Work Package 4: Socio-ecological management framework for MPAs and MSP integration

Deliverable 4.4: Strategic Guidance for the Integration of MPA and MSP Processes on Multiple Governance and Ecosystem Levels

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Abstract	Deliverable 4.4 Part 1 of the MSP4BIO project focuses on developing comprehensive strategic guidance for integrating MPAs within MSP processes across diverse governance scales and marine ecosystems. This document outlines a structured screening process that includes an expert judgment phase and a criteria checklist to facilitate MPA integration throughout the entire MSP lifecycle — from plan preparation to implementation, monitoring, and revision phases. By examining current practices within European Union (EU) Member States, this deliverable identifies key criteria that have guided MSP development and evaluates whether and how MPAs are integrated into these processes. Four primary relationships between MPAs and MSP are identified: (1) conservation as a driver for MSP, exemplified by the Great Barrier Reef; (2) full integration of conservation into MSP, as seen in Sweden; (3) integration through Strategic Environmental Assessment (SEA), noted in Spain; and (4) conservation as a layer in MSP, as practiced in Portugal. Key considerations for successful integration include policy frameworks, identification of MPA networks, spatial analysis, stakeholder engagement, ecosystem-based management, adaptive management, capacity building, evaluation, and compliance with SEA requirements. The document emphasizes the importance of stakeholder involvement and feedback throughout the MSP process to enhance collaboration and efficacy in the integration of MPAs into marine planning frameworks.
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Acronyms

ATO:	Atlantic Ocean
BAS:	Baltic Sea
BS:	Black Sea
CABs:	County Administrative Boards
CIA:	Cumulative Impact Assessments
CFP:	Common Fisheries Policy
EBA:	Ecosystem-based Approach
EBSA	Ecologically or Biologically Significant Marine Areas
EEZ:	Economic Exclusive Zone
EIA:	Environmental Impact Assessment
ES:	Ecosystem Services
ESE:	Ecological-Socio-Economic
EMMA:	Ecologically significant marine underwater areas
EU:	European Union
GES:	Global Environmental Status
GIS:	Geographic Information System
HELCOM:	Helsinki Commission for the Marine Environmental Protection of the Baltic Sea
ISRAs:	Important Marine Areas
MOEW:	Ministry of Environment and Water
MONS:	Monitoring, Research, Nature Enhancement, and Species Protection
MPA:	Marine Protected Area
MS:	Mediterranean Sea
MSFD:	Marine Strategy Framework Directive
MSP:	Maritime Spatial Planning
NGO:	Non-Governmental Organization
NS:	North Sea
ORs:	Outermost Regions

OWF:	Offshore wind farms
PHAROS4MPAs:	Blue Economy and Marine Conservation: Safeguarding Mediterranean MPAs in order to achieve Good Environmental Status
SAC:	Special Area of Conservation
SDGs:	Sustainable Development Goals
SEA:	Strategic Environmental Assessment
SPA:	Special Protection Area
SPED:	Strategic Plan for Environment and Development
UAc:	Universidade dos Açores
UNESCO	United Nations Educational, Scientific and Cultural Organization
VASAB:	Vision and Strategies Around the Baltic Sea
WFD:	Water Framework Directive
WP:	Work Package
WWF:	World Wildlife Funds

1. Introduction

Maritime Spatial Planning (MSP) is an important integrative and adaptive approach for managing the increasing and often competing demands for maritime space. It contributes to the sustainable use of marine resources while safeguarding ecosystem health. A central component of MSP is its capacity to integrate multiple sectors, governance levels, and ecological considerations into a cohesive planning framework.

The implementation of Marine Protected Areas (MPAs) is an important measure used to guarantee the protection of marine ecosystems. When well-managed, these areas contribute to biodiversity conservation and restoration, the maintenance of ecosystem services (ES), and ecosystem resilience, which are essential for human well-being.

The MSP4BIO project aims to integrate science and policy to strengthen the protection of marine biodiversity within a European network of MPAs. Funded by the European Union's Horizon Europe Research and Innovation Programme, its primary goal is to develop an integrated and modular Ecological-Socio-Economic (ESE) management framework that allows the effective and coherent integration of area-based conservation measures into spatial planning processes. Deliverable 4.4 Part 1 of the MSP4BIO project focuses on developing comprehensive strategic guidance for integrating MPAs within MSP processes across diverse governance scales and marine ecosystems. This document provides practical insights and a criteria checklist to facilitate MPA integration throughout the entire MSP lifecycle —from plan preparation to implementation, monitoring, and revision phases. By examining current practices within European Union (EU) Member States, this deliverable identifies key criteria that have guided MSP development and evaluates whether and how MPAs are integrated into these processes.

The methodology employed is a mixed-method approach, with a literature review to support an open-ended questionnaire and a systematic list of criteria to analyse the experiences of EU member states in their MSP efforts. The approach seeks to uncover best practices, gaps, and opportunities for enhancing the synergy between MSP and MPA. The aim of this analysis is not judgmental, meaning that it does not seek to evaluate the processes in "Right/Good" or "Wrong/Bad" but rather to collect insights from real-world cases, ensuring that the resulting guidance is both theoretically grounded and practically applicable.

Adjustments on the countries analysed in Deliverable 4.4 Part I were made due to practical constraints and evolving collaboration opportunities. Specifically, some countries initially proposed (such as Seychelles and Australia) were replaced because essential information or responses were not received within the required timeframe, making it challenging to complete the analysis as planned. Additionally, the opportunity for the analysis of Tawain emerged and was accepted as giving a non-EU perspective.

This deliverable builds upon the overarching goals of the MSP4BIO project, contributing to the development of an integrated ESE management framework. The outcomes aim to support policymakers, planners, and practitioners in advancing sustainable marine governance strategies by supporting the integration and synergies between MPA and MSP processes, ultimately fostering biodiversity conservation and promoting long-term ecological and socio-economic resilience.

2. Objective and Methodology

The variation in wording between "MPAs and MSP integration" and "MPAs integration in MSP" reflects the difference in scope and feasibility at the current stage of implementation. "MPAs and MSP integration" represents the ultimate goal of fully harmonising MPAs with MSP processes, ensuring a comprehensive and seamless alignment of objectives and policies. However, given the varying levels of progress across the EU, complete integration of MPAs and MSP is currently not feasible. Consequently, the term "MPAs integration on MSP" is used to describe an incremental approach where MPAs are incorporated into MSP frameworks as a foundational step toward achieving the broader goal.

The deliverable aims to establish a systematic approach to MPA-MSP integration through the:

- Screening and Analysis of developed MSPs across EU sea basins

- Consideration of diverse planning approaches and maturity levels - Development of guidance for integration of MPA and MSP processes

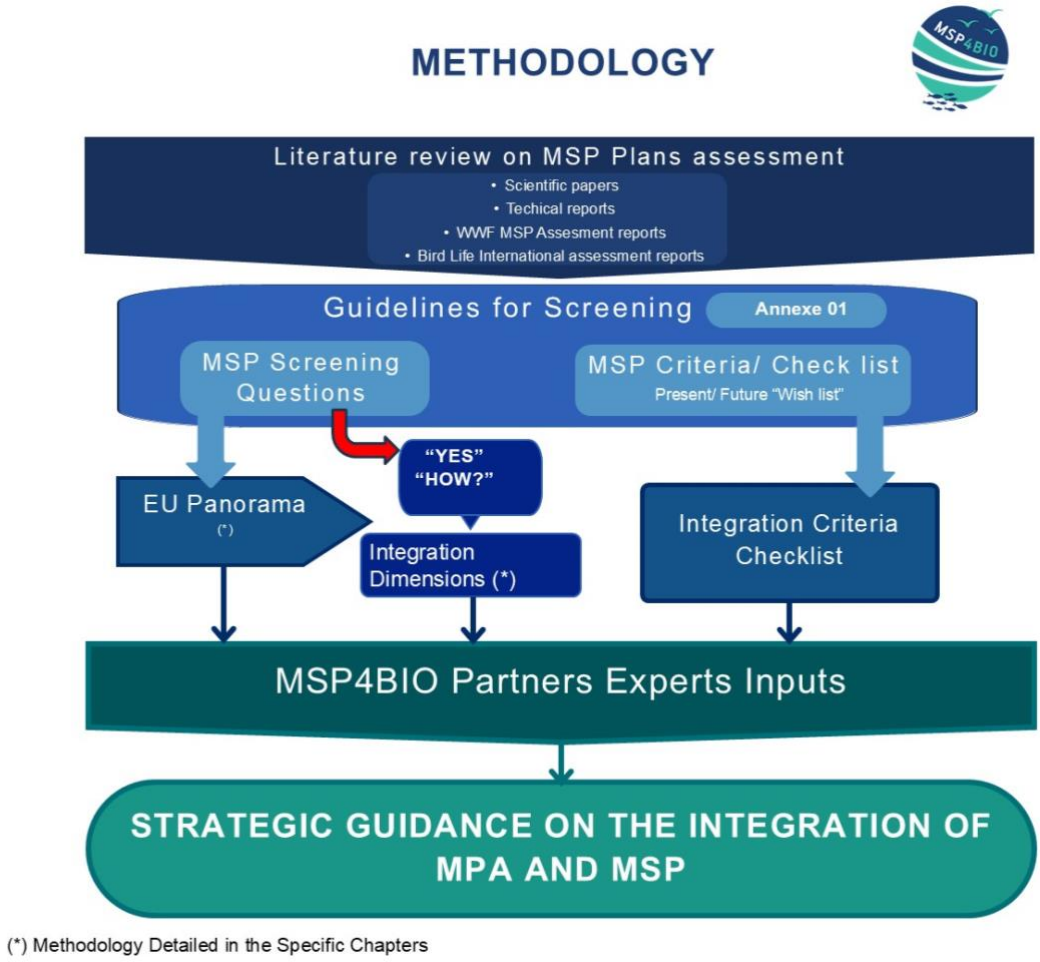


Figure 1: Deliverable Methodology

Understanding the relationship between conservation and the MSP process

Task 4.1 Part I was organised into three main steps, each designed to explore integrating conservation measures and MSP (

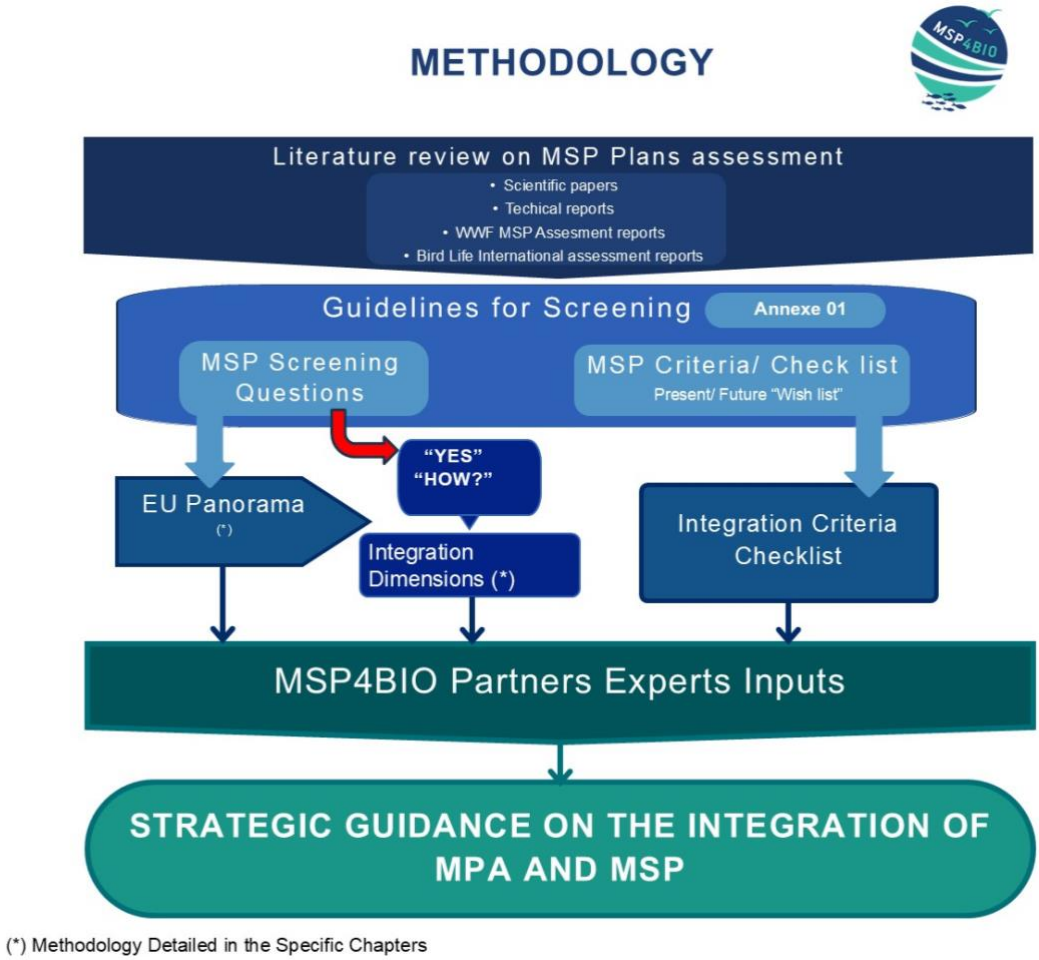


Figure 1). First, a comprehensive literature review on plans assessment was conducted combining existing guidelines, scientific papers and relevant documents addressing the integration of conservation efforts within MSP processes. As MPAs integration in MSP is a theme not deeply addressed other features were included in this review, mostly those referring to some kind of analysis of MSP processes. This review aimed to identify the main features that underpin sustainable maritime planning. Second, building on the review's findings and the expertise of project members and partners, a set of open-ended questions was developed to examine the relationship between MPAs and MSP (Guidelines for Screening – Annex 01). These questions addressed a broad range of themes, including policy and legal frameworks, MPA network design and ecological coherence, spatial analysis and mapping, stakeholder engagement and consultation, ecosystem-based management, adaptive management and monitoring, capacity building and knowledge sharing, evaluation and review processes, and Strategic Environmental Assessment (SEA). Third, an MSP criteria checklist comprising 93 criteria was utilised to assess whether these elements had been incorporated into MSP plans. These criteria were derived from well-established sources for MSP plan evaluation, including WWF (2022), WWF European Policy Office (2021, 2022a), Ehler (2014), UNESCO-IOC/European Commission (2021), and BirdLife International (2022) (complete

list in Annex 4). The criteria were categorised into four key areas: Environmental (n=25), Socioeconomic (n=30), Policy and Governance (n=21), and Planning Process (n=17); the latter included other criteria related to the MSP process.

The research included data from all EU countries with MSP, in total 20 out of the 22 coastal Member States of the MSP Directive, as well as Taiwan. These countries are: Belgium, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain, and Sweden. Croatia and Greece were excluded from the analysis due to the early stage of MSP development in these countries. Taiwan was included as a point of comparison in the report, serving as a reference for a non-EU country to support a broader, worldwide application of the guidance on integration. A detailed review of MSP documentation from each of these countries was conducted, providing a comprehensive overview of their planning processes. This analysis aimed at obtaining a wide view through the input of two local experts (a member of the planning team, an officer member, or a responsible partner). These experts provided insights on the open-ended questions and the applicability of the criteria, offering in-depth analyses of the integration of MPAs and MSP. They identified which criteria were already addressed in the plans and highlighted those that, while absent, were deemed important to consider for future inclusion. Additionally, experts evaluated the importance of each indicator for fostering effective integration of MPAs and MSP in coastal, offshore, and high seas areas. The importance of each criterion was ranked on a scale from 1 (least important) to 3 (most important).

Moreover, the relationship between conservation efforts and MSP among the 21 countries was classified into four distinct Key levels/categories, which are defined based on the literature review and well-known experiences:

1. **MPA as the driver for MSP** – where conservation serves as the primary motivation for initiating MSP processes. The iconic representation of this level is the Great Barrier Reef. But others, such as the Seychelles fits also in this key level.
2. **MPA fully integrated into MSP across sectors** – where conservation is seamlessly embedded within MSP, influencing multiple sectors, adopting a robust conflict-solving identification and establishing a clear methodology/guide for integration.
3. **MPA integrated through SEA or other Environmental Spatial Strategy** – where SEA, or other Environmental Spatial Strategies (as the declaration of 'Conservation Priority Zones'), serve as mechanisms for incorporating conservation goals into MSP in the actual scenario or/and in the long term.
4. **MPA as a layer or sector in MSP** – where conservation is treated as a specific sector or layer within the broader MSP framework.

Data Processing and Analysis

Spreadsheets containing responses from two experts from each country on the current use, potential future use, and area-specific importance of the criteria were consolidated to enable a comprehensive analysis. Divergent responses for the same country were evaluated based on the accompanying comments provided by the experts. Each case was carefully analysed, and a final decision was determined accordingly. For example, in the question regarding comprehensive public consultation, the initial responses included both 'Yes' and 'No.' However, after reviewing the details provided in the comments—highlighting public consultations, parliamentary committee discussions, and SEA consultation—the final decision was recorded as 'Partial'. It is important to note that the responses reflect the knowledge and perspectives of the interviewees, which may not fully represent the actual national context. Additionally, responses regarding the potential future use of the criteria might be less explicit, as they often reflect the interviewees' intentions rather than formal or ongoing institutional agreements. This is particularly evident in the responses provided by governmental agents.

Experts indicated whether a given criterion was currently used or could potentially be used in the future by answering Yes, Partial, or No. For each criterion, the number of “Yes” responses in the 'Satisfied/Covered in Actual Plan' field was summed to calculate its frequency of use. In addition, for each criterion, the average importance for the three areas together was calculated. To identify the most relevant criteria across countries, sea basins, and different MPA/MSP relationships, both the frequency of use and the average importance scores were combined to rank all criteria (see the selection process in Annex 7). Those that were most frequently used and highly rated in importance were considered the key criteria. To facilitate visualisation, the top 25% most frequently used criteria were selected (Annex 2).

The assessment of the EU sea basins included the Baltic Sea, Black Sea, Mediterranean Sea, North-East Atlantic, and North Sea. For countries spanning multiple sea basins, interview results were considered for all relevant basins, except in the case of Germany, where two separate interviews were conducted: one for the Baltic Sea and another for the North Sea.

Portugal also had two interviews, one for Madeira and another for the Azores, even though both regions represent the North-East Atlantic. The results were combined to analyse the country as a single entity. In this case, only criteria with positive responses in both interviews were considered satisfactorily covered; otherwise, they were categorised as partially or not covered.

A chi-square test was conducted to determine whether the use of criteria varied between sea basins. The frequency of use was also applied to identify variations in criteria usage across countries, including Taiwan, for general comparison, as well as the ten most used criteria by category. The former aimed to identify countries where the use of criteria still needs improvement. The most relevant criteria were identified by ranking those with the highest number of 'yes' responses, followed by those with the most partial use.

Regarding the coastal, offshore, and high seas areas, the average importance of each criterion was calculated for each area separately to identify the most relevant ones for integrating MPAs into the MSP framework. The top 10% and top 25% key criteria were selected using quantiles and percentiles. Specifically, the top 10% were selected by filtering the criteria with importance values greater than the 90th percentile (P90). Similarly, the top 25% were chosen by filtering criteria whose importance values exceeded the 75th percentile (Q3) of the average importance. The complete list of criteria was compiled in Annex 02.

Based on the responses from the guidelines and criteria tables, countries that reported using, even partially, the Cumulative Impact Assessments (CIA) were classified as having implemented CIA. The key criteria utilised by both countries with and without CIA were identified based on their frequency of use. In addition, a comparative analysis was performed to evaluate the differences between these two groups. A chi-square test was used to identify potential variations in criteria usage between these groups, offering valuable insights into their differing approaches.

Aiming to identify potential gaps or areas where the application of criteria could be more effective, all 93 criteria were grouped into preplanning, planning, and implementation phases based on the phase in which they could be applied. Additionally, the interest in using these criteria in the future was assessed by considering the responses of countries that did not apply those criteria in the MSP process in order to determine which ones had the highest percentage of potential future use. Furthermore, criteria with the lowest "satisfied covered" scores were assessed regarding the percentage of interest in using them in the future. This approach allowed for identifying potential areas of improvement and future implementation based on the countries' expressed preferences. All statistical analyses were performed using R software (version 4.4.1), with support from the dplyr and stats package.

