction in the stability of the marine ecosystem, as well as potential changes in the distribution of species and habitats, which may necessitate a reassessment of the existing and planned network of marine protected areas.
To some extent issues on protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes are noted like the issue of coastal erosion. In the Latvian MSP there are some measures regarding coastal (dune) protection in case of high erosion risk. Action plan of the MSP sets the task 3.4 to be done until 2030: "To develop spatial solutions (measures) for minimising erosion effects, including identifying sites suitable for extraction of sand for beach nourishment, as well as places that require beach nourishment, without posing a risk of negative impact on the marine ecosystem."

3. Sustainable seafood production

As one of six strategic priorities defined in Latvian MSP is sustainable fisheries. Existing information on the most important fishing areas has been assessed to consider and designate other sea use zones. Fish nursery areas, spawning grounds were identified. Also, fish catch data (both statistics and spatial distribution even per species) is included in the MSP to be considered in the licensing process. The Latvian MSP does not include zoning for aquaculture. There are no specific quantitative objectives set for aquacultures, but a list of conditions and recommendations for aquaculture development areas in the MSP.

4. Biodiversity and ecosystem protection and restoration

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. In the line of strategic objective there are lists of measures requiring qualitative assessment included in the MSP. Territories of marine protected areas 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.

5. Blue Circular Economy

The Latvian MSP sets circular economy principles for disposal site operations. Traditionally, sediment material from the dredging and maintenance of ports and shipping lanes has been used in construction processes or deposited at sea in officially designated disposal sites. Dumping the sediment from dredging into the sea is considered a wasteful use of natural resources. The MSP points out that the use of these resources for construction and port development should be considered, as well as for beach nourishment, thereby reducing the risk of coastal erosion.

6. Zero pollution

The MSP includes indirectly the zero-pollution principle in the plan of measures. The MSP addresses mainly pollution prevention issues related to maritime traffic and ports and aquaculture as well. In particular, the Latvian MSP plan highlights the need to reduce the total load of nitrogen and phosphorus in the Gulf of Riga and the Baltic Sea, as well as the spread of alien species, harmful chemicals and solid waste, and with that calls upon a methodology to evaluate spatial cumulative impacts from the use of the sea as part of the EIA process.

Fair and just transition towards EGD

To ensure stakeholder participation in the MSP development process, the Maritime Spatial Planning Working Group was established in 2014. It was initiated to ensure the regular involvement and participation of government institutions, planning regions, coastal municipalities and members of the public in the marine spatial plan process, ensuring coordination and exchange of information on sectoral policy objectives and development interests. In 2022 the new Maritime and Coastal Spatial Planning Coordination Group was formed by merging two pre-existing working groups - the Maritime Spatial Planning Working Group and the Coastal Cooperation and Coordination Group, as the issues they address often overlap and involve all relevant authorities. A national geo-portal is used to ensure access to MSP and MSP spatial data by relevant stakeholders. Part of MSP spatial data as web services for download are available also in Latvian open data portal. During the whole elaboration process of the Plan (and the SEA process), consultations with stakeholders provided the feedback on the impacts on different groups.

Challenges and obstacles identified

One of the main challenges including EGD and related policy elements within the MSP seemed to point out contrasts between maritime sector development and nature protection. While the EGD states that biodiversity should be protected, it also states that marine energy should be developed. Therefore, cooperation between different interests, understanding the effects of one action and their compensating mechanisms is crucial.
With the development of new sea uses for the Blue economy an impact on traditional sea use sectors is expected. For example, with the development of the renewable energy sector, traditional uses may have new physical obstacles to free movement in the sea.
Limitations in the MSP process itself and policy fragmentation regarding the implementation of the EGD is another challenge. For instance, the question is how to translate quantitative measures into MSP to integrate EGD objectives.

COUNTRY SUMMARIES: SPAIN

MSP in Spain

The Royal Decree 363/2017 establishes a framework for MSP in Spain, which is an extension of the Law 41/2010 on the protection of the marine environment, which implement Marine Strategies Framework Directive (MSFD). Legally, Spanish MSP and Marine Strategies are linked and have the same Competent Authority (Ministry for the Ecological Transition and the Demographic Challenge). The Maritime Spatial Planning Plans (POEM) agree with the environmental objectives of the Marine Strategies and are applied in 5 marine demarcations defined by the Law 41/2010. POEM have been approved by the Royal Decree 150/2023, being legally binding. The plans are not driven by any vision or strategy but constitute their objectives from policies, plans and strategies in relation to maritime uses and activities and Blue Economy at international, European and national levels. POEM have one general planning objective and others grouped in three categories: general-interest objectives, horizontal planning objectives (multi-sector) and sectorial planning objectives. Zoning have been designed for different maritime uses and activities differentiating Priority Use Areas (PUA) and High Potential Areas (HPA). For the implementation of the POEM, measures have been proposed for the first cycle of MSP.