The questions (Annex 1) to feed the guideline were analysed using a three-step approach. First, the questions were broken down into more specific sub-questions, each focusing on distinct aspects of the broader question. Second, the most relevant questions were identified based on the frequency of positive ('yes') responses (>50%), considering the responses from all countries collectively. The data for each sea basin was also analysed. For the Black Sea, which is represented by two countries, the questions deemed most important were those that received positive responses from both countries. Third, for each of these combinations, the responses related to “how” each objective of the question was addressed, were synthesised, summarising the key insights and approaches. When responses were too superficial or general, the answers were synthesised by combining the related sub-questions, allowing for a more comprehensive understanding of the topic.

Methodology for the Organization and Standardization of MSP Data

This methodology explains the process of organising and standardising MSP data collected from various countries. Its primary goal is to facilitate comparative analysis and ensure structured information visualisation.

The countries included in this study were Belgium, Germany, the Netherlands, France, Cyprus, Slovenia, Spain, Estonia, Finland, Latvia, Poland, Sweden, Romania, Bulgaria, Ireland, Portugal (Madeira), Taiwan, and Denmark. This selection spanned a broad range of marine regions and showcased diverse approaches to spatial planning, covering areas such as the North Sea, Mediterranean Sea, Baltic Sea, Black Sea, Atlantic Ocean, and Pacific Ocean. Each country was represented in the spreadsheet with a tab named accordingly.

To further enhance clarity, the tabs were grouped by sea basin, using the following labels: NS (North Sea), MS (Mediterranean Sea), BAS (Baltic Sea), BS (Black Sea), ATO (North-East Atlantic), and Taiwan.

Once collected, the data were organised in an Excel spreadsheet, with specific columns structured to maintain clarity and consistency.

The “Group” column categorised the questions into thematic areas such as “Policy and Legal Framework” or “Identify MPA Networks”. This helped cluster the questions by specific evaluation topics, providing an overarching view of each area. The “Question” column contained the specific questions used in the questionnaire, designed to evaluate core MSP elements like MPA integration, spatial analysis tools, and stakeholder engagement processes. Responses to these questions were recorded in the “Answer” column, categorised as “Yes”, “No”, or “Maybe” to reflect the initial analysis of documentation and the status of the criteria being evaluated. To make the data more visually intuitive, these responses are color-coded: green for “**Yes**,” red for “**No**,” and orange for “**Maybe**”.

This colour-coding enhanced clarity and efficiency, allowing analysts to spot patterns quickly and identify critical areas needing attention. Green highlighted successful outcomes that fully meet the criteria. Red-flagged gaps or shortcomings, emphasising areas requiring improvement. Orange signalled ambiguity, prompting further investigation. The implemented approach provides a simple strategy to screen large datasets, helping to identify patterns and inconsistencies without requiring a detailed initial textual review. It also enhances communication when findings are presented in reports or presentations, making the data more accessible to decision-makers, stakeholders, and technical teams.

The “How?” column elaborated on the rationale behind each response, providing explanations based on document analysis or expert insights.

The “Comments” column recorded supplementary observations, including limitations, points needing further inquiry, or general notes that don’t align with other columns (Figure 2).

Question	Answer	How?	Comments
4.4. Was input specifically sought on MPA management objectives to enhance acceptance and promote collaborative decision-making?	Maybe		it does not explicitly state whether input on MPA management objectives was specifically sought

Figure 2: Explaining "Comments" column

Emphasis was placed on data demonstrating compliance with national and international legal requirements, especially concerning protected areas. Responses with clear, detailed justifications, recorded in the “How?” column, were prioritised as they formed the foundation for validating classifications. The methodology also focused on identifying MPA networks, trying to ensure ecological connectivity, and using spatial prioritisation tools (e.g. Marxan) to locate suitable sites. Stakeholder engagement data, reflecting collaborative acceptance and support for proposed measures, was also highlighted. Responses marked “Maybe” underwent deeper scrutiny to identify conditions that could shift them toward a definitive “Yes” or “No”, often requiring going back to expert consultation to resolve ambiguities. Ambiguous responses were addressed through:

- Contexts were reviewed to uncover the causes of uncertainty, and keywords like “possibly”, “depends”, or “partially” were evaluated to interpret nuances. Responses were classified as “Yes” with restrictions if the criterion was partially met; “No” with potential if future plans could fulfil the criterion; or “Maybe”, indicating uncertainty or incomplete approaches. Justifications included relevant excerpts from documents and outlined conditions for clearer responses. Expert and stakeholder consultations helped clarify doubts.

All classification decisions were recorded to ensure consistent application of criteria across countries and contexts. Explanatory comments were added to the spreadsheet to facilitate future reviews and analyses. Responses were compared to similar data from other contexts to validate interpretations and minimise biases. Data organisations were conducted using Microsoft Excel, while official documents and interviews served as primary and secondary data sources.

3. EU Landscape

Sea Basin Analysis

During the first reading of the MSP screening across the EU, a clear conclusion was reached: It is not possible to establish a deep comparison among the EU sea basins due to the differing number of countries in each Sea Basin and with Marine Spatial Plans screened. Some, such as the North Sea Basin and Baltic Sea Basin, involve a larger number of countries actively implementing MSP, which enables deeper regional analysis. Conversely, sea basins like the Black Sea may have more limited representation, restricting comparative analyses. Furthermore, this approach allows room to focus on basin-specific details, as each sea basin has unique environmental conditions, governance structures, and challenges that merit individual attention rather than uniform comparison.

The EU Sea basins are analysed through their specific features, which stand out based on synthesising information from a preliminary reading of raw material. These features are explored in terms of ecological, economic, and governance dimensions, reflecting the uniqueness of each basin:

Atlantic Sea Basin: The analysis highlights established legal frameworks, the integration of MPAs within MSP, and ecosystem-based approaches. Challenges such as ecological coherence, monitoring gaps, and stakeholder conflicts in integrating traditional and emerging maritime sectors are addressed, showcasing the distinct regional dynamics.

North Sea Basin: This sea basin is recognized for leading offshore renewable energy integration alongside MPAs, with successful practices in this context. Persistent stakeholder conflicts and spatial planning challenges emphasize country-specific needs. Transboundary collaboration and multi-use spatial planning are key strengths in the region.

Mediterranean Sea Basin: Specific features include the ecosystem-based approach, balancing offshore and coastal connectivity, and efforts to strengthen institutional cooperation. The Mediterranean integrates conservation priorities within its plans but struggles with biodiversity hotspot identification and monitoring, socioeconomic evaluations, and connectivity assessments, essential for comprehensive planning.

Black Sea Basin: The analysis emphasizes regional cooperation, integration of MPAs with Blue Economy sectors, and adaptive management frameworks. Challenges such as connectivity assessments, biodiversity monitoring, and integrating ecological and economic priorities highlight unique regional pressures.

Baltic Sea Basin: The focus here is on integrating MPAs within MSP and fostering cross-border cooperation through regional bodies such as HELCOM. Strengths include tools for spatial alignment and stakeholder engagement, while weaknesses in legal harmonization and enforcement mechanisms underscore challenges unique to the region. The emphasis on ecological connectivity and cumulative impact assessment identifies nuanced regional priorities.

Summary of the Atlantic Sea Basin

The Atlantic Sea Basin includes some of the largest continuous Economic Exclusive Zones (EEZs) in Europe, as well as some Outermost Regions (ORs). This spatial feature — with larger, more remote areas — offers unique learning. Such regions provide invaluable insights into marine biodiversity and ecosystem management. They also highlight challenges in sustainability and governance due to their vastness and remoteness.

Evaluation of Deep-Sea Protection Measures:

The Atlantic Sea Basin demonstrates significant progress in deep-sea protection measures, particularly in Portugal and France, where well-established legal frameworks ensure the integration of MPAs within MSP. Spain and Ireland incorporate MPAs into MSP using ecosystem-based approaches, ensuring periodic reviews. However, there are notable gaps in the comprehensive assessment of the ecological coherence of deep-sea MPAs, particularly in Portugal and Spain. France requires improved monitoring frameworks to track biodiversity and long-term environmental impacts.

International Cooperation Mechanisms:

France, Spain, and Portugal have well-developed international cooperation mechanisms through European policy and regional agreements. Ireland actively participates in international maritime organisations to align conservation and economic strategies. Nevertheless, challenges remain in harmonising legal frameworks between countries, leading to inconsistencies in MPA management. Spain requires better mechanisms to facilitate data sharing and monitoring across jurisdictions. Improved legal harmonisation and data-sharing mechanisms will strengthen international cooperation efforts.

Integration of Traditional and Emerging Maritime Activities:

The integration of traditional and emerging maritime activities is progressing well in France, where offshore renewable energy is effectively incorporated into MSP, ensuring compatibility with MPAs. Spain and Ireland promote effective participatory maritime planning processes involving the fishing and tourism industries. However, conflicts between traditional industries such as fisheries and tourism and emerging activities like renewable energy and aquaculture persist in Portugal, and France requires improved spatial analysis tools to manage competing sectoral demands. Greater stakeholder coordination and improved spatial planning tools will help balance traditional and emerging maritime activities within MSP.

Table 1: Synthesis of the column "How" for North-East Atlantic.

North-East Atlantic	
Short Question	**Syntheses**
Feedback to Stakeholders	Feedback loops with stakeholders are integral to refining and improving marine spatial plans. By making the outcomes of public engagement and participation accessible, planners ensure that stakeholder concerns are incorporated into the final plans. This feedback process contributes to the legitimacy of MSP frameworks, ensuring that decision-makers are informed by the views and needs of those directly impacted by marine planning initiatives.
Identification of Existing MPAs	Identifying existing MPAs is essential for recognising key areas of biodiversity conservation within MSP. This process involves mapping areas that have already been designated as MPAs, marking them as Priority Use Areas for biodiversity conservation. To ensure effective management, the revision of strategic frameworks includes creating spatial maps that highlight ecological significance and the representation of habitats and species, which guide both the recognition of current MPAs and the identification of new ones. These mapped areas, whether already protected or under consideration, provide a clear framework for ongoing conservation efforts and the expansion of MPA networks.
Identification of Potential MPAs	Identifying potential MPAs is a crucial aspect of MSP, ensuring that ecologically significant areas are prioritised for conservation. Key strategies include creating spatial maps that highlight areas with high ecological value, such as those supporting critical habitats and species. These maps assist in guiding the revision of strategic frameworks and identifying potential MPAs for future designation. The inclusion of areas already in the process of formal approval or previously considered for protection is also important, ensuring the continuity of conservation efforts. Additionally, existing MPAs are marked as priority areas for biodiversity conservation, while areas with high potential for future MPA designation are identified and researched for future protection. This integrated approach supports the sustainable management and expansion of

	marine conservation areas, ensuring the long-term health of marine ecosystems.
Periodic Review of MSP and MPAs	Periodic review and adaptation of MSP and MPAs are essential to ensure that they remain effective in addressing evolving environmental conditions, new scientific findings, and shifting conservation objectives. Key strategies for successful review include using monitoring results to inform the process, involving stakeholder engagement, and considering emerging threats, legislative changes, and socio-economic factors. Reviews should allow for flexibility, such as adjusting MPA boundaries, designating new sites, or revising management measures as needed. This adaptive approach ensures that both MSP and MPA frameworks continue to provide adequate protection while fostering sustainable marine resource management, helping to identify risks early, minimise conflicts between marine activities, and maximise opportunities for the co-use of space.

Key Observations Table (Table 2**)**

Table 2: Key Observation table for North-Atlantic Sea Basin

Country	Strengths	Gaps
Portugal	Strong legal recognition of MPAs within MSP, established participation mechanisms, and	Gaps in assessing ecological coherence of MPA networks, limited ecosystem-based approach application.

	integration of MPAs into SEA.	
Spain	Early stakeholder engagement, and integration of MPAs within MSP zones.	Weak assessments of long-term ecological, economic, and social implications.
France	Effective cross-sectoral coordination, strong adaptive management, and detailed mapping of MPAs in MSP.	Limited analysis of biodiversity hotspots and monitoring of cumulative environmental impacts.
Ireland	Ecosystem-based approach incorporated, periodic review of MSP and MPA designations, and SEA integration.	Lack of spatial analysis tools for identifying MPAs and insufficient connectivity assessment.

Final Considerations

The **Atlantic Sea Basin** demonstrates significant progress in legal recognition, transparency, and stakeholder engagement, establishing a solid foundation for marine protection and economic integration. However, critical challenges remain that should be addressed as follows:

1. **For deep-sea protection measures:**
    a. Expand the use of spatial analysis tools and strengthen the evaluation of ecological connectivity.
2. **For international cooperation mechanisms:**
    a. Harmonize regulations, share best practices, and establish transboundary MPA networks.
3. **For the integration of maritime activities:**
    a. Prioritize cumulative impact monitoring and increase engagement of local communities and industries.

North Sea Basin Summary

Assessment of Offshore Renewable Energy Integration with MPAs:

The North Sea Basin is a leading offshore renewable energy integration region, with Belgium, the Netherlands, and Denmark successfully balancing energy development with MPA protections. Germany employs adaptive management strategies to maintain the equilibrium between marine conservation and energy projects. However, stakeholder conflicts between energy industries and traditional maritime sectors remain unresolved in Germany and Denmark. Norway is also advancing in offshore renewable energy coordination, particularly through regional cooperation initiatives. Strengthening multi-stakeholder engagement and refining adaptive

management practices will enhance renewable energy integration within MPAs.

Transboundary Protection Measures:

Transboundary protection measures are well-developed in Belgium and the Netherlands, where collaboration on MPA management is a priority. Germany and Denmark actively participate in regional conservation agreements to align protection measures across borders. Norway also participates in regional initiatives to support cross-border marine conservation efforts. However, the lack of harmonised monitoring frameworks across the region limits the effectiveness of transboundary conservation efforts. Denmark and Belgium need better coordination in enforcing cross-border marine conservation policies. Improved harmonisation of conservation policies and joint monitoring frameworks will strengthen transboundary MPA protections.

Multi-Use Concepts and Approaches:

Multi-use concepts and approaches are gaining traction in the Netherlands and Germany, where innovative spatial planning enables the coexistence of different marine activities. The Netherlands' North Sea Agreement (2020)—an arrangement between the government, environmental NGOs, and the fisheries sector—demonstrates how stakeholder collaboration can guide marine spatial planning and sustainable multi-use development. Belgium integrates tourism, fisheries, and conservation efforts within their MSP framework. However, limited policy coherence on multi-use implementation across the basin continues to impact Denmark. Stakeholder engagement in multi-use planning remains a challenge in Belgium and Germany. Developing clear policies and enhancing stakeholder collaboration will improve multi-use integration in MSP.

Table 3: Synthesis of the column "How" for the North Sea

North Sea	
Short Question	**Syntheses**
Adaptive Management Principles in MSP	Adaptive management in MSP ensures flexibility by allowing policies and zoning to be revised based on monitoring and new scientific data. Key areas are not pre-zoned, enabling decisions to be made with up-to-date information, such as for granting licenses or concessions. Regular monitoring and periodic updates, including adjustments like increasing protected areas, ensure the plan remains relevant and responsive to evolving needs.

Feedback to Stakeholders	Feedback to stakeholders is an essential part of the consultation process in MSP, ensuring transparency and accountability. After each consultation phase, a summary of stakeholder inputs and responses is provided. Key documents, such as consultation reports and analysis of public contributions, are shared to highlight the most important changes made to the plan and explain how stakeholder feedback was addressed. This includes publishing all responses received, ensuring comprehensive feedback and engagement, and fostering an inclusive decision-making process.
Habitat Representation in Existing MPAs	The representation of habitats in existing MPAs is a key consideration in the MSP process, focusing on the ecological significance and variety of habitat types. In some cases, specific habitat types, such as sandbanks and reefs, are given particular attention, as outlined in regulatory frameworks like the Habitats Directive.
Identification of Existing and Potential MPAs	The identification of existing and potential MPAs in MSP focuses on their ecological significance, habitat diversity, and connectivity. The process includes identifying areas important for biodiversity conservation, such as marine reserves aimed at protecting seafloor integrity, supporting restoration efforts, and conserving key species and habitats. Plans also prioritise the permeability of marine spaces for migratory species, ensuring that these species can access critical areas for their lifecycle. Regular reviews, such as those in updated MSP frameworks, help expand and legally recognise MPAs, ensuring areas like the 'Vlakte van de Raan' are officially designated for protection.
Knowledge Sharing for MPA Integration	Knowledge sharing for MPA integration is a key component of MSP, fostering stakeholder collaboration through structured consultation processes and bilateral meetings. This approach allows various interest groups to exchange experiences and perspectives, particularly in relation to nature conservation and MPA planning. Continuous monitoring and evaluation of MSP ensures the incorporation of up-to-date knowledge and data, supporting informed decision-making. The process also creates platforms for dialogue among authorities, businesses, and the public, leading to greater engagement and proactive discussions. As stakeholders recognise the strategic importance of MSP, the exchange of knowledge becomes essential in promoting diverse interests and facilitating effective MPA integration.

Mapping and Integration of MPAs in MSP	Mapping and integration of MPAs in MSP is facilitated through dedicated GIS platforms and map-based tools that allow for the visualisation of MPAs alongside other marine activities. These tools, such as the GeoSea Portal and other map viewers, enable stakeholders to assess potential overlaps between MPAs and maritime sectors, such as shipping, energy, and fishing. Maps are developed to show MSP zones and MPAs, highlighting areas of integration and potential conflicts. These spatial tools also support the identification of specific regimes, such as seasonal reservations or bird migration corridors, and help develop planning alternatives that balance multiple uses of marine space while ensuring effective conservation outcomes.
MPA Recognition in MSP Policies	MPA recognition in MSP policies is anchored in legal frameworks prioritising the protection of marine ecosystems and biodiversity. National water acts and environmental codes guide the MSP process, ensuring sustainable use of marine resources while meeting the objectives of the Marine Strategy Framework Directive (MSFD). Existing MPAs, such as those under Natura 2000 or national marine protected areas, are clearly identified and integrated into MSP policies, with specific actions for their enhancement, including restrictions on harmful activities like bottom trawling. Detailed coordinates and conservation objectives for each MPA, including specific species protection and activity restrictions, are also outlined in MSP documentation to ensure effective management and conservation.
Periodic Review of MSP and MPAs	The periodic review of MSP and MPAs is essential to ensure they remain effective in the face of evolving environmental conditions. Reviews are driven by new scientific data, emerging threats, and shifting conservation objectives. To support this, comprehensive monitoring and research programs, like the Monitoring, Research, Nature Enhancement, and Species Protection (MONS) program, provide ongoing data on ecological health and the cumulative impacts of human activities, aiding in adaptive decision-making. As part of the review process, the SEA evaluates alternative planning options and their environmental impacts. Additionally, the monitoring of the effects of MSP and MPA implementation is documented, ensuring that plans are adjusted based on findings and that the latest knowledge informs future designations.

Spatial Tools for MPA Identification	Spatial tools are crucial for identifying and designating MPAs, often involving ecological and economic analyses. For example, concentration maps are used to identify key bird habitats for protection under the Birds Directive, with annual research updating these maps. Additionally, advanced tools like Marxan are employed to analyse and identify suitable areas for marine reserves, particularly within predefined search zones in MSP drafts. These tools integrate both ecological and economic considerations to ensure that areas with significant environmental value are prioritised for protection, while also balancing other maritime interests.
Stakeholder Participation in MPA Integration	Stakeholder participation in the integration of MPAs within MSP is an essential and structured process. Stakeholders are actively engaged at every stage, from the initial proposal submissions to public consultations. This collaborative process ensures that different interests are considered in planning MPAs and other marine uses. Specific emphasis is placed on ensuring MPAs are effectively integrated with other maritime activities, such as shipping, energy, and fisheries, by consulting with relevant sector representatives throughout the development process. Additionally, the process includes coordination with neighbouring countries to align on international agreements, such as those under the MSFD, and expanding MPA networks based on emerging evidence. Public consultations and feedback are continuously encouraged, ensuring that both local and broader stakeholders contribute to shaping the MSP, promoting transparency and inclusivity.

Key Observations Table (Table 4**)**

Table 4: Key observations table for the North Sea

Country	Strengths	Gaps
Denmark	Adaptive planning, stakeholder engagement.	Monitoring frameworks and ecological coherence evaluations.
Belgium	Spatial analysis, connectivity assessments, stakeholder engagement.	Limited monitoring and capacity-building efforts.
Netherlands	Adaptive management,	Socioeconomic assessments and cumulative impact monitoring.

	ecosystem-based planning.	
Germany	Legal frameworks, participatory governance, adaptive management.	Monitoring, diagnostic frameworks, and connectivity evaluations.

Final Considerations

The Greater North Sea Basin Initiative aims to enhance transboundary collaboration in MSP, energy and nature conservation. Therefore, the **North Sea Basin** countries are advancing in key areas of offshore renewable energy integration, transboundary protection, and multi-use planning. However, significant challenges remain:

1. **Offshore Renewable Energy Integration**:
    a. Strengthen biodiversity and habitat assessments.
    b. Improve monitoring of cumulative impacts on MPAs.
2. **Transboundary Protection Measures**:
    a. Harmonize regulatory frameworks and align ecological connectivity initiatives.
    b. Enhance cross-border collaboration through improved monitoring systems.
3. **Multi-Use Concepts**:
    a. Expand stakeholder capacity-building programs.
    b. Implement robust cumulative impact evaluations for multi-use scenarios.

Black Sea Basin Summary

Assessment of Environmental Pressures on MPAs:

The Black Sea Basin faces significant environmental pressures on MPAs, particularly from coastal development and industrial activities. Romania and Bulgaria have legal frameworks addressing these issues, but enforcement remains weak. Improved monitoring and assessment strategies are required to ensure long-term MPA resilience.

Regional Cooperation through the Bucharest Convention:

Regional cooperation is facilitated through the Bucharest Convention, with Romania and Bulgaria aligning their policies with EU standards. However, cross-border collaboration with non-EU Black Sea nations remains inconsistent, limiting regional conservation effectiveness.

Integration of MPAs with Emerging Blue Economy Sectors:

The integration of MPAs with emerging Blue Economy sectors is progressing, but challenges persist. While Romania has begun integrating aquaculture and tourism considerations into MSP, Bulgaria needs stronger frameworks to balance conservation and economic growth. Strengthening governance and stakeholder engagement will be crucial for achieving sustainable Blue Economy development in the Black Sea Basin.

Table 5: Synthesis of the column "How" for the Black Sea

Black Sea	
Short Question	**Syntheses**
MPA Recognition in MSP Policies	MPA recognition within MSP policies is fundamental for aligning marine spatial planning with environmental protection and sustainable development goals. The policy and legal frameworks, including the EU MSFD and Water Framework Directive (WFD), which are fully integrated into the planning and Environmental Impact Assessment (EIA), support the conservation and protection of MPAs. However, the establishment or expansion of MPAs falls outside the scope of MSP, as these actions are governed separately by the Ministry of Environment and Water under EU and national legislation. The plan reflects any new or extended MPAs as they are designated and updated during their implementation and revisions. Similarly, in Romania, the maritime spatial plan integrates the protection of biodiversity and marine ecosystems by including MPAs in the planning process. These MPAs are crucial to ensuring good ecological status, and the plan emphasises the need for a network of connected protected areas to support species migration, reproduction, and refuge while fostering sustainable economic development.

Key Observations (Table 6)

Table 6: Key observations table for Black Sea

Country	Strengths	Gaps

Romania	Legal frameworks, spatial tools, fostering regional collaboration.	Connectivity assessments, stakeholder engagement, adaptive management.
Bulgaria	Strong adaptive management practices and effective cross-sectoral coordination.	Limited biodiversity monitoring and insufficient evaluation of ecological connectivity.

Final Considerations

The **Black Sea Basin** demonstrates progress in managing environmental pressures, fostering regional cooperation, and integrating MPAs with Blue Economy sectors. However, challenges remain:

1. **Environmental Pressures on MPAs**:
    a. Enhance connectivity and habitat representation assessments.
    b. Strengthen cumulative impact evaluations and monitoring frameworks.
2. **Regional Cooperation**:
    a. Align ecological priorities and improve regulatory coherence.
    b. Foster transboundary connectivity through joint monitoring initiatives.
3. **Integration with Blue Economy Sectors**:
    a. Expand stakeholder engagement and capacity building.
    b. Develop adaptive management frameworks for balancing ecological and economic needs.

Mediterranean Sea Basin Summary

Institutional Cooperation

Across these countries, the formal MSP process is designed to address diverse perspectives through multi-stakeholder involvement. This was particularly relevant to the complex process of preparing marine spatial plans in Italy, which was based on effective cooperation between national and regional authorities, ensuring the alignment of local priorities with national strategies.
Also, France has established discussion forums, composed of public institutions, local authorities, sectoral companies and other sea and coastal users' associations, including marine conservation. Having in mind that MSP in France is developed as part of sea basin strategy documents, incorporating requirements of MSP Directive and MSFD, this process facilitated communication and collaboration between MSP and MPA authorities. Similarly, in Spain, regional authorities, as well as the competent authority for MPA management, are

involved from the beginning of the MSP process, ensuring alignment with MPA criteria and objectives.

Conservation Considerations and Identification of New MPA Sites in MSP

The ecosystem-based approach is a common theme, recognising the interconnectedness of ecological systems and the need to protect ecosystem functions and services. The Cyprus Plan considers this approach and the need to respect the integrity of ecosystems as much as possible. In line with that, one of the Plan´s goals is the management and protection of Natura 2000 areas and the protection of marine endangered species and their habitats. However, no specific considerations or measures are provided regarding MPA connectivity.
While the establishment of MPAs is usually a separate process from the MSP, all plans identify existing and potential MPAs. This process is particularly important in Slovenia, where the MSP plays a crucial role in establishing new MPAs. It is currently the only legally binding document identifying potential new MPAs based on proposals from MPA authorities by providing a cross-sectoral harmonised basis for their establishment.
Italian MS plans include priority zones for nature conservation in correspondence with designated and future MPAs, as well as with ecologically valuable areas and implementing adaptive management and robust monitoring frameworks. Nonetheless, the country encounters gaps in habitat representation, connectivity evaluations, and stakeholder engagement.
Spain and France emphasise the identification of MPAs based on ecological criteria and periodic reviews of MPA designations. However, both countries require improvements in biodiversity monitoring and socioeconomic considerations.

Coastal-Offshore Integration Strategies

The Mediterranean Sea Basin incorporates mechanisms to manage both coastal and offshore areas, ensuring connectivity between marine ecosystems and human activities. While MSP frameworks across the region acknowledge the need for spatial integration, the extent to which coastal and offshore areas are effectively connected varies among countries.
MSP recognises ecological connectivity in Malta by assessing cumulative impacts and long-term sustainability factors, ensuring that offshore activities align with coastal conservation priorities. However, a lack of biodiversity hotspot identification presents challenges for strengthening integration. Similarly, Slovenia incorporates ecological (blue) corridors within its MSP, supporting connectivity between coastal and offshore marine areas. However, while these corridors are conceptually defined, their management strategies remain underdeveloped.
In Italy, coastal and offshore integration is recognised and strengthened by MSP. The MSP plans identify objectives, zoning, and measures across coastal and offshore areas, paying attention to their respective coherence. This is further supported by a robust legal and governance framework, also enabling the direct involvement of coastal regions in marine planning. Yet, challenges remain in ensuring ecological connectivity between different habitat types and addressing stakeholder concerns in offshore development. Cyprus incorporates adaptive

management strategies, allowing adjustments to MSP based on evolving environmental conditions. However, connectivity between MPAs and offshore areas is weak, limiting the ability to maintain ecological integrity across different marine zones.
France and Spain engage in cross-sectoral coordination, particularly in balancing offshore energy expansion with existing coastal conservation measures. Despite these efforts, monitoring frameworks for biodiversity conservation remain insufficient, hindering the ability to assess long-term impacts on marine ecosystems.

Table 7: Synthesis of the column "How" for the Mediterranean Sea

Mediterranean Sea	
Short Question	**Syntheses**
Ecosystem-Based Approach in MSP	The ecosystem-based approach is fundamental in the development of MSPs. Examples of successful implementation include identifying blue corridors, which enable biodiversity and ecosystem services to flourish, and considering ecological connectivity in decision-making to enhance marine protection and sustainable use.
Feedback to Stakeholders	Stakeholder engagement is critical throughout the MSP process. In the context of public participation, all results and feedback are publicly available online. Formal participation includes detailed records of workshops, meetings, and discussions, while informal channels ensure continued communication. Feedback received is systematically addressed and integrated into final plans, which are made accessible for public review. This transparent approach ensures stakeholder concerns are considered, contributing to more inclusive decision-making.
Identification and Habitat Representation of Existing and Potential MPAs	Existing MPAs are an integral part of the MSP process. Plans identify areas such as Natura 2000 sites as well as high-potential areas for future MPA designation, considering ecological significance and connectivity. The process considers also the representation of diverse habitats, species, and biodiversity hotspots.
Mapping and Integration of MPAs in MSP	The integration of MPAs into MSP involves mapping both existing and potential MPAs, as well as Natura 2000 sites. These areas are overlaid with other

	marine uses to ensure compatibility and to minimise conflicts.
MPA Recognition in MSP Policies	MPAs are recognised and supported through legal and policy frameworks, including the transposition of the EU MSP Directive into national legislation. In line with current legislation, the authorities responsible for marine protected areas will ensure that no activity compromises the values for which these areas have been designated.
Periodic Review of MSP and MPAs	The periodic review of MSPs and MPAs ensures that they remain adaptive to emerging scientific data, new threats, and evolving conservation goals. Regular assessments allow for the updating of conservation objectives and the adjustment of MPA boundaries or management strategies.

Key Observations Table (Table 8)

Table 8: Key Observations table for Mediterranean Sea

Country	Strengths	Gaps
Spain	Participatory governance, alignment with SEA processes, early stakeholder engagement.	Limited connectivity assessments and insufficient cumulative impact monitoring.
France	Strong adaptive management practices and effective cross-sectoral coordination.	Limited biodiversity monitoring and insufficient evaluation of ecological connectivity.
Italy	Ecosystem-based planning, robust monitoring frameworks, and compliance with regional efforts.	Gaps in habitat representation, ecological connectivity, and stakeholder engagement.
Cyprus	Focus on adaptive management and comprehensive cumulative impact evaluations.	Weak connectivity evaluations and limited stakeholder participation in MSP processes.
Slovenia	Integration of ecological corridors and transboundary connectivity within MSP. Established stakeholder engagement and participatory planning	The lack of measures for Blue corridors makes them (currently) only formal concepts with no concrete management and implementation regimes.

	processes supporting conservation efforts. Recognition of Blue Corridors as a framework for regional ecological linkages. Alignment with regional conservation priorities through transboundary cooperation initiatives.	
Malta	Strong SEA framework, regular biodiversity monitoring, and integration of cumulative impact assessments.	Limited stakeholder engagement, lack of biodiversity hotspot identification, and weak cross-border cooperation.

Baltic Sea Basin Summary

Examination of Existing MSP-MPA Integration Practices

The Baltic Sea Basin is making strides in integrating MPAs within MSP, with Germany and Estonia leading the way in ensuring strong alignment with environmental policies. Finland and Latvia emphasise stakeholder involvement in MPA designation, fostering participatory governance. While Denmark needs improved legal frameworks to ensure MPA integration into MSP, Estonia and Finland require stronger enforcement mechanisms for their designated MPAs. Strengthening legal frameworks and enforcement mechanisms may ensure a more robust integration of MPAs into MSP. However, other softer mechanisms may prove to be better solutions when facing the static and slow change character of legal instruments. Poland, for e.g. advocates the existing solutions but acknowledges that better coordination is needed between these two processes.

Cross-Border Cooperation Mechanisms

Cross-border cooperation in the Baltic Sea Basin benefits from well-established mechanisms, particularly through initiatives under the HELCOM-VASAB Maritime Spatial Planning Working Group — a joint platform between the two intergovernmental organisations, HELCOM and VASAB. This group plays a central role in facilitating dialogue and coordination on MSP across the region, building on a long-standing tradition of regional collaboration that originated within VASAB. For MPAs specifically, HELCOM continues to provide critical support for data-sharing and regional coherence in marine conservation. Germany, Poland, and Latvia actively engage in these regional

structures, contributing to coordinated approaches. However, inconsistencies in national regulations and differences in planning approaches across the basin can create inefficiencies in managing MPAs across borders. Rather than seeking fully aligned national MSP strategies — which reflect domestic priorities and legal systems — enhancing mutual understanding, information exchange, and procedural compatibility between countries like Finland and Estonia can help improve coordination on cross-border marine protection.

Transboundary Coordination Initiatives

Transboundary coordination initiatives are advanced in Germany and Denmark, where strong MSP coordination mechanisms align with EU directives. Latvia and Poland ensure periodic evaluations of their MSP-MPA integration. Estonia and Finland would benefit from a common framework to ensure continuous regional coordination, and Denmark faces challenges in ensuring the effectiveness of its long-term MSP monitoring strategies. Establishing centralised frameworks and improving long-term monitoring efforts will enhance regional MSP coordination.

Table 9: Synthesis of the column "How" for the Baltic Sea

Baltic Sea	
Short Question	**Syntheses**
Adaptive Management Principles in MSP	The integration of adaptive management principles in MSP is characterised by continuous updates and flexible governance. Some countries have established regular review cycles and monitoring systems to respond to emerging environmental and societal challenges. Co-creation of knowledge regarding socio-ecological systems and land-sea interactions between planners and stakeholders are some approaches supporting adaptive governance. Adaptive strategies ensure that MSP remains responsive to changes in marine ecosystems and emerging human activities, such as offshore renewable energy installations. The incorporation of these principles strengthens the long-term sustainability of marine spatial planning efforts.
Connectivity in Potential MPAs	In some MSP processes, connectivity considerations also extend to potential MPAs, with an emphasis on maintaining ecological linkages between areas of conservation interest. For example, the Swedish MSP process identifies potential future MPAs based on ecological significance, representation of different habitat types, and connectivity, reflecting a proactive approach to marine conservation.

Ecological Criteria in Spatial Analysis	Ecological criteria are foundational to the spatial analysis used in MSP, ensuring that marine areas are selected and managed with a focus on biodiversity conservation and ecosystem function. Ecological criteria are applied to identify areas of ecological significance, including biodiversity hotspots, sensitive habitats, and connectivity corridors. These analyses, which often involve tools like GIS and ecosystem modelling, inform the designation of MPAs and help ensure that the spatial distribution of human activities aligns with conservation objectives.
Ecosystem-Based Approach in MSP	MSP frameworks in several countries adopt an ecosystem-based approach (EBA) by integrating ecological, economic, and social considerations. This approach guides decisions to ensure the preservation of ecosystem functions and services, as seen in policies like the Marine Strategy Framework Directive. In practice, this means adopting the best available knowledge, applying precautionary principles, and ensuring that marine activities respect and enhance ecological resilience and connectivity, particularly for protected areas. EBA has also been embedded into planning work through adopting the social-ecological systems approach in a co-creation process, which has been open to anyone interested, including sectoral representatives as well as experts at all national and local levels.
Feedback to Stakeholders	The feedback process for stakeholders in MSP emphasises transparency and active engagement. Solutions commonly involved providing formal consultation reports summarising stakeholder input, with these reports being made publicly available on official websites or through dedicated meetings. A key approach includes the publication of the consultation results, where each comment or suggestion is addressed in writing, ensuring a thorough response. In some cases, consultation reports were officially submitted to the government after public hearings. Additionally, the integration of feedback into the MSP process was communicated through public displays and the dissemination of planning materials, ensuring stakeholders were informed on how their input influenced the planning decisions.

Habitat Representation in Existing MPAs	The MSP planning process emphasises the identification and representation of habitats within existing MPAs, with particular attention given to ecological significance, habitat diversity, and connectivity. While the identification of potential new MPAs was not a primary focus in all cases, areas with significant ecological value, such as Ecologically or Biologically Significant Marine Areas (EMMA application of EBSA) in Finland, were considered, integrating nature conservation perspectives into the planning process. The representation of different habitat types, the location of protected species, and the consideration of ecological features were central to the process, ensuring that ecological priorities guided the planning. Furthermore, some MSP processes actively address connectivity between existing MPAs, incorporating measures to enhance coherence, such as the promotion of blue corridors and coordination between cross-border protected areas. The planning also acknowledges the importance of updating information on the ecological significance of areas and biotopes, reinforcing the integration of biodiversity and conservation objectives into MSP.
Identification of Potential MPAs	Although the identification of potential new MPAs was not a primary focus in the MSP process in most of the cases, some measures focused on enhancing marine ecosystem protection, such as addressing barrier effects for migratory species and maintaining ecological connections between functionally important areas, have been mentioned. Blue corridors, which facilitate the movement of species such as fish throughout their life cycles, have been mapped within MSP frameworks. Additionally, the creation of cross-border blue corridors, like those linking protected areas at national borders, further supports the ecological coherence of MPAs, enhancing connectivity between coastal zones and adjacent waters.
Knowledge Sharing for MPA Integration	The MSP process emphasises knowledge sharing and collaboration across national, regional, and international levels, with a particular focus on integrating socio-ecological marine systems. This is achieved through structured consultation processes and participatory events, allowing stakeholders to share experiences and foster mutual learning. Ongoing cooperation between MSP and MPA agencies ensures that planning decisions are based on up-to-date knowledge, while continuous monitoring and evaluation enrich the learning process. While significant progress has been made in promoting dialogue among stakeholders, there

	is room for further strengthening inter-ministerial cooperation and focusing more on MPA-MSP integration.
Mapping and Integration of MPAs in MSP	The integration of MPAs within MSP is commonly achieved through the development of detailed mapping systems. These maps visualise spatial overlaps and interactions between different marine use and MPAs, aiding the understanding of how designated areas, such as conservation zones or bird migration corridors, interact with other sectors like shipping or energy. Various GIS platforms, such as web-based applications and dedicated geoportals, allow for the switching and overlaying of various planning layers to evaluate potential conflicts or synergies. These mapping tools help identify priority areas for protection, manage spatial requirements for multiple uses, and ensure the ecological coherence of MPAs within broader spatial planning frameworks.
MPA Recognition in MSP Policies	Marine Protected Areas are integrated into MSP policies across various frameworks, often aligned with broader environmental objectives such as achieving good environmental status as outlined in the EU MSFD. In many cases, existing MPAs are explicitly recognised within MSP, either as areas designated for nature conservation or as areas of national interest for environmental protection. Additionally, potential new MPAs are often identified and designated as areas of particular ecological importance or high nature value. The planning processes emphasise the need to balance the protection of these areas with sustainable marine activities, using regulations to avoid disturbances and ensure ecological integrity. Efforts are also made to integrate MPAs within broader strategic goals, ensuring alignment with conservation, national security, and sustainable use priorities, while providing clear guidelines for the protection of habitats and species.
Periodic Review of MSP and MPAs	The periodic review of MSPs and MPAs is a critical process to ensure that marine policies remain relevant and effective. These reviews are typically driven by new scientific data, emerging environmental threats, and evolving conservation objectives. MSPs and MPAs are generally assessed at regular intervals, such as every five to ten years, to adapt to changes in the marine environment. Monitoring systems, such as those established by regional environmental authorities or the Federal Maritime and Hydrographic Agency, play a key

	role in assessing the effectiveness of these plans. These systems gather data on environmental, economic, and social impacts, which inform decisions on whether revisions to the plans are needed. Additionally, monitoring efforts are aligned with broader regulatory frameworks, such as the MSFD, to track progress and ensure the sustainability of marine resources. However, these elements, still requires more investment to make them fully functional. Regular updates to geospatial data and maps are also integrated into the review process, helping to refine spatial management strategies and improve long-term planning.
Spatial Tools for MPA Identification	In the MSP process, spatial tools are essential for identifying and mapping areas of ecological importance, including potential MPAs. Various approaches have been employed, such as using ArcGIS spatial tools to create ecological value maps based on existing data, including the distribution of ecologically significant species, biodiversity hotspots, and sensitive habitats. These spatial analysis tools not only help identify suitable locations for marine activities but also ensure that new developments, such as wind farms, do not overlap with protected areas like Natura 2000 sites. While MSPs do not typically identify new MPAs, the tools support the broader goal of conserving marine biodiversity and ensuring the sustainable use of marine resources by carefully evaluating ecological criteria and ecosystem connectivity.
Stakeholder Participation in MPA Integration	Effective stakeholder participation is fundamental to integrating MPAs in the MSP process, ensuring that diverse perspectives are considered in the planning and decision-making processes. A broad range of stakeholders, including government agencies, local communities, the fishing industry, environmental organisations, and scientists, were actively involved across multiple stages of the MSP development. In some countries, stakeholder consultations were mandated through legal frameworks, ensuring engagement from municipalities, regional bodies, and county councils. Specific MPA integration was discussed with stakeholders, particularly focusing on how conservation goals for MPAs could be aligned with other uses in the MSP. Input from key stakeholders was usually gathered through international and national meetings, workshops, and public hearings.