The European Green Deal in Spanish MSP Plan

The European Green Deal (EGD) is mentioned in the Royal Decree 150/2023 although the Spanish MSP process started before the approval of the EGD, so that not all its aspects are totally integrated in the process.

1. Climate change mitigation

Climate change (CC) mitigation is considered in strategic objectives and measures of the POEM, supporting the objectives of the PNIEC (National Integrated Energy and Climate Plan), the Roadmap for the development of offshore wind and sea energies in Spain, the Spanish Strategy for Science, Technology and Innovation 2021-2027 and the State Ports Strategic Plan. CC mitigation is viewed as a cross-cutting topic comprising the renewable energy production, storage and transportation, focusing on the establishment of HPA for the development of offshore wind, considering landscape impact, fishing sector, and marine ecosystems affected; clean energy transition in maritime sectors by studying the prospective of the blue economy and blue growth strategy; and transformations in ports.

2. Climate change adaptation

CC adaptation is addressed in specific objectives and measures of the POEM in order to achieve the objectives of the EU Biodiversity Strategy for 2030 and the Strategy for Adaptation to Climate Change on the Spanish Coast. Regarding the need to improve the connectivity and resilience of marine ecosystems the Marine Green Infrastructure (MGI) elements contributing to nature-based solutions are incorporated; the protection of biodiversity is tackled through measures focusing on improving coastal resilience, identification of Marine Protected Areas (MPA) and declaration of Marine Reserves for Fishing Interest (MRFI); in addition to the anticipation of climate change-related effects by addressing erosion and the conservation of the maritime-terrestrial public domain, considering land-sea interactions.

3. Sustainable seafood production

Sustainable seafood production is included in the specific objectives and measures of the POEM. Regarding the objectives of the Pluriannual Strategic Plan for Spanish Aquaculture 2021-2030, spatial planning is aimed at protecting the marine ecosystem in established PUA and HPA including measures for elaboration of management instruments for the declared Zones of Interest for Aquaculture (ZIA) and Zones of Interest for Marine Cultures (ZICM). In terms of sustainable fishing, actions focus on achieving maximum sustainable yield of commercial species and reduce the negative impact of fishing. Thus, although strategic objectives are absent, the POEM include MRFI sites as part of the PUA in order to protect, regenerate and develop resources for the maintenance of sustainable fisheries.

4. Biodiversity and ecosystem protection and restoration

POEM incorporate specific and strategic objectives as well as MSP measures to be implemented in order to address biodiversity, ecosystem protection and restoration aligned with international commitments, European directives and national policies. POEM aim to improve connectivity and resilience of marine ecosystems through the incorporation of the MGI elements and including current and future MPA through different protection tools by the designation of PUA and HPA for the protection of biodiversity.

5. Zero pollution

Among the specific objectives outlined in the POEM, the emphasis lies on pollution prevention, particularly concerning water treatment and quality. This entails averting adverse impacts of land-sea discharges on human activities and the environment, as well as safeguarding coastal water status.

Fair and just transition

In the Spanish MSP process, an MSP interministerial technical working group was formed in the framework of Spanish Marine Strategies, encompassing the Ministries with competences at-sea, and with the participation of the autonomous communities through the Marine Strategies Monitoring Committees for each marine demarcation. In addition, *ad hoc* groups tackled emerging issues, including the involvement of other stakeholders. To ensure accessibility of plan-related data information, the InfoMAR geoportal was developed, consolidating data and geographical information. In terms of an ecological transition towards a low-carbon economy and efficient in the use of resources, POEM aim to contribute efficiently and equitably towards decarbonization and, linked to the previous one, just transition in terms of employment. Moreover, one of the measures is the development of a prospective study and socio-economic characterization of various sectors of the Spanish blue economy.

Challenges and obstacles identified

Challenges integrating EGD objectives in the POEM focus on the MSP process itself, regarding the complexity of the legal system, limitations, integration of different policy objectives, lack of data, societal needs and difficulties in managing expectations of different stakeholders. The interviewees suggest improving communication with actors, coordination with the MSFD, application of the precautionary principle, assessing efficiency in the ecosystem-based approach application and to define priorities in the implementation of the EGD elements. Although the POEM have included some objectives of the EGD, since these MSP plans have recently been approved, time is still needed to evaluate their results.