Key Observations (Table 10**)**

Table 10: Key observation table for Baltic Sea

Country	Strengths	Gaps
Germany	Strong legal recognition of MPAs, stakeholder engagement, and periodic reviews (questions in guideline 1.1, 4.5, 8.3).	Limited focus on monitoring and connectivity assessments (questions in guideline 6.2, 2.3).
Estonia	Comprehensive spatial analysis and participatory processes, emphasising knowledge sharing (questions in guideline 3.6, 7.2).	Weak legal diagnostics and insufficient connectivity evaluations (questions in guideline 9.1.3, 2.3).
Finland	Transparency in SEA processes and focus on adaptive management (questions in guideline 9.2.3, 6.1).	CIA still needing more development (questions in guideline 3.3, 9.3.8).
Latvia	Habitat representation and stakeholder engagement in regional coordination initiatives (questions in guideline 2.2, 4.5).	Insufficient monitoring and socioeconomic impact evaluations (questions in guideline 6.2, 9.3.3).
Poland	Use of spatial tools and participatory approaches for regional coordination (questions in guideline 3.1, 4.1).	Limited CIA and capacity-building initiatives (questions in guideline 9.3.8, 7.1).
Denmark	Participatory approaches, adaptive management, and long-term ecological evaluations (questions in guideline 4.1, 6.1, 9.3.5).	Weak monitoring programs and legal frameworks for MSP-MPA integration (questions in guideline 6.2, 9.1.3).

Final remarks on the EU Sea Basins analysis

Even if it is difficult to provide a detailed comparison of the results across the sea basins due to variances in the number of countries involved, the

comprehensiveness of their MSP efforts, and the unique characteristics of each basin, a highlight of the key similarities, and contrasts features are presented:

Atlantic Sea Basin: Demonstrates significant progress in integrating MPAs into MSP, especially through established legal frameworks in Portugal and France. The challenges include gaps in ecological coherence assessments and stakeholder conflicts relating to traditional and emerging maritime sectors like renewable energy and fisheries (Table 1);

North Sea Basin: Leads in offshore renewable energy integration, with countries like Belgium, the Netherlands, and Denmark balancing energy projects with MPA protections. However, transboundary coordination challenges persist, particularly in harmonising monitoring frameworks and legal alignment to manage cross-border conservation efforts effectively (Table 3);

Mediterranean Sea Basin: Features a prominent ecosystem-based approach, with adaptive management and cross-sectoral integration playing key roles. However, challenges in identifying biodiversity hotspots and weak connectivity between MPAs and offshore areas hinder comprehensive integration. National efforts in Slovenia and Italy show innovative practices like ecological corridor planning, while Cyprus incorporates adaptive strategies to handle evolving conditions (Table 7);

Black Sea Basin: Shows progress in integrating MPAs within MSP and fostering regional cooperation. The focus remains on enhancing ecological connectivity and monitoring frameworks, but gaps remain in adaptive management and connectivity evaluations. Romania and Bulgaria demonstrate different strengths in terms of legal frameworks and cross-sectoral collaboration (Table 5);

Baltic Sea Basin: Strongly focuses on MSP-MPA integration, with countries like Germany and Estonia ensuring comprehensive alignment with environmental policies. Weaknesses include inconsistencies in legal frameworks and necessary enforcement mechanisms in countries like Poland and Finland. Cross-border cooperation is relatively advanced through the HELCOM-VASAB framework, but stronger policy harmonisation is needed to address inefficiencies (Table 9).

Overall, while there are shared strengths, such as regional collaboration and integrated ecosystem-based approaches across basins, the variability in monitoring mechanisms, legal frameworks, and stakeholder engagement between basins prevents deeper uniform comparison. Each basin demonstrates distinct needs and priorities that limit a one-size-fits-all analysis.

4. Integration Framework

The analysis encompasses four key levels:

1 - Conservation /MPA is the driver for MSP

2 - Conservation /MPA is fully integrated into MSP across sectors

3 - Conservation/MPA is integrated through SEA or other Environmental Spatial Strategies

4 - Conservation/MPA is a layer/sector in MSP

PRELIMINARY RESULTS:

4.1 TYPE OF RELATION MPA-MSP

Table 11 outlines the connection between MSP and MPAs across various European countries. The extent of integration between MSP and MPA processes differs considerably; it ranges from comprehensive integration with legal precedence given to MPAs, to limited integration.

While it is possible for a country to exhibit characteristics that align with more than one Key level of integration between MSP and MPA, for the purpose of this deliverable, each country was assigned to only one category to ensure clarity and consistency in our analysis. This approach allows for a simplified, focused framework that avoids duplication and ambiguity. Selecting the category that best reflects the dominant or most representative relationship between MSP and MPAs in each country allows to provide a clear, practical, and easily interpretable overview of integration levels across European Countries.

Table 11: Types of MPA-MSP Relationship/

Sea_basin	Country	Type	Observations
Baltic Sea	Estonia	4	The Estonian MSP explicitly acknowledges the importance of MPAs. The plan incorporates the Habitats Directive and the Birds Directive, ensuring that the protection of natural objects and their conservation objectives are properly considered. Although the MSP itself does not propose the creation of new protected natural objects, the establishment of new protected areas follows the procedures outlined by law, specifically the Nature Conservation Act. While the MSP and the MPA processes are structurally similar, they remain distinct. Both frameworks aim to manage and protect marine resources, and during their development, they must take each other's objectives and regulations into account. Despite this structural similarity, contradictions often arise, particularly during the drafting of MSPs or the establishment of MPAs.
	Finland	2	MSP in Finland is an expert-driven, regionally based approach with a non-binding legal status (Haapasaari and van Tatenhove, 2022). The Ministry of the Environment oversees the MSP process and collaborates with neighbouring countries. The updated Nature Conservation Act (9/2023) provides the legal foundation for nature conservation, while other legislation, like the Water Act and Environmental Protection Act, also supports conservation measures. Åland has its own Nature Conservation Act (ÅFS 1998:82), and conservation measures can be set through agreements with land or water area owners (Bouvet et al., 2024).
	Germany	3	Implementing an EBA in German MSP follows the HELCOM-VASAB Guidelines. The SEA evaluated the environmental impacts of MSP implementation, addressing security, shipping facilities, economic uses, research, and marine environmental protection. The MSP integrates sectors such as shipping, offshore wind energy, cables, raw material extraction,

			fisheries, marine aquaculture, scientific uses, environmental protection, security (national and alliance defence), air traffic, and recreation. There is a distinction between the responsibilities for MSP implementation and the management/monitoring of Marine Protected Areas (MPAs).
	Latvia	2	The MSP was adopted as legally binding for Internal Waters, Territorial Waters, and the EEZ in May 2019 under Order of the Cabinet of Ministers No. 232. National authorities must consider the plan when developing public infrastructure in these areas, including issuing licenses for future uses. The MSP underwent a SEA to ensure high environmental protection, integrate the ecosystem approach, and promote sustainable development. It designates nature value investigation areas in the EEZ to identify potential protected biotopes and species, which will inform the creation of future MPAs and decisions on new sea uses. One key outcome of the MSP is allocating space for future MPA designation based on ecological assessments. Additionally, new licenses for Wind Power Park installations can only be issued in designated research areas outside priority use zones.
	Poland	3	In Poland, MPAs, primarily designated as Natura 2000 sites, are established by ministerial order through the General Directorate for Environmental Protection. There are also small offshore areas within national parks (Słowiński and Woliński NP) and marine parts of some natural reserves (e.g., Beka Reserve). Each MPA requires a management (conservation) plan developed through an interactive process involving all relevant stakeholders, including MSP planners. However, this process occurs outside the MSP framework. Management plans are prepared under the supervision of the maritime office's territorial director, the same authority overseeing MSP, but are adopted by the Minister for Environment. These conservation plans are legally binding and take precedence over other sector policies. If an MPA is a national park, stricter rules apply, as they are based on the

			Nature Conservation Act passed by Parliament. National parks have their own administration, headed by a director appointed by the Minister for Environment. National parks represent the highest form of nature protection in Poland.
	Sweden	2	The Swedish Agency for Marine and Water Management has developed an MPA framework implemented by county administrative boards (CABs) at the regional level. CABs investigate and propose new MPAs, which are submitted to the government or other relevant decision-making bodies. Municipalities can also designate nature reserves. The regulatory power of MPAs over other sectors depends on the type of MPA and its specific regulations. Natura 2000 areas, for example, have significant regulatory authority. Sweden's policy and legal frameworks for MSP explicitly support the establishment and management of MPAs. The Marine Spatial Planning Ordinance and the Swedish Environmental Code provide the legal basis for MSP, ensuring the sustainable use of marine resources while preserving and restoring ecosystems in line with the EU MSFD. Current MPAs are represented in Swedish MSP as part of areas designated for nature (N-areas), which include national interest areas for nature conservation. Potential new MPAs are designated as areas of particular consideration for high nature values ("n-areas").
	Denmark	4	The legal framework governing MSP currently offers limited support for the establishment and management of MPAs, lacking clear guidance on how to integrate MPAs into the MSP process. While there appears to have been some initial assessment of conflicts between MSP and MPA regulations, particularly through strong dialogue between the MSP team and the Ministry of Environment, this interaction does not seem sufficient to fully address all gaps. The Ministry of Environment remains an active participant in the working group, yet the fact that certain conflicts and gaps are still

			unresolved suggests that the integration of MSP and MPA regulations requires further development and attention.
Black Sea	Bulgaria	4	The policy and legal frameworks for MSP recognise and support the conservation and protection of MPAs, particularly through the provisions of the EU MSFD, the national Marine Strategy (Programme of Measures), and the WFD. Both directives are fully integrated into the plan and its EIA. However, the plan itself does not include the establishment or extension of MPAs, as it is a non-legally binding document without the authority to do so. MPA designation is a separate process managed by the Ministry of Environment and Water (MOEW) under EU, international, and national environmental laws. The plan will incorporate any newly established or extended MPAs during its implementation and revisions.
	Romania	4	In the case of Romania, the maritime spatial plan considers the principles of conservation and protection of biodiversity to ensure the good ecological condition of the marine environment, the conservation of natural capital and the restoration of marine biodiversity, representing prerequisites for economic activities and an opportunity for sustainable economic development. The existing network of marine protected areas is included both in the descriptive part of the plan and represented on the attached maps, being considered a key element of the strategies dedicated to the protection of coastal and marine ecosystems. At the same time, it is considered the need for the network of marine protected areas to have an adequate extend to fulfil the assigned protection role and to be formed by natural protected areas connected by "ecological corridors" that ensure natural conditions for the movement, reproduction, and refuge of species of marine fauna. The MSP analyses the spatial overlapping of maritime uses and resulting pressures and identifies the factors that influence the dynamics of conflicts between the different types of uses and the objectives

			of conservation and protection of biodiversity and marine habitats. To avoid and minimise the impact of maritime activities, the economic development objectives of the Romanian sector of the Black Sea must consider the existing legislative protection measures concerning the marine environment.
Mediterranean Sea	Cyprus	4	At both the European and national levels, numerous legislative measures are directly related to environmental protection, including the Marine Strategy Framework Directive (2008/56/EC) and the Water Framework Directive (2000/60/EC). In line with the Directive on the conservation of natural habitats and wild fauna and flora (92/43/EEC), seven marine areas in Cyprus have been designated as Sites of Community Importance under Natura 2000, aiming to protect, manage, and conserve marine ecosystems. The MSP Plan illustrates both existing and proposed Natura 2000 areas, as well as 14 proposed Marine Protected Areas (MPAs), which include artificial reefs and Fisheries Restricted Areas. Management plans for these protected areas can be developed by the competent authority. Any future marine areas designated as Natura 2000 by the competent authority after the MSPlan's adoption will be treated as part of the MSPlan until the next revision when they will be officially incorporated.
	France	4	France's legal framework for MPAs is based on the Environment Code, which covers all environmental protection aspects. It defines various MPA types, including national parks, nature reserves, marine natural parks, and Natura 2000 sites, totalling 20 designations. The 2016 Law for the Recovery of Biodiversity further supports biodiversity conservation. MPA governance varies by designation: for Natura 2000 sites, management involves local authorities, landowners, operators, and site users, with the French State advising. Nature Reserves have a management body including socio-professional actors, local authorities, and nature conservation organisations. French MSP is subject to a SEA and developed through a multi-stakeholder

			approach, integrating sectors like fisheries, aquaculture, tourism, marine renewable energy, and marine conservation.
	Malta	4	The EU MSP Directive is transposed into national legislation through the subsidiary legislation (S.L.552.27) under the Development Planning Act of 2016 (Cap.552), which states that the Strategic Plan for Environment and Development (SPED) and any replacement spatial strategy shall constitute the Maritime Spatial Plan for Malta. SPED's Thematic Objective 8, calls for "Safeguarding protected areas including Special Area of Conservation (SACs), Special Protection Areas (SPAs) and MPAs whilst enabling activities aimed at enhancing their management objectives". The designation of MPAs falls under a different regulatory framework. MSP is not considered as the main instrument to designate MPAs. However, the SPED policy framework for the Coastal Zone and Marine Area was developed in congruence with the policy direction on MPAs at the time.
	Slovenia	3	The MSP process in Slovenia is subject to SEA, which was prepared alongside the plan. Public consultation on both documents took place in 2020-2021. The Nature Conservation Act provides the framework for protecting natural values and biodiversity, requiring the integration of nature protection measures into spatial planning documents, although it does not specifically address marine conservation. Several bylaws govern biodiversity, such as the Decree on Ecologically Important Areas and the Decree on SPAs (Natura 2000 sites). The Ministry of Natural Resources and Spatial Planning oversees nature conservation policy, with the Institute of the Republic of Slovenia for Nature Conservation playing a key role in policy implementation. The Institute participates in spatial planning, including MSP, providing guidelines, permits, expert opinions, and proposing new protected areas.

	Italy	4	The policy and legal frameworks governing MSP do not explicitly support or recognise the establishment and management of MPAs. However, they do mention the need for species and habitat conservation sites, as well as protected areas, as part of the spatial provisions that the plans must include. The national policy or legal framework has not addressed conflicts between MSP and MPA regulations. The MSP process has recognised and incorporated existing MPAs and Natura 2000 areas in the marine zoning and has considered establishing new MPAs based on provisions from existing national law. Furthermore, the ecological significance of marine areas, including EBSAs, Important Marine Areas (ISRAs), and sea mountains, has been factored into the planning process.
	Spain	3	The Spanish MSPlan emphasises the independence of MPAs, created and regulated under various legal instruments, and their precedence over sectoral plans and marine spatial plans. These MPAs are recognised as 'Conservation Priority Zones' in the MSPlan. According to current legislation, competent authorities ensure that no activity threatens the values for which these areas are protected, even in MPAs that lack a management plan.
North Atlantic	France	4	France's legal framework for MPAs is based on the Environment Code, which covers all aspects of environmental protection. It defines various MPA types, including national parks, nature reserves, marine natural parks, and Natura 2000 sites, totalling 20 designations. The 2016 Law for the Recovery of Biodiversity further supports biodiversity conservation. MPA governance varies by designation: for Natura 2000 sites, management involves local authorities, landowners, operators, and site users, with the French State advising. Nature Reserves have a management body including socio-professional actors, local authorities, and nature conservation organisations. French MSP is subject to a SEA and developed through a multi-stakeholder

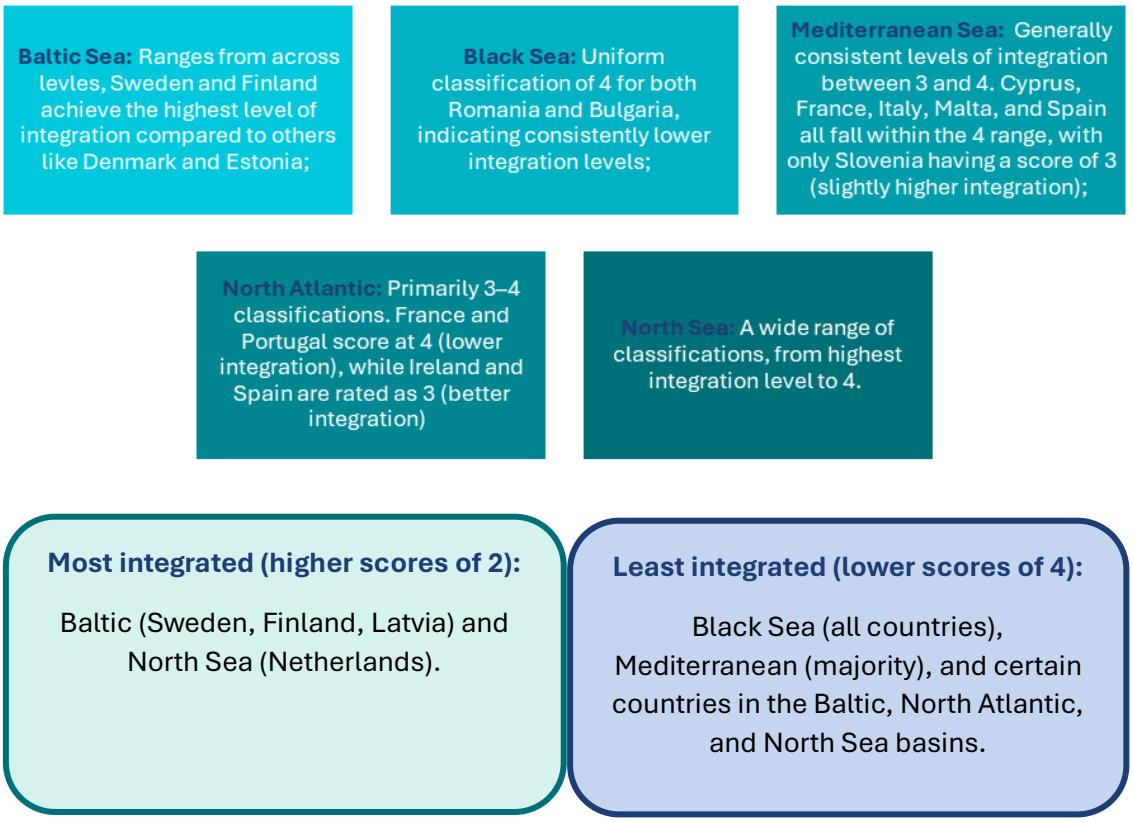
			approach, integrating sectors like fisheries, aquaculture, tourism, marine renewable energy, and marine conservation.
	Ireland	3	The National Marine Planning Framework is Ireland's key policy document for managing maritime activities, ensuring the integration of various sectoral policies, including environmental protection, renewable energy, fisheries, aquaculture, and tourism. A SEA was conducted by the Department of Housing, Planning, and Local Government to incorporate environmental considerations into the planning process. MPAs in Ireland are governed by international, EU, regional (OSPAR), and national frameworks, providing broad guidelines. However, Ireland currently lacks a specific national definition of MPAs, which affects the coherence and representativeness of the protected area network. Protection beyond 12 nautical miles is mainly provided by the EU Birds and Habitats Directives and the OSPAR Convention. The Marine Protected Area Advisory Group (2020) noted that Ireland’s network of protected areas is not yet coherent, representative, connected, or resilient and that the lack of an MPA definition in Irish law is a significant gap that needs to be addressed.
	Portugal	4	The entity responsible for developing the MSP was part of the same structure as the MPAs, allowing for some consideration of conservation. However, the management objectives are distinct, and the entities proposing and managing changes are different. There have been no changes to the protected areas in the past three years. Only the Autonomous Region of the Azores has revised its Protected Areas Network, with 30% of the Marine Area Protected and 15% strictly Protected. The MSP in this region had just been approved in 2024 with no prevision for the new Network.
	Spain	3	Establishing MPAs in the country follows a separate procedure. However, existing MPAs are identified in the MSP plan as Priority Use Areas for Biodiversity Conservation. Areas currently under research that could

			potentially become formal MPAs in the future are classified as High-Potential Areas for Biodiversity Conservation in the MSP plan.
North Sea	Belgium	3	The MSP Team in Belgium is part of the Marine Environment Service but operates independently to maintain neutrality during the MSP process. The restrictions for MPAs are outlined in the legally binding Royal Decree that implements the MSP. This decree (for 2020-2026 and the draft for 2026-2034) includes the coordinates of five Natura 2000 sites, detailing the species and features they protect, as well as the specific restrictions in place. It also includes coordinates for bottom integrity areas and, for the upcoming MSP, areas designated for marine reserves. In addition to mitigation measures, the SEA for the MSP provides advice on monitoring, including a requirement for offshore wind projects to monitor seabird disturbance (though not directly linked to MPAs). The monitoring of Natura 2000 sites is integrated with the MSFD. The draft MSP for 2026-2034 also introduces a new environmental objective, which includes developing a comprehensive monitoring program for Belgian marine areas, Natura 2000 sites, marine reserves, and soil integrity zones, as well as monitoring the effects of active nature restoration projects.
	Germany	3	Implementing the EBA in German MSP follows the HELCOM-VASAB Guidelines. The SEA evaluated the environmental impacts of MSP implementation, addressing security, shipping facilities, economic uses, research, and marine environmental protection. The MSP integrates sectors such as shipping, offshore wind energy, cables, raw material extraction, fisheries, marine aquaculture, scientific uses, environmental protection, security (national and alliance defence), air traffic, and recreation. There is a distinction between the responsibilities for MSP implementation and the management/monitoring of MPAs.

	Netherlands	2	The Netherlands' legal framework for MSP is rooted in the National Water Act, which emphasises biodiversity and ecosystem protection, including marine ecosystems in the North Sea. The Environment and Planning Act, effective from January 2024, replaced the Water Act in terms of environmental regulations, programs, permits, and project decisions. The North Sea Programme 2022-2027 aligns with the vision for a restored North Sea by 2050, focusing on nature value restoration and the protection, restoration, and enhancement of ecosystem resilience, which is in line with international sustainable development goals. Around 30% of the Dutch North Sea is designated as MPAs under Natura 2000 and the MSFD. The MSP includes actions to further protect these MPAs, such as a ban on destructive bottom trawling in 15% of the area. New MPAs established in 2021, part of the MSP 2022-2027, will have management plans developed within three years. The North Sea Programme also integrates MSFD requirements, including environmental status descriptions, goals, indicators, and a program of measures, with three MPAs designed under the MSFD. The programme promotes nature-inclusive construction for marine activities, supporting ecosystem restoration through early-stage design actions.
	Denmark	4	The legal framework governing MSP currently offers limited support for the establishment and management of MPAs, lacking clear guidance on how to integrate MPAs into the MSP process. While there appears to have been some initial assessment of conflicts between MSP and MPA regulations, particularly through strong dialogue between the MSP team and the Ministry of Environment, this interaction does not seem sufficient to address all gaps fully. The Ministry of Environment remains an active participant in the working group, yet the fact that certain conflicts and gaps are still unresolved suggests that the integration of MSP and MPA regulations requires further development and attention.

At this point, the screening and data exploration phases are finalised, which means that making substantial changes to the 4 key levels' definitions is no longer feasible. However, the partners/ experts in MSP4BIO have suggested some valuable points that are the basis for a future improvement of the Key levels.

In an attempt to compare further the Sea Basin results, an analysis of the key levels of integration by Sea Basin is presented:



4.2 Major Gaps, Weaknesses and Threats to Integration in Each Key Level

In order to better inform Recommendations for Integration by Key Levels in section "*7.2 From Key Levels analysis*", a summary of Major Gaps, Weaknesses and Threats to Integration in each Key Level is presented below:

Key Level 2 - MPA fully integrated into MSP across sectors

Non-Binding Legal Status of MSP: In Finland, the MSP process is expert-driven, regionally based, and operates under a non-binding legal framework. This may

limit its enforceability and effectiveness in integrating Marine Protected Areas (MPAs) into marine management strategies.

Integration of Stakeholders: The Swedish MPA framework heavily relies on regional-level CABs. While they are not responsible for proposing MPAs, potential misalignment and lack of integration with other governance levels or sectors could weaken comprehensive marine resource management.

Limited Regulatory Power Over Other Sectors: In Sweden, the regulatory authority of MPAs depends on the type of MPA. For example, while Natura 2000 areas hold significant power, other MPAs may lack sufficient control over conflicting sectoral activities, like offshore wind energy and fisheries.

Lack of Centralized Coordination: Finland's MSP relies on regional authorities with potentially limited regulatory alignment between regions and with the national government. This decentralisation poses risks of inconsistency in MPA management and spatial planning standards.

Threats of Insufficient Monitoring and Enforcement: In Sweden, while MPAs are incorporated into MSP as "nature areas" (N-areas), the lack of a strong monitoring mechanism and enforcement may reduce their effectiveness.

Climate Change and Anthropogenic Pressures**:** Countries face threats from increasing climate change impacts, including sea level rise, ocean acidification, and changing marine ecosystems. MSP and MPA frameworks may be inadequately equipped to address such dynamic challenges proactively.

Limited Data and Baseline Studies: the designation of "areas of high nature value" in MSP depends on baseline data. Incomplete or outdated ecological data could affect identifying and prioritising areas most in need of protection.

Economic and Sectoral Dominance: Sectoral interests, such as energy development and fisheries, potentially dominate decision-making processes and overshadow conservation and MPA goals in non-binding MSP frameworks. This prioritisation can undermine biodiversity conservation.

Key Level 3 - MPA integrated through SEA or other Environmental Spatial Strategy

Fragmented Responsibilities: In countries like Germany and Poland, there is a clear distinction between MSP implementation and MPA management, leading to potential misalignment in their objectives and processes.

Limited Integration in Planning: In Poland, while management plans for MPAs are legally binding, the planning and implementation occur outside the MSP framework, creating a potential barrier to synergy between MSP and MPA goals.

Inconsistent Enforcement of Conservation Objectives: some countries like Spain may have precedence over other sectoral uses, not all MPAs have management plans, potentially undermining their protection mandates.

Sectoral Conflicts: In some countries, conflicts arise due to competing sectoral interests, such as shipping, offshore energy, and fisheries, with no clear conflict-solving methodological approach, which can impede the effectiveness of MPAs within the MSP framework.

Limited Data-Driven Decision Making: Challenges exist in properly identifying and managing high-value biodiversity areas, particularly when ecological assessments are incomplete or inadequate to fully inform MSP objectives.

Insufficient Stakeholder Coordination: While legally binding frameworks exist, coordination between stakeholders remains a challenge. For instance, in Spain, the independence of MPA regulations requires additional efforts to align with MSP priorities.

Inadequate Adaptability to Climate Change: MSP strategies often lack explicit measures to address climate change impacts, such as shifting ecosystems and rising sea levels, which may compromise the resilience of MPAs.

Monitoring and Enforcement Gaps: Effective monitoring systems are often underdeveloped in MSP, where monitoring focuses on other issues like wind energy impacts rather than directly linking to MPAs.

Reliance on Pre-Existing Legislation: In some countries, like Slovenia, the integration of biodiversity and nature conservation into MSP relies heavily on pre-existing frameworks (e.g., Nature Conservation Acts), which may limit proactive marine conservation measures.

Limited Geographic Scope of MPA Networks: In Ireland, the lack of a coherent, representative, connected MPA network reinforces gaps in effective marine conservation and spatial planning.

Key Level 4 - MPA as a layer or sector in MSP

Lack of legal integration between MSP and MPA frameworks, often resulting in misaligned conservation and spatial planning efforts.

Insufficient legal authority or non-binding nature of MSP documents to establish or modify MPAs.

Limited recognition of ecological corridors and connectivity between MPAs within MSP frameworks, leading to fragmented conservation efforts.

Minimal synergy between MSP objectives and wider biodiversity goals due to parallel or independent development processes.

Ineffective stakeholder coordination and governance mechanisms, creating gaps in the collaboration required between environmental and marine authorities.

Limited monitoring and enforcement mechanisms for ensuring MSP compliance with MPA objectives.

Poor integration of ecological and environmental assessments into MSP processes, leading to conservation being deprioritised in favour of economic activities.

Increased economic pressures, including competition for maritime space from shipping, tourism, and resource extraction, which potentially undermine conservation goals.

Spatial and regulatory conflicts between stakeholders managing MPAs and those implementing MSP, stemming from unclear jurisdictional roles.

Lack of resilience and connectivity in MPA networks, making them vulnerable to the impacts of climate change and human activities.

In Conclusion, key level 4, which features the highest challenges, presents a series of obstacles that are often overlapping on other key levels: Lack of legal integration between MSP and MPA frameworks often results in misaligned conservation and spatial planning efforts, compounded by the insufficient legal authority or non-binding nature of MSP documents to establish or modify MPAs. Limited recognition of ecological corridors and connectivity between MPAs within MSP frameworks leads to fragmented conservation efforts, while minimal synergy between MSP objectives and wider biodiversity goals stems from parallel or independent development processes. Spatial and regulatory conflicts arise due to unclear jurisdictional roles between stakeholders managing MPAs and those implementing MSP, with ineffective stakeholder coordination and governance mechanisms further exacerbating collaboration gaps between marine and environmental authorities. Poor integration of ecological and environmental assessments into MSP processes deprioritises conservation in favour of economic activities, increasing economic pressures such as competition for maritime space from shipping, tourism, and resource extraction, which potentially undermine conservation goals. Limited monitoring and enforcement mechanisms fail to ensure MSP compliance with MPA objectives, while a lack of resilience and connectivity in MPA networks makes them vulnerable to climate change and human activities. These cumulative factors reveal significant gaps and weaknesses, highlighting the need for more cohesive, integrated, and enforceable MSP and MPA strategies.

Conclusion:

Across the EU Member States, in some jurisdictions, there is a clear support for the establishment of MPAs within the frameworks of MSP, while others operate with distinct processes that exhibit varying levels of coordination. This diversity in approach underscores the complexity of marine governance across Europe.

Examples of **Comprehensive Integration** in various European countries include:

Germany: MSP in Germany follows the Ecosystem-Based Approach, ensuring environmental protection and integrating various sectors, though the responsibilities of MSP and MPA management are distinct.

Sweden: MSP regulatory frameworks directly support MPA establishment, and areas designated for nature conservation are included in MSP planning.

Examples **of Limited Integration** in various European countries include:

Denmark: The legal framework governing MSP has limited support for MPAs, showing unresolved conflicts and gaps in integration.

Italy: MSP does not explicitly support MPAs, and conflicts between MSP and MPA regulations remain unaddressed within national policy.

There are several **key challenges** in achieving comprehensive integration between Marine MPAs in various European countries.

Legal and Structural Distinctions: Many countries have distinct legal frameworks for MSP and MPAs, leading to conflicts and contradictions during their planning processes. For instance, as e.g. while Estonia has structured similarities between MSP and MPA processes, they remain legally separate, thus giving room to contradiction.

Stakeholder Engagement: Engaging relevant stakeholders in the integration process is crucial yet often insufficient. In Poland, for example, although stakeholder involvement in developing MPA management plans is mandated, this occurs outside the MSP framework, causing disconnections.

Lack of Clear Guidance: In countries like Denmark, the existing MSP legal frameworks provide limited guidance on incorporating MPAs, which highlights the need for better coordination.

Non-binding Nature of Plans: Some MSP initiatives, such as those in Finland, have non-binding legal status, which may hamper effective enforcement and integration with MPA management.

Insufficient Environmental Assessments: Implementation of ecosystem-based approaches varies, and the lack of thorough EIA can impede effective integration, as seen in some limitations of the German MSP process.

5. SEA

SEA plays a central role in any Planning Policy as MSP by aligning strategic plans with the requirements of the MSFD and the SEA Directive. These directives establish clear objectives for achieving Good Environmental Status (GES) in marine basins (EC, 2001; EC, 2014).

As a methodological and strategic tool, SEA integrates ecosystem-based approaches into planning processes. Its primary role is to provide a scientific basis for assessing cumulative environmental impacts, managing multisectoral interactions, and proposing measures that promote the sustainable use of marine resources and balanced decision-making. This approach enables the integrated management of multiple uses of marine space, such as transportation, renewable energy, and environmental conservation, contributing to reduced conflicts between sectors and the protection of critical ecosystems (Noble, 2002; Zaucha et al., 2025).

SEA is essential for the protection and management of these areas, adopting an ecosystem-based perspective to ensure a holistic analysis of impacts and the definition of priorities. It facilitates the integrated evaluation of environmental impacts and the spatial allocation of human activities, promoting long-term sustainability.

SEA is also pivotal in the identification and mitigation of cumulative impacts, as it offers a systematic approach to assessing the combined effects of multiple human activities on a large spatial and temporal scale. By integrating environmental and social data, SEA identifies critical impact areas and proposes preventive and corrective measures, ensuring more sustainable decisions aligned with conservation goals and the rational use of natural resources (Zaucha et al., 2025).

Despite its significance, SEA faces substantial implementation challenges. Gaps in environmental data, methodological difficulties, and institutional barriers limit its effectiveness in supporting strategic decision-making processes (Zaucha et al., 2025). To overcome these challenges, it is necessary to enhance methodological tools, promote data integration, and strengthen collaboration among stakeholders in maritime planning (Calado et al., 2021).

Additionally, SEA provides a robust methodological framework for identifying sustainable alternatives and mitigating adverse impacts, supporting EU Member States in aligning their maritime spatial plans with long-term environmental objectives and international sustainability commitments (Noble, 2002; Sheate & Partidário, 2010). Also, Practical guidelines are indispensable for effectively operationalising sustainability, improving the quality of strategic decisions, and ensuring the effective integration of environmental criteria into MSP processes (Sheate & Partidário, 2010). The Most Commonly Addressed Issues in Strategic Environmental Assessment by Sea Basin are presented in Table 12.

Table 12: Syntheses of the Most Commonly Addressed Issues in Strategic Environmental Assessment by Sea Basin.

Sea Basin	Short Question	Syntheses
Baltic Sea	**Adherence to Legal Frameworks in SEA**	The SEA/MSP Plan process ensures adherence to national and international legal frameworks by integrating comprehensive environmental impact assessments, legal reviews, and sustainability principles. It aligns with regulations like the Marine Strategy Framework Directive and national laws on environmental protection, ensuring that significant environmental impacts are assessed during planning. The process incorporates stakeholder consultations, uses previous environmental studies to inform decisions, and applies multi-criteria analysis to evaluate various scenarios. This holistic approach integrates ecological, economic, and social considerations, ensuring that the MSP complies with legal requirements and promotes sustainable development throughout its implementation.
	Review and Scoping for Sustainability Baseline	In the development of MSP, establishing a sustainability baseline is critical for assessing environmental, social, and economic impacts. This is often achieved through a combination of scoping, impact assessments, and continuous monitoring and review. Methodologies such as scoping and impact assessment are used to gather data and assess the state of the environment, considering both direct and transboundary impacts. These processes help identify key marine ecosystem components and potential impacts, ensuring that all relevant factors are considered in the planning process. Additionally, the integration of ecosystem-based approaches ensures the effective functioning of ecosystems is prioritised, while ongoing review and monitoring allow for continuously updating marine area information and responding to emerging threats and new scientific data. Regular assessments contribute to the adaptation of MSPs over time, supporting long-term sustainability.
	Cumulative Impacts in SEA	Cumulative impact assessments in SEA are essential for understanding the combined effects of multiple activities on the marine environment, including cross-border assessments. It is necessary to evaluate how various maritime

		activities, such as offshore wind development, fishing, and shipping, interact with each other and impact ecosystems. In countries like Sweden, cumulative impacts are assessed using integrated tools, such as SYMPHONY, and by considering long-term ecological effects. These assessments help ensure that MSP incorporates not only sector-specific impacts but also the broader consequences of overlapping activities, leading to more informed and sustainable planning decisions.
	Ecosystem Impact Uncertainties in SEA	Ecosystem impact uncertainties are addressed through the application of the precautionary principle and scenario-based planning. Uncertainty regarding future developments, such as new marine uses like wind energy or aquaculture, is managed through dedicated research and EIA to ensure no negative environmental effects. SEA reports generally account for current knowledge, yet areas of undecided development are handled cautiously, with decisions being contingent on future assessments and the availability of more concrete environmental data.
	Environmental Performance in SEA	The analysis of MSP highlights the importance of integrating comprehensive EIAs and performance evaluations from the early stages of the process. These assessments, covering ecological, economic, social, and cultural aspects, play a critical role in ensuring the environmental performance of the plan. Continuous collaboration with stakeholders and the integration of their feedback throughout the planning stages reinforce the participatory nature of the process. Furthermore, applying ecosystem-based methodologies and multi-criteria analysis, evaluating the impacts on ecosystem services, is essential for achieving sustainable environmental performance while balancing marine development with environmental protection.
	Impact Assessment for Sustainability	Sustainability in the MSP process is assessed through comprehensive impact evaluations, focusing on the potential environmental effects of the plan's implementation. These assessments examine the likely significant impacts on the marine environment, particularly in terms of regulations governing the use and protection of EEZ. A detailed methodology is applied during the SEA

		process, incorporating scoping, impact assessments, and reviews to ensure sustainability across ecological, economic, and social dimensions.
	Long-term Ecological, Economic, and Social Impacts in SEA	The planning process of the MSP aims to integrate long-term ecological, economic, and social considerations, with a focus on balancing these aspects. While ecological impacts are consistently prioritised, the social and economic implications are explicitly addressed, particularly through the application of an ecosystem-based approach and in specific measures designed to balance the needs of the environment, economy, and society. In some cases, social implications are more focused on activities near the shore, where human interactions are more prominent, such as landscape impacts and recreational experiences. Additionally, the need to assess and manage these long-term impacts is acknowledged in various planning stages, and there is ongoing incorporation of data to enhance decision-making, aiming for a sustainable and integrated marine spatial planning framework.
	Monitoring for Sustainability Baseline	Some plans have integrated comprehensive mechanisms to track and review the implementation of marine spatial plans. These processes often include action plans that outline follow-up activities, ensuring the continuous updating of marine data to reflect changing conditions. This enables effective monitoring, review, and adaptation of the plan. These monitoring processes contribute to maintaining an updated baseline and improving the effectiveness of the marine spatial planning process.
	Participation in SEA	

		The participation of stakeholders in the SEA process is an integral part of MSP. Feedback from stakeholders and the public is actively sought, with consultation phases being organised to ensure broad engagement. The SEA process may run in parallel to MSP preparation, and participation is facilitated through both meetings and online platforms, ensuring transparency and accessibility. The sustainability, participation, and transparency principles are explicitly embedded within the SEA framework, reinforcing the integration of environmental priorities into the overall planning process.
	Stakeholder Engagement in SEA	Effective stakeholder engagement is crucial for the success of SEA in the MSP process. Various approaches have been adopted to ensure broad participation, including legislation in Finland and the Åland Islands, which mandates that stakeholders and public authorities to be involved in the planning process. Public participation is further promoted through multi-stage consultations with diverse sectors, ensuring an inclusive and transparent process. The aim is to develop a planning process that reflects society's needs, with stakeholder activities organised in close collaboration with MSP planners and SEA experts. In some regions, such as Poland, the process has been praised for being comprehensive and transparent, though there remains a need for better outreach to underrepresented groups, such as youth or the general public outside marine areas.
	Transparency in SEA	Transparency in the SEA process is achieved through public dissemination of plans, assessments, and consultations. Stakeholder engagement is emphasised, including in the very initial stages of the planning process, through multiple-stage consultations, accessible public platforms, social media, and transparent feedback mechanisms. These efforts ensure that stakeholders from various sectors (environmental, social, economic) have an active role in the process, with information being regularly updated, publicly available, and open to scrutiny to ensure accountability and inclusive decision-making. However, some places are still concerned about the need for more active dissemination

		of information about the meetings on social media (or more active use of social media).
Black Sea	**Adherence to Legal Frameworks and Environmental Performance in SEA**	Environmental performance in SEA is integral to ensuring that marine spatial planning meets environmental protection goals and promotes sustainability. The Bulgarian MSP Plan adhered to the EU, international, and national legal frameworks through the EIA, with stakeholder consultations informing the process. While the EIA complies with legal obligations, it lacks a comprehensive analysis of overlaps and gaps in the strategic and legal frameworks. Similarly, other SEAs prioritise environmental protection by analysing key environmental aspects during planning and implementation, supporting sustainable development. These assessments help identify potential environmental impacts, ensuring that planning decisions align with high environmental performance standards and contribute to the long-term sustainability of marine environments.
North-East Atlantic	**Cumulative Impacts in SEA**	To effectively evaluate cumulative impacts in MSP, it is essential to conduct CIA for activities with significant potential effects, such as offshore renewable energy development. This process involves identifying and analysing the combined effects of multiple activities on marine ecosystems, considering pressures from different sources and their interactions. SEA should focus on understanding the underlying stressors and integrating adaptive management practices. Ultimately, minimising cumulative impacts requires systematic identification of key pressures and the implementation of sustainable management strategies to balance development and environmental preservation.
	Ecosystem Impact Uncertainties in SEA	Proactive identification of potential unforeseen adverse effects is a crucial component of the SEA process. Key strategies for managing these uncertainties include recognising data gaps and acknowledging knowledge limitations, including around cumulative impacts, species movements, and environmental components. SEA should adopt a flexible approach, such as periodic revision cycles, to adapt to new scientific knowledge, emerging threats

		(e.g., climate change), and updated monitoring data. Additionally, integrating biodiversity criteria or actions into the planning process ensures that future impacts, including those related to emerging developments such as offshore wind farms (OWF), are adequately addressed. Continuous development of methodologies, especially in defining ecological status and linking human pressures to environmental impacts, is essential for reducing uncertainty and ensuring adaptive, informed decision-making in MSP.
	Long-term Ecological, Social, and Economic Impacts in SEA	A comprehensive SEA approach considers the long-term ecological, economic, and social impacts of marine activities, ensuring balanced, sustainable planning. For ecological impacts, the SEA emphasises maintaining good ecological status, aligning with environmental protection frameworks such as the MSFD, while considering the complex interactions between human activities and the marine environment. Economically, the SEA supports the development of a sustainable blue economy, balancing growth with environmental protection by evaluating the economic benefits of key sectors (e.g., fishing, tourism, renewable energy) and accounting for the costs of environmental degradation. Socially, the SEA process incorporates stakeholder engagement, ensuring diverse perspectives are integrated into decision-making, thereby addressing social implications and fostering more inclusive outcomes. This integrated, long-term approach ensures that marine spatial planning decisions promote sustainability and resilience across all dimensions—ecological, economic, and social.
	Participation in SEA	Participation is a fundamental element of effective SEA, ensuring that diverse stakeholders are actively involved in the decision-making process. Key strategies for fostering participation include conducting stakeholder consultations with local communities, industry representatives, NGOs, and scientific bodies to gather a wide range of perspectives. Additionally, fostering collaboration with neighbouring countries is crucial, particularly given the transboundary nature of marine ecosystems. To facilitate informed participation,

		it is important to provide open access to relevant information, clearly document decisions, and integrate feedback into the planning process.
	Stakeholder Engagement in SEA	Successful stakeholder engagement in the SEA process requires diverse and inclusive methods. Key strategies include using a variety of engagement tools, such as online surveys, public consultations, and thematic workshops to gather feedback from a broad range of stakeholders. It is crucial that stakeholder input is not only collected but actively integrated into decision-making, with a particular focus on addressing concerns raised. This process fosters trust and accountability, ensuring that decisions are well-informed and consider the needs of those most impacted by marine activities. Formal consultation procedures, supported by legal frameworks and national policies, are essential in ensuring transparency and providing clear channels for feedback, such as online events or sector-specific consultations (e.g., for fisheries). This inclusive approach strengthens the legitimacy of the SEA process and enhances its effectiveness in managing marine environments.
	Sustainability in SEA	Key solutions to achieving sustainability include integrating an ecosystem-based approach and committing to long-term monitoring and reporting. A strong emphasis on maintaining or achieving good ecological status is crucial, as is promoting sustainable initiatives such as marine renewable energy, which supports decarbonisation efforts. Engaging stakeholders throughout the process enhances participation, aligning decisions with both environmental and social sustainability. Together, these strategies provide a robust framework for ensuring that marine resources are used responsibly and sustainably.
	Transparency in SEA	Transparency in SEA is ensured through open access to information, including environmental reports and responses to consultations, comprehensive documentation, and the identification of data gaps. This openness allows stakeholders to stay informed about the planning process and ensures that decisions are made based on the best available information, with clear documentation of the rationale behind decisions. The approach to transparency and stakeholder engagement in the MSP process demonstrates a clear intent

		to foster trust, ensure accountability, and make decisions informed by the needs and concerns of those most affected by activities in the marine environment.
North Sea	**Cumulative Impacts in SEA**	Cumulative impacts of various activities on marine ecosystems are assessed in SEA through systematic and integrated impact evaluations. While these evaluations are typically sector-based, focusing on specific activities like wind energy and cable laying, they emphasise the need for understanding the combined effects of multiple activities. This approach includes expert judgment but often lacks quantitative analysis and does not address synergetic impacts or baseline effects of ongoing activities. Adaptive management plays a crucial role in preventing unacceptable cumulative impacts, ensuring that ecosystem restoration is not compromised and that knowledge gaps are identified and addressed for better planning solutions.
	Long-term Ecological Impacts in SEA	Long-term ecological impacts are a critical focus in SEA, with potential effects assessed across short, medium, and long-term horizons. This includes considering factors like coastal protection resilience, which involves predicting long-term changes such as sea-level rise and ensuring sustainable sand supply from extraction zones. The SEA process also integrates social implications, particularly around balancing environmental, economic, and social concerns, and addressing how activities near the shore may affect landscapes or public experiences.
	Participation in SEA	Participation in SEA is an integral part of the planning process, ensuring inclusive stakeholder engagement. This typically involves a combination of informal dialogues with relevant parties during the drafting stage, followed by formal public consultations once the draft is ready. Every comment received during the consultation is addressed, ensuring transparency and responsiveness.
	Stakeholder Engagement in SEA	Stakeholder engagement in the SEA process is essential for ensuring inclusive and participatory decision-making. A broad range of stakeholders, including

		local authorities, agencies, NGOs, and other interested parties, is actively involved through consultations, both online and in-person, to gather diverse inputs on key aspects of the MSP process, such as land-sea interactions and the siting of wind energy projects. Stakeholder feedback is systematically integrated into the final decisions, with multiple rounds of consultations held at various stages of the process, often resulting in consensus-based outcomes. The legal frameworks and regulations governing SEA procedures, such as the Marine Environment Law and Royal Decree, ensure transparency and accountability, and final statements summarising the participation process provide clarity on how stakeholder contributions are addressed.
	Sustainability in SEA	Sustainability in SEA is central to the objectives of MSP, with an emphasis on ensuring the sustainable use of marine resources. In the SEA process, different alternatives are evaluated based on their alignment with MSP objectives. Key principles include adherence to the UN Sustainable Development Goals (SDGs).
	Transparency in SEA	Transparency in SEA is crucial for fostering public trust and ensuring accountability throughout the MSP process. Key elements of transparency include the public release of all relevant documents, such as the SEA itself, MSP drafts, annexes, and responses to consultations. Stakeholders and the general public are kept informed through online platforms where comments, proposals, and feedback are made available. The decision-making process is characterised by ongoing public and expert consultations, including national and international participation, ensuring that all views are considered. Regular information exchanges, workshops, and expert hearings are integral to maintaining openness, with all outcomes being transparently shared. This approach guarantees that the planning process remains inclusive, with active involvement from diverse sectors, including marine conservation, fisheries, energy, and others.

Mediterranean Sea	**Adherence to Legal Frameworks in SEA**	The SEA process is designed in accordance with EU and national regulations. It incorporates a structured approach from screening, consultations with stakeholders, and environmental assessments, ensuring full compliance with relevant legal frameworks. In some regions, the process involves parallel implementation with plan preparation and emphasises transparency and public engagement to inform and align with existing policies. These processes aim for harmonious integration of SEA with legal instruments to ensure transparency and decision-making alignment with national and EU guidelines.
	Cumulative Impacts in SEA	Cumulative impacts are assessed by evaluating the synergistic, long-term, and short-term effects of multiple activities on various environmental factors such as biodiversity, air, water, and human health. Several SEA processes include quantitative scoring systems to account for these impacts, while others are exploring deeper, more comprehensive assessments, especially for future plan updates. The inclusion of cumulative impacts is central to understanding how various pressures combine to affect marine and coastal environments, including through carrying capacity assessments.
	Ecosystem Impact Uncertainties in SEA	SEA processes incorporate mechanisms to address uncertainties in ecosystem impacts, acknowledging gaps in scientific knowledge and evolving environmental conditions. This includes adaptive approaches such as periodic revisions of plans based on new data, improving methodologies, and responding to emerging threats like climate change. Through these mechanisms, SEA aims to integrate uncertainty management, focusing on biodiversity and long-term ecological sustainability.
	Environmental Performance in SEA	Environmental performance in SEA is primarily governed by adherence to EU and national regulations, involving thorough environmental assessments, monitoring, and transparent consultation processes. It integrates stakeholder input, considering environmental, social, and economic aspects in plan formulation. This structured approach is crucial for promoting sustainable development, with ongoing assessments to ensure adherence to legal

		frameworks and environmental objectives, all coordinated under a competent authority for effective execution and monitoring.
	Long-term Ecological Impacts in SEA	The SEA processes emphasise the consideration of long-term ecological impacts, particularly in relation to coastal and marine conflicts. This includes conflicts between various industries (e.g., mineral extraction vs. tourism), with the goal of balancing economic development and environmental conservation. By aligning with objectives such as the MSFD, the SEA aims to ensure good ecological status and promote sustainable marine use, supporting a blue economy that integrates both environmental protection and socio-economic growth.
	Long-term Social Impacts in SEA	Social impacts are assessed alongside environmental factors, focusing on long-term sustainability and human health. The SEA process includes stakeholder participation, ensuring that social implications are addressed through transparent and inclusive decision-making. This integration of social and environmental factors ensures the development of policies that are equitable and responsive to both environmental and community needs.
	Participation in SEA	Participation is embedded throughout SEA processes, emphasising public consultation, stakeholder engagement, and transparent communication of planning decisions. In some cases, engagement is enhanced through public hearings, online events, and collaborative consultations, particularly for transboundary issues. Effective stakeholder engagement ensures that diverse perspectives, including those of local communities and industry representatives, are included in environmental planning processes, fostering inclusivity and long-term sustainability.
	Scoping for Sustainability Baseline	Scoping phases address potential sustainability impacts through an in-depth assessment of marine and environmental factors. This includes identifying significant effects on the environment, human health, and cultural heritage. Utilising global best practices, such as the Marine Spatial Planning guide by UNESCO, aids in creating a robust baseline for decision-making, ensuring that

		sustainability is considered in all stages of planning, from the early stages to the final assessments.
	Stakeholder Engagement in SEA	Stakeholder engagement is a fundamental aspect of SEA, with varied levels of participation depending on local requirements. Formal consultation processes, public hearings, and online events allow stakeholders to provide input. However, some processes recognise the need for improvement in the quality and depth of stakeholder involvement, identifying the importance of expanding these efforts during the implementation phase to enhance engagement and inclusivity.
	Sustainability in SEA	Sustainability in SEA is supported by integrating principles of ecological health, public participation, and transparent decision-making. Emphasis on achieving or maintaining good ecological status, promoting marine renewable energy, and addressing decarbonization goals illustrates a commitment to long-term sustainability. By prioritising these factors, the SEA process ensures that plans align with environmental conservation goals and contribute to the sustainability of marine and coastal ecosystems.

6. Checklist Criteria

KEY CRITERIA OVERVIEW

The analysis of criteria usage across all assessed countries reveals the ten most frequently applied criteria, which span the four key categories: Environmental, Planning, Socio-economic, and Politics/Governance (Figure 3). Among these, criteria such as 'Strategic Environmental Assessment in accordance with the Strategic Environmental Assessment Directive,' 'MSP goals identified and objectives defined,' and 'MSP team established' were most addressed, with 18 out of 21 countries reporting their application.

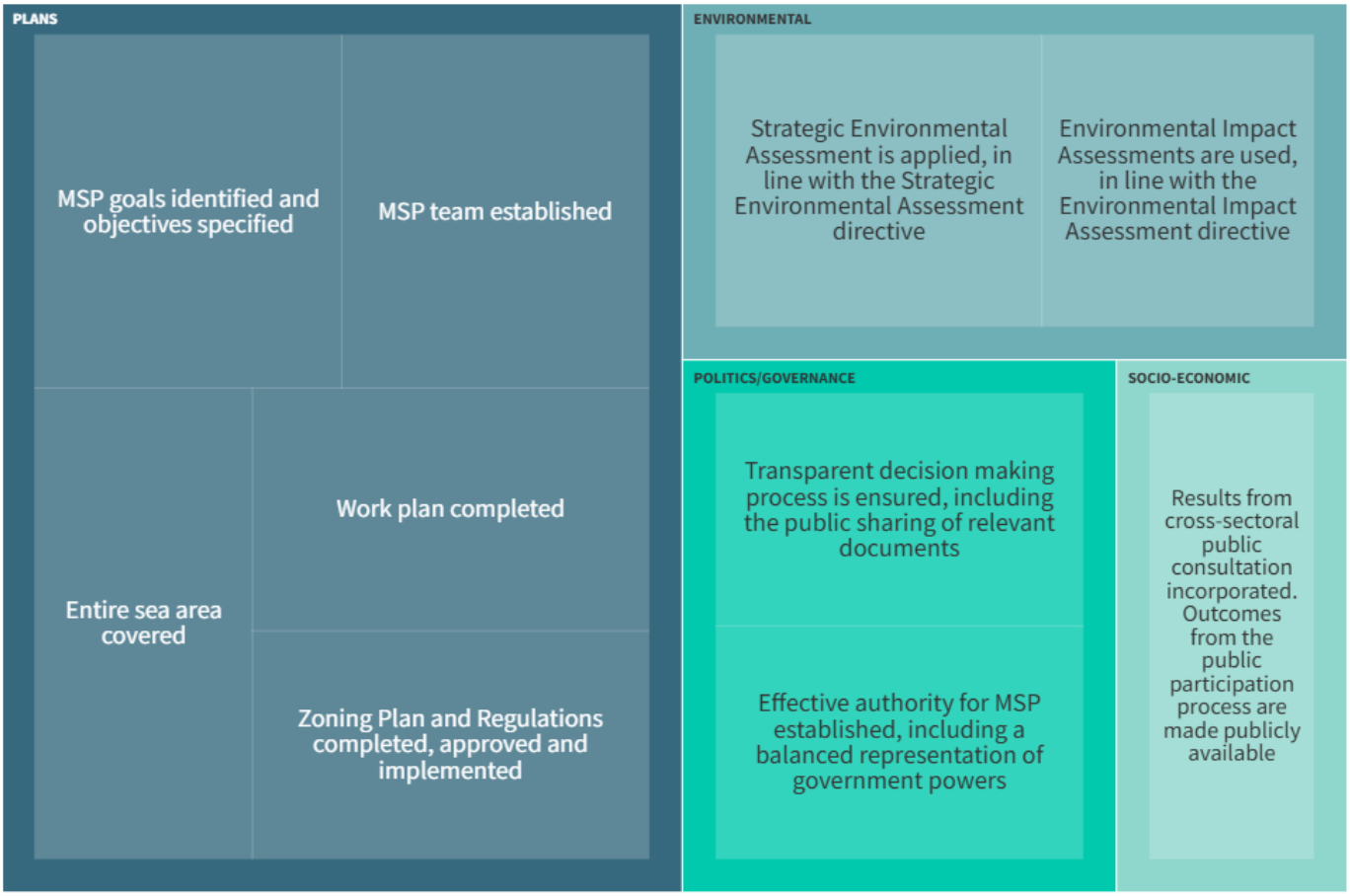


Figure 3: Top 10 Criteria Applied Across Countries by Key Categories.

CRITERIA USAGE ACROSS COUNTRIES (VARIATIONS)

The use of criteria varied across countries (Figure 4). Environmental criteria were most frequently applied in Lithuania (n=18), Cyprus (n=16), and Latvia (n=15),

but were less commonly used in France (n=3), Spain (n=5), Romania (n=5), Portugal (Madeira, n=5), the Netherlands (n=5), and Italy (n=5). Taiwan is also one of the countries with low usage (n=5); however, environmental criteria accounted for 71% of the criteria utilised. Socio-economic criteria were predominantly applied in Cyprus (n=22), Lithuania (n=19), Estonia (n=16), Ireland (n=16), Finland (n=15), and Poland (n=15). In contrast, this category was not utilised in the Netherlands and was used less frequently in Taiwan (n=1), Spain (n=2), France (n=3), and Romania (n=4).

Criteria related to politics and governance were most applied in Estonia (n=18), Lithuania (n=17), Sweden (n=17), Cyprus (n=16), and Ireland (n=16). However, their application was limited in Taiwan (n=1), the Netherlands (n=2), and Denmark (n=4). Planning-related criteria were most prevalent in Lithuania (n=16), Germany (Baltic Sea; n=15), Germany (North Sea; n=13), Romania (n=13), and Sweden (n=13). Conversely, this category was not applied in Taiwan and was less frequently used in Portugal (Azores; n=5), the Netherlands (n=5), Denmark (n=5), and Bulgaria (n=5).

Figure 4: The use of criteria varied across countries

Politics/Governance and socio-economic criteria were the most frequently addressed categories, while environmental criteria were the least utilised by countries. Countries that made greater use of environmental criteria typically belonged to types 2 and 3 of the MPA-MSP relationship, with the exception of Cyprus, Malta, and Estonia, which are type 4 but showed a high level of criteria usage across almost all categories. This shows their interest in advancing the MSP process, including the environmental dimension, as seen in Estonia, which has demonstrated a strong commitment to environmental policies.

Moreover, most type 2 countries displayed a relatively homogeneous distribution across the categories, indicating a balanced approach to integrating different aspects into the planning process. However, the Netherlands was an exception,

showing lower usage of criteria across all four categories, especially in the socio-economic domain, where no criteria were utilised. This highlights the notable gap in the country's socio-economic assessments, suggesting that while the Netherlands is engaged in MSP, there is room for improvement.

MOST COMMONLY USED CRITERIA BY CATEGORY

- **Environmental criteria:** The most frequently used criteria in the environmental category included the application of Strategic Environmental Assessments in line with the Strategic Environmental Assessment Directive; the consideration and support of environmental provisions and objectives from relevant interconnected policies; and the implementation of Environmental Impact Assessments, in accordance with the Environmental Impact Assessment Directive (Figure 5). Over 70% of assessed countries applied these criteria**.** The widespread application of these criteria highlights the importance placed on ensuring sustainable development and mitigating environmental impacts.

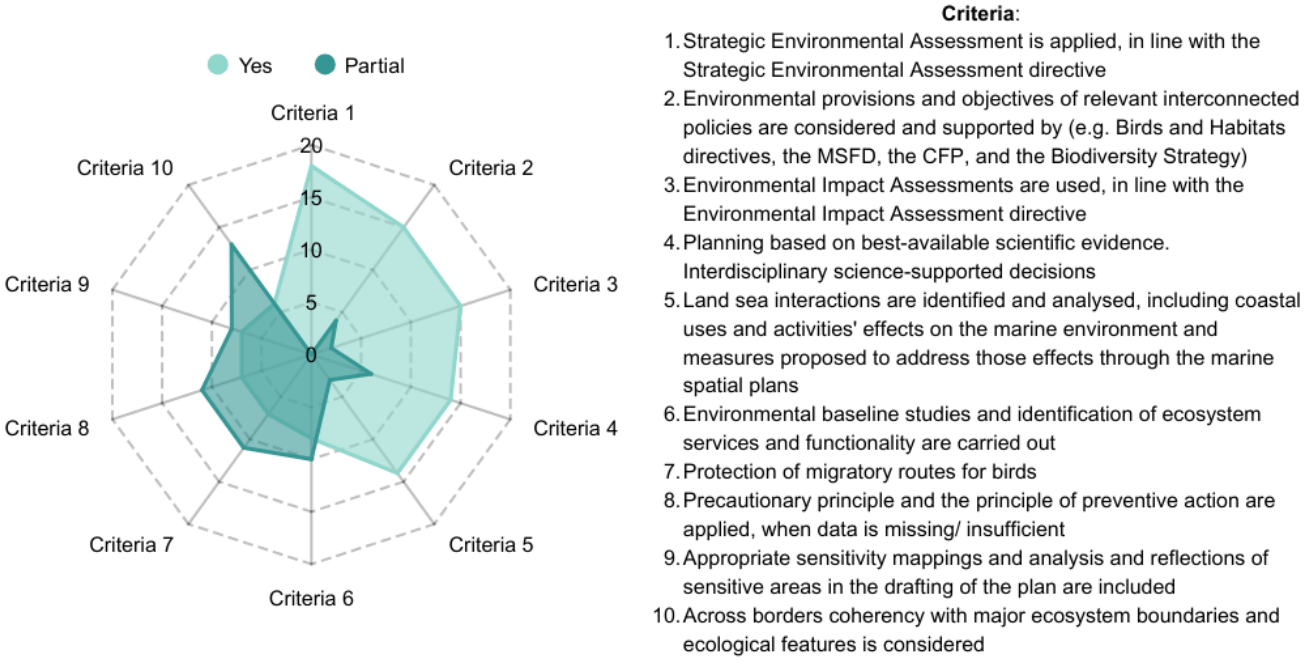


Figure 5: Top 10 Most Frequently Used Criteria in the Environmental Category

- **Planning Process Criteria:** Key criteria in this category included the identification of MSP goals and the specification of objectives, the establishment of MSP teams, the coverage of the entire sea area, the completion of work plans, the selection of a preferred vision, and the completion, approval, and implementation of zoning plans and regulations (Figure 6). The use of these criteria, ranging from goal identification to the implementation of zoning plans, demonstrates the commitment to ensuring a well-coordinated and inclusive planning process. Their

inclusion also reflects the importance of clear objectives and coordinated efforts in achieving the sustainable and efficient use of marine resources.

Figure 6: Top 10 Most Frequently Used Criteria in the Planning Process Category

- **Politics and Governance Criteria:** The most addressed criteria included the establishment of an effective authority for MSP, ensuring a balanced representation of government powers, and the assurance of a transparent decision-making process with relevant documents made publicly available. Other key criteria in this category were developing a legally binding plan and integrating all maritime sectors, ensuring their objectives were aligned with MSP objectives, targets, and timelines established by relevant policies and legislation (Figure 7). The use of these criteria emphasises the importance of strong governance in MSP, as well as the need for coordinated efforts and a legally binding approach to achieving sustainable maritime management.

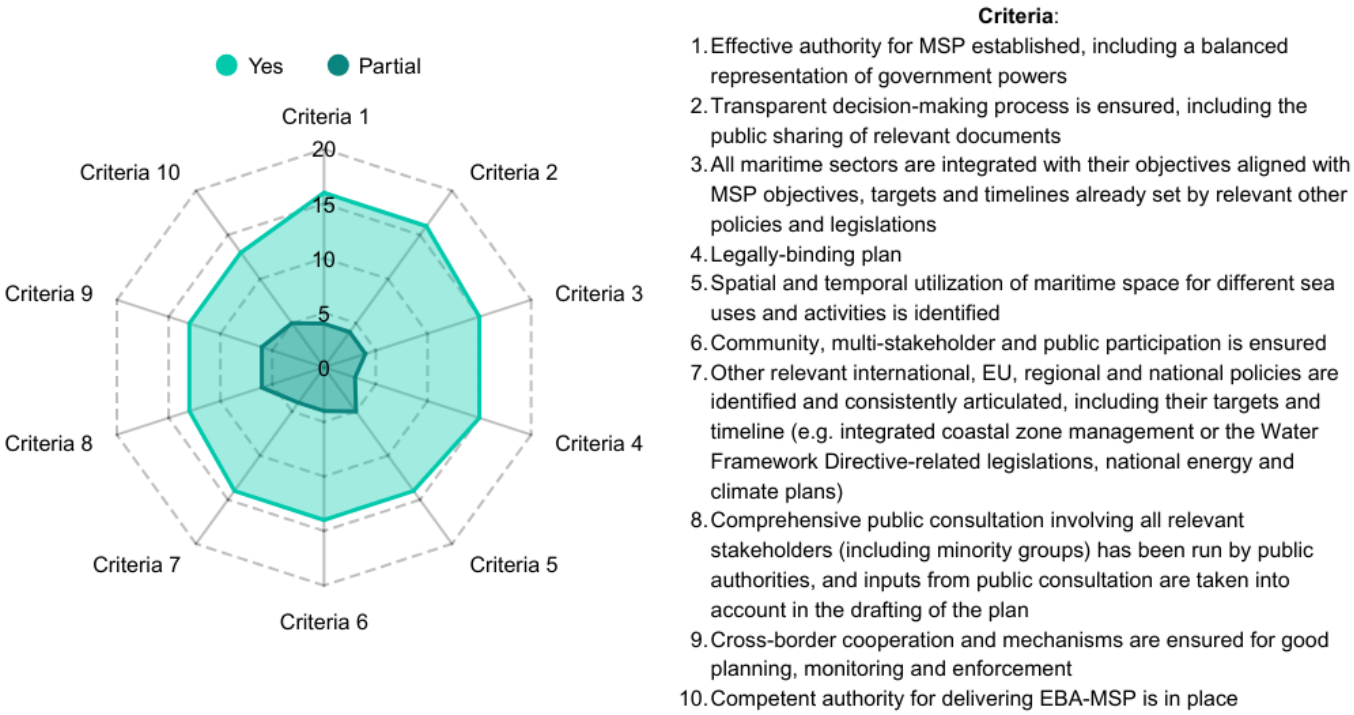


Figure 7:Top 10 Most Frequently Used Criteria in the Politics and Governance Category

- **Socioeconomic criteria:** The most frequently used socio-economic criteria included the incorporation of results from cross-sectoral public consultations, with outcomes made publicly available, and the establishment of coordination for authorisation, certification, and planning procedures (Figure 8). The application of these criteria highlights the importance of transparency and stakeholder engagement in the decision-making process. These efforts ensure that socioeconomic considerations are effectively integrated into planning, promoting inclusive and informed outcomes.

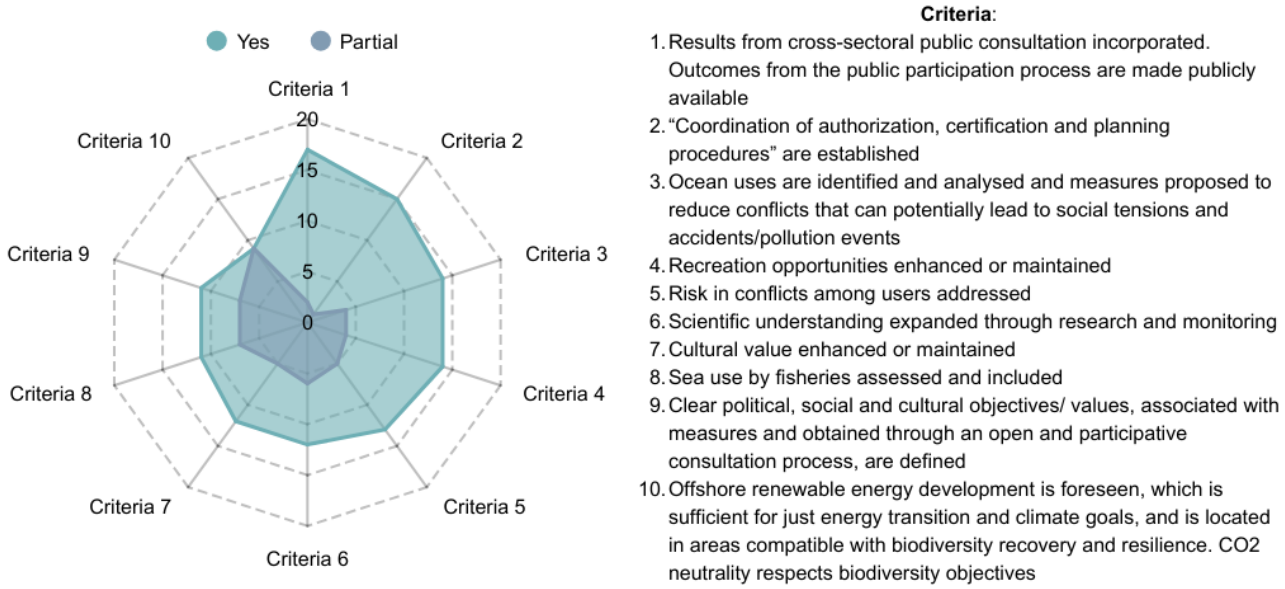


Figure 8: Top 10 Most Frequently Used Criteria in the Socioeconomic Category

CRITERIA MOST USED ACROSS SEA BASINS

The Baltic Sea

The Baltic Sea region had the highest number of participating countries (n=8). The most important criteria applied across all eight countries included planning based on the best available scientific evidence, considered the most important one for the integration of MPA and MSP; the use of Environmental Impact Assessments, in line with the Environmental Impact Assessment Directive; and the completion, approval, and implementation of the Zoning Plan and Regulations (Figure 9 and Annex 2). The integration of diverse criteria, from the establishment of MSP teams to in-depth public consultation processes, underscores the commitment to ensuring sustainable, inclusive, and conflict-minimizing management of marine resources. These criteria collectively emphasise the need for scientific support, stakeholder engagement, and adaptive management to achieve a balanced and resilient marine environment.

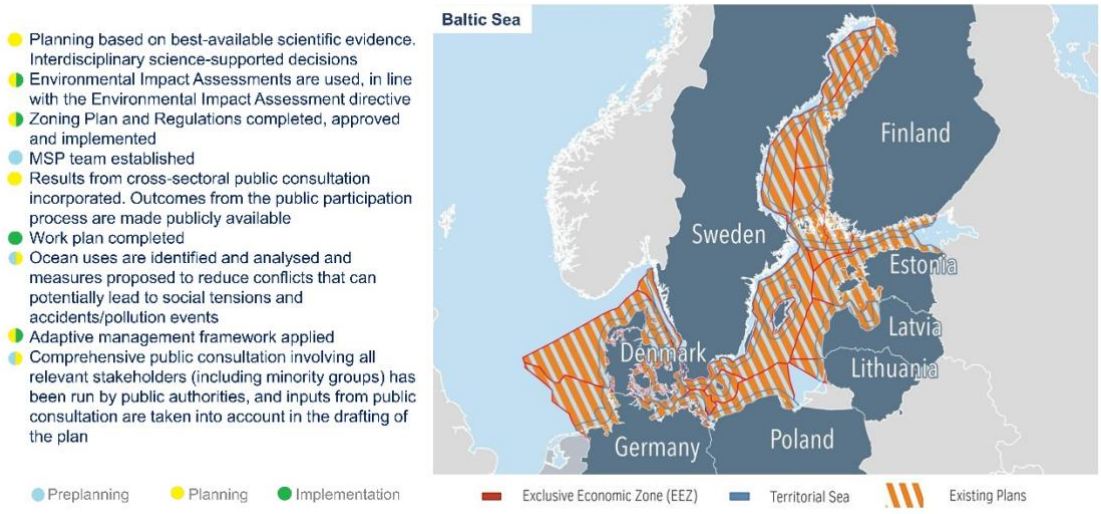


Figure 9: Criteria most used across the Baltic Sea (adapted from: https://maritime-spatial-planning.ec.europa.eu/).

Mediterranean Sea

Following the Baltic Sea, the Mediterranean Sea and the North Sea were each represented by six countries. In the Mediterranean Sea, the most applied criteria included the consideration and support of environmental provisions and objectives from relevant interconnected policies; the integration of all maritime sectors, with objectives aligned to MSP targets and timelines established by other relevant policies and legislation. Also, the development of legally binding plans, identification and specification of MSP goals, and establishment of MSP teams (

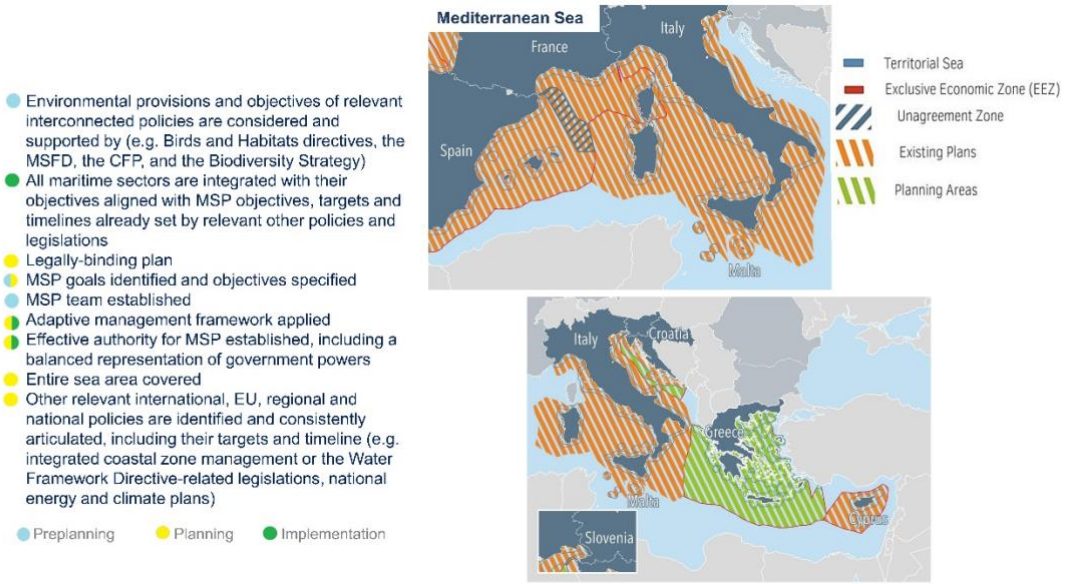


Figure 10). This demonstrates their commitment to aligning MSP with broader

environmental and policy frameworks and ensuring a coordinated and strategic approach to managing the region's marine resources.

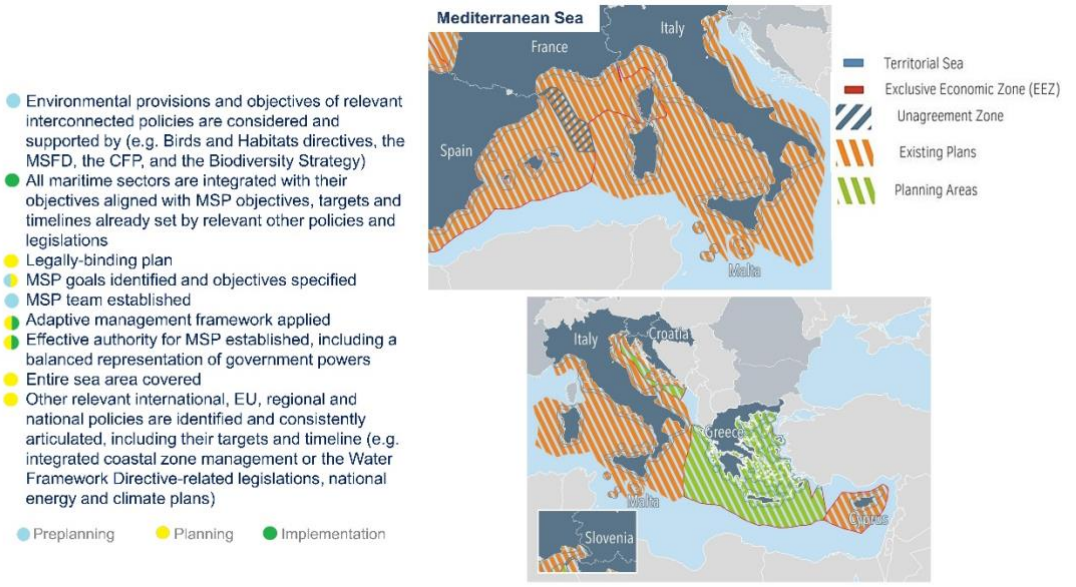


Figure 10: Criteria most used across the Mediterranean Sea (adapted from: https://maritime-spatial-planning.ec.europa.eu/).

North Sea

In the North Sea, the most frequently applied criteria included the use of Environmental Impact Assessments, in line with the Environmental Impact Assessment Directive; the application of Strategic Environmental Assessments, in line with the Strategic Environmental Assessment Directive; the completion of the work plan; and the coverage of the entire sea area (Figure 11). All of them are considered highly important for the integration of MPA and MSP (Annex 2). This highlights the North Sea's commitment to implementing a comprehensive and transparent approach to MSP, ensuring that environmental, scientific, and social considerations are effectively integrated into the planning process for sustainable and inclusive marine resource management.

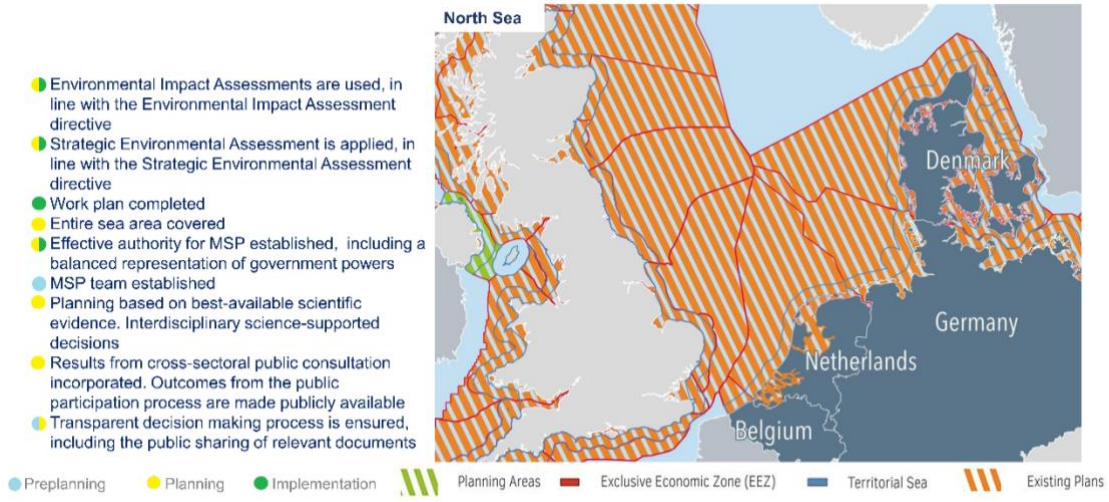


Figure 11: Criteria most used across the North Sea (adapted from: https://maritime-spatial-planning.ec.europa.eu/).

North-East Atlantic

The North-East Atlantic was represented by four countries. The criteria applied across all these countries included coverage of the entire sea area; identification and specification of MSP goals; formation of MSP teams; and the application of Strategic Environmental Assessments in line with the Strategic Environmental Assessment Directive (Figure 12); Similarly to the North Sea, the most commonly used criteria in this region emphasise the interest in establishing a comprehensive and coordinated approach to MSP, ensuring that legal, environmental, and social considerations are integrated into a transparent and effective decision-making process for sustainable marine resource management.

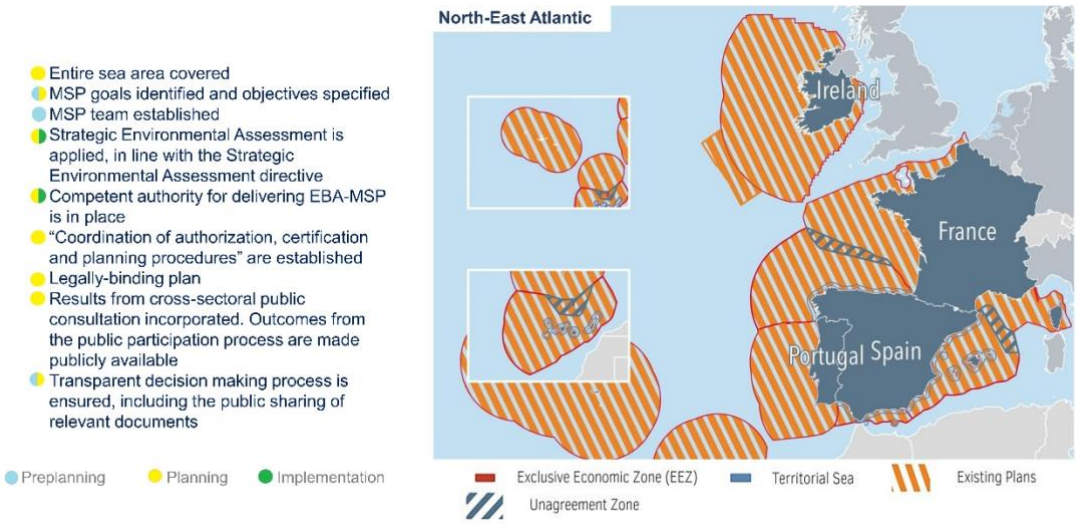


Figure 12:Criteria most used across the Noth-East Atlantic (adapted from: https://maritime-spatial-planning.ec.europa.eu/).

Black Sea

The Black Sea, represented by two countries, was one of the least represented sea basins. A total of 17 criteria were applied across both countries. Five of these criteria were considered highly important for the integration of MPA and MSP, including the establishment of coordination for authorisation, certification, and planning procedures; coverage of the entire sea area; expansion of scientific understanding through research and monitoring; application of Strategic Environmental Assessment in line with the Strategic Environmental Assessment Directive; and ensuring a transparent decision-making process, including the public sharing of relevant documents (Figure 13). This highlights the Black Sea's focus on ensuring that environmental, scientific, and procedural aspects are carefully considered in the management of marine resources.

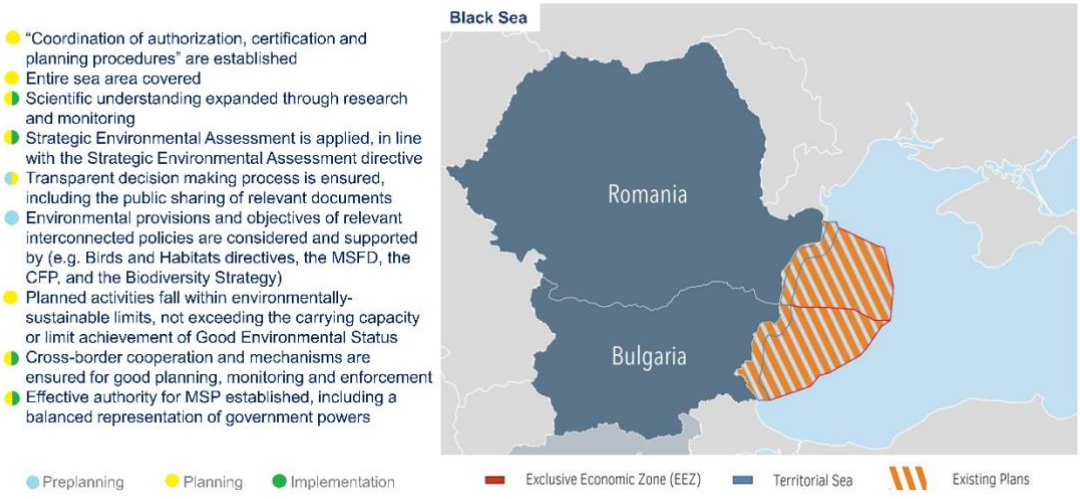


Figure 13:Criteria most used across the Black Sea (adapted from: https://maritime-spatial-planning.ec.europa.eu/).

Taiwan

In Taiwan, seven criteria were satisfactorily addressed during the MSP process namely: Environmental Impact Assessments are used, in line with the Environmental Impact Assessment Directive; Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment Directive; Environmental provisions and objectives of relevant interconnected policies are considered and supported (e.g., Birds and Habitats Directives, the MSFD, the CFP, and the Biodiversity Strategy); Catch yields are improved or sustained in fishing within the marine area; Focal species abundance increased or maintained; Public understanding of environmental and social 'sustainability'

improved; Regulatory and enforceability set up. The first three criteria are among the most used criteria in Europe, demonstrating their potential for international application.

The criteria most used in the European Union are representative of European standards and values. However, these criteria cannot be fully exported to other regions of the world without considering local specificities. A prime example is Taiwan, where the social, economic, and political context differs from that of Europe, which may make a direct application of European commonly used criteria less effective or appropriate.

Among the criteria most frequently used in each sea basin, excluding Taiwan, eight showed significant differences. These criteria, along with their respective p-values, are as follows: Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions ($p = 0.0179$); Comprehensive public consultations conducted, involving all relevant stakeholders (including minority groups), with inputs incorporated into plan drafting ($p = 0.0125$); Tools are devised to translate spatial data into actionable information fit for planning purposes, and end users can evaluate the usability and quality of spatial data and maps ($p = 0.028$); Adaptive management framework applied ($p = 0.026$); MSP team established ($p = 0.027$); Cumulative impact assessment of all activities at sea is used ($P = 0.048$); Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans ($p = 0.043$); and Economic baseline studies and economic impact assessments are carried out. Clear economic objectives, focusing on sustainable development and aligned with the sustainable blue economy and finance principles, are defined ($p = 0.033$).

Future use

The criteria with the highest percentage of interest for future use were as follows: the provision of “Greater confidence and certainty for investors”; the integration of a coherent, well-connected, and representative network of MPAs and areas of ecological importance, ensuring connectivity through provisions outside MPAs, in line with the Biodiversity Strategy spatial targets, and associated with management plans; ensuring community, multi-stakeholder, and public participation; cross-border cooperation and mechanisms for effective planning, monitoring, and enforcement; coverage of the entire sea area; forecasts of future human activities documented and mapped; planned activities falling within environmentally sustainable limits, not exceeding carrying capacity or achieving Good Environmental Status; and the application of Strategic Environmental Assessment, in line with the Strategic Environmental Assessment Directive. Notably, 100% of the countries that did not currently utilise these criteria expressed interest in adopting them in the future. However, this expression of interest, especially high in the responses of Governmental Agencies staff, may have a “political” need to show commitment to the integration process (Table 13).

Table 13: Criteria with the highest future use interest

Criteria	Future Use (%)
Providing “Greater confidence and certainty for investors”	100.0
Coherent, well-connected and representative network of MPAs and areas of ecological importance are integrated, ensuring connectivity through respective provisions outside MPAs, in line with the Biodiversity Strategy spatial targets, and associated with management plans	100.0
Community, multi-stakeholder and public participation is ensured	100.0
Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement	100.0
Entire sea area covered	100.0
Forecasts of future human activities documented and mapped	100.0
Planned activities fall within environmentally sustainable limits, not exceeding the carrying capacity or limit achievement of Good Environmental Status	100.0
Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	100.0
Planning based on data and assessments of the functionality of natural processes, ecosystem structure, functioning and services to prevent their losses. Marine ecosystem services are assessed and included	83.33
Environmental baseline studies and identification of ecosystem services and functionality are carried out	66.67
Protection of migratory routes for birds	66.67
Sustainable blue economy objectives and finance principles are transparent, science-led, compliant and inclusive, are applied	66.67
Sustainable multi-purpose uses through time and space included are identified	66.67
Tools for monitoring progress and aligning with key policies included	66.67
Essential marine habitats connected via blue corridors/ green infrastructure	62.50
Planning based on spatio-temporal analysis and protection of species and habitats sensitivity in the long run and considering climate change impacts	60.00
Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions	53.85

Among the less commonly used criteria (with over 50% non-utilization), more than 80% of the countries that did not currently use these criteria showed little interest in adopting them in the future. The only exception was the indicator “Areas suitable for restoration activities, followed by restoration plans, are identified, including ecosystem functions”, which presented a more positive outlook. In this

case, 53.85% of the countries that did not use this indicator expressed interest in adopting it in the future (Table 14). This analysis needs to be seen with a critical lens, as some results raise some doubts as to whether the respondents understood the “Future use” question differently from the current situation. It is quite striking that, for instance, the criteria about fair distribution of benefits is not seen as important in the future. Another justification for these answers may be that respondents experienced some fatigue when evaluating long tables of criteria. In future works, these hypotheses need to be cleared.

Table 14: Criteria with Low Current Use and Future Interest

Criteria	Not Satisfied Covered (%)	Future use (%)
Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions	59.09	53.85
Local access to markets and capital improved	59.09	0.00
Monetary benefits distributed to and through coastal communities and marginalised groups	59.09	7.69
Household occupational and income structure stabilised or diversified through reduced marine resource dependency	54.55	0.00
Non-monetary benefits distributed equitably to and through coastal communities and marginalised groups	54.55	16.67

THE MOST IMPORTANT CRITERIA FOR THE INTEGRATION OF MPAS AND MSP IN THE COASTAL, OFFSHORE AND HIGH SEAS

When considering the importance of criteria for integrating MSP and MPAs, specific criteria emerged as particularly relevant for different areas (see Table in Annex 2). For coastal regions, the criteria from the Environmental and Politics/Governance categories emerged as the most prominent, with those related to the use of scientific evidence, Environmental Impact Assessments, and Cumulative Impact Assessments being considered as the most critical for integrating MSP and MPAs. Considering that coastal ecosystems are highly vulnerable to multiple human activities, the greater importance attributed to these criteria may reflect the need to manage the environmental pressures these areas face carefully.

In offshore areas, most of the criteria belong to the Politics/Governance category. However, the criterion deemed most relevant was also planning based on the best available scientific evidence, ensuring interdisciplinary and science-supported decisions, which falls under the Environmental category. The expansion of MPAs and the establishment of a competent authority to deliver an

Ecosystem-Based Approach MSP were also considered highly important. This suggests that while governance and political aspects are key in offshore areas, there is a strong emphasis on the establishment of effective management structures and the need for scientific evidence, the latter being further emphasised by the presence of the 'Scientific understanding expanded through research and monitoring' criterion among the most important ones. These factors highlight the need for both robust environmental planning and competent governance to ensure the integration of MPAs and MSP in these areas.

For the high seas, similarly to coastal areas, Politics/Governance and Environmental criteria were the most relevant. A transparent decision-making process was considered the most important criterion for these areas, followed by the use and public sharing of high-quality spatial data across administrative and sectoral borders; planning informed by data and assessments of natural processes, ecosystem structures, functions, and services to prevent their loss, with marine ecosystem services assessed and integrated; and planning based on spatio-temporal analysis for the long-term protection of species and habitats, considering their sensitivity and the impacts of climate change. The relevance of these criteria reflects the importance of cooperation and openness in managing the high seas, where governance is complex due to the absence of clear territorial boundaries. Moreover, they stress the growing need for informed, long-term, adaptive management to address the dynamic nature of marine ecosystems.

Regarding the importance of criteria to integrate MPAs into MSP in Taiwan, 92 out of 93 criteria were considered as highly relevant (score 3) for integration in the High Seas. All criteria were of intermediate importance (score 2) in Offshore areas. Only the criterion 'Cross-border cooperation and mechanisms are ensured for good planning, monitoring, and enforcement' was considered as having high importance (score 3) in Coastal areas. The representations of the 10% of the most important criteria for the integration of MPAs and MSP in the coast, offshore and high seas can be seen in the Figure 14.

DIFFERENCES IN INDICATOR PREFERENCES BETWEEN COUNTRIES WITH AND WITHOUT CIA

Of the 21 countries assessed, 13 reported using CIA for all activities at sea, with nine of them partially implementing it. Seven countries did not use CIA at all. Significant differences in indicator usage were observed between countries that applied CIA and those that did not. These differences were evident in mitigation hierarchy ($p = 0.005$), the use of cumulative impact assessments for all activities at sea ($p < 0.0001$), and the use of SWOT analysis, specifically identifying opportunities and strengths that can be influenced by MSP ($p = 0.015$), with the latter being more prevalent in countries without CIA.

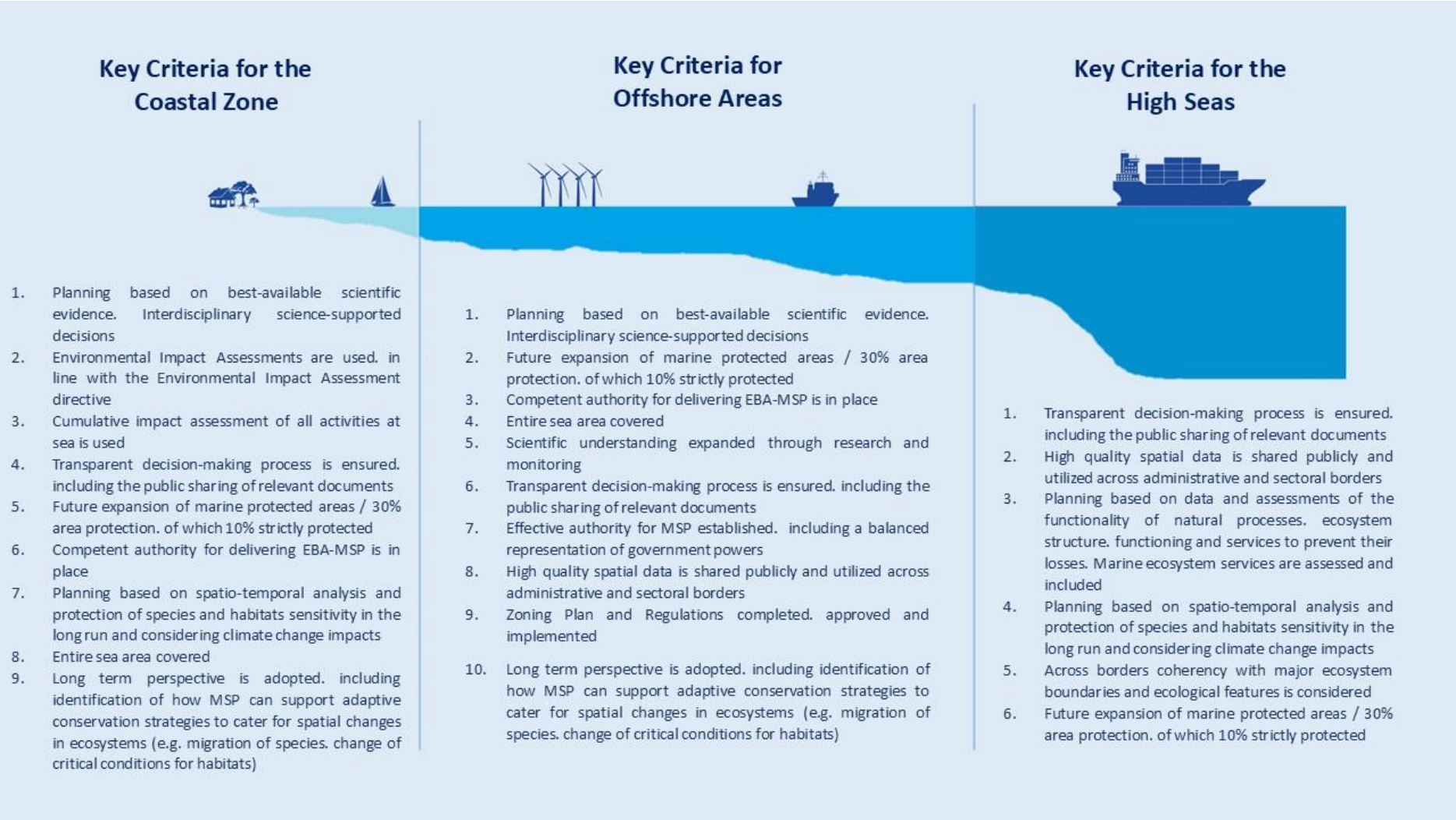


Figure 14: Representations of the top 10% most important criteria for the integration of MPAs and MSP in the coast, offshore and high seas.

All 93 criteria were allocated across the three MSP planning phases (pre-planning, planning, and implementation; Table 15).

Table 15. Allocation of Criteria across MSP Planning Phases.

Planning phase	Criteria
Preplanning	Appropriate sensitivity mappings and analysis and reflections of sensitive areas in the drafting of the plan are included
	Environmental baseline studies and identification of ecosystem services and functionality are carried out
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)
	MSP team established
	Required funding for MSP provided
	Required staff with appropriate skills provided
	Science advisory committee established
	SWOT analysis was conducted, identifying in particular which of the opportunities and strengths can be influenced by MSP
Preplanning/planning	Community, multi-stakeholder and public participation is ensured
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan
	Economic baseline studies and economic impact assessments are carried out. Clear economic objectives, focusing on sustainable development and aligned with the sustainable blue economy and finance principles, are defined.
	Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans
	MSP goals identified and objectives specified
	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events
	Precautionary principle and the principle of preventive action are applied, when data is missing/insufficient
	Preferred vision selected
	Social, political, cultural baseline studies and appropriate impact assessments for local communities are carried out
	Spatial and temporal utilization of maritime space for different sea uses and activities is identified
	Sustainable blue economy objectives and finance principles are transparent, science-led, compliant and inclusive, are applied
	Transparent decision-making process is ensured, including the public sharing of relevant documents
Planning	“Coordination of authorization, certification and planning procedures” are established

	Adverse effects on traditional practices and relationships or social systems avoided or minimized
	Alternative management actions to achieve Preferred vision identified
	Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions
	Based on SMART objectives associated with management measures and indicators to allow for proactive, iterative, and adaptive management
	Blue Carbon ecosystems protected
	Clear political, social and cultural objectives/ values, associated with measures and obtained through an open and participative consultation process, are defined
	Cumulative impact assessment of all activities at sea is used
	Entire sea area covered
	Forecasts of future human activities documented and mapped
	Industry employment and income generation are forecasted
	Legally-binding plan
	Long term perspective is adopted, including identification of how MSP can support adaptive conservation strategies to cater for spatial changes in ecosystems (e.g. migration of species, change of critical conditions for habitats)
	Other relevant international, EU, regional and national policies are identified and consistently articulated, including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations, national energy and climate plans)
	Planned activities fall within environmentally sustainable limits, not exceeding the carrying capacity or limit achievement of Good Environmental Status
	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions
	Planning based on data and assessments of the functionality of natural processes, ecosystem structure, functioning and services to prevent their losses. Marine ecosystem services are assessed and included
	Planning based on spatio-temporal analysis and protection of species and habitats sensitivity in the long run and considering climate change impacts
	Possible side-effects and distribution of positive and detrimental impacts across the sectors and groups of people (including regional differences) are identified, fostering social justice
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available
	Risk in conflicts among users addressed
	Sea use by fisheries assessed and included
	Sustainable multi-purpose uses through time and space included are identified
	Temporal and spatial uncertainties in the era of climate change are addressed, including adaptation measures
	Various scenarios of sustainable sea uses are considered
Planning/implementation	“Greater confidence and certainty for investors” is provided

	Across borders coherency with major ecosystem boundaries and ecological features is considered
	Adaptive management framework applied
	Alien and invasive species and genotypes removed or prevented from becoming established
	Coherent, well-connected and representative network of MPAs and areas of ecological importance are integrated, ensuring connectivity through respective provisions outside MPAs, in line with the Biodiversity Strategy spatial targets, and associated with management plans
	Competent authority for delivering EBA-MSP is in place
	Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement
	Effective authority for MSP established, including a balanced representation of government powers
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive
	Essential marine habitats connected via blue corridors/ green infrastructure
	Future expansion of marine protected areas / 30% area protection, of which 10% strictly protected
	Harmonised monitoring set up
	High quality spatial data is shared publicly and utilized across administrative and sectoral borders
	Management Plan completed
	Offshore renewable energy development is foreseen, which is sufficient for just energy transition and climate goals, and is located in areas compatible with biodiversity recovery and resilience. CO2 neutrality respects biodiversity objectives
	Over-exploitation of living and/or Non-living marine resources is minimized, prevented or prohibited entirely
	Protection of migratory routes for birds
	Respect for and/or understanding of local knowledge enhanced
	Scientific understanding expanded through research and monitoring
	Stakeholders are satisfied with participation process
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive
	Tools for monitoring progress and aligning with key policies included
	Zoning Plan and Regulations completed, approved and implemented
Implementation	Aesthetic value enhanced or maintained
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations
	Catch yields are improved or sustained in fishing within the marine area
	Cultural value enhanced or maintained
	Economic status and relative wealth of coastal residents and/or resource users improved
	Equity within social structures and between social groups improved and fair
	Existence value enhanced or maintained

	Focal species abundance increased or maintained
	Health of coastal residents and/or resource users Improved
	Household occupational and income structure stabilized or diversified through reduced marine resource dependency
	Improved availability of locally-caught seafood for public consumption
	Local access to markets and capital Improved
	Management Plan approved and implemented
	Management Plan enforced
	Mitigation hierarchy is applied
	Monetary benefits distributed to and through coastal communities and marginalised groups
	Multi-use of marine space is promoted
	Non-monetary benefits distributed equitably to and through coastal communities and marginalised groups
	Populations of target species for extractive or non-extractive use are restored to or maintained at desired reference points
	Public's understanding of environmental and social 'sustainability' improved
	Recreation opportunities enhanced or maintained
	Regulatory and enforceability set up
	Tools are devised to translate spatial data into actionable information fit for planning purposes, and end users can evaluate the usability and quality of spatial data and maps
	Wilderness value enhanced or maintained
	Work plan completed

7. Recommendations for MSP and MPA integration

7.1 Recommendations from lessons learned on the Europe practice

Recommendations are set after analysing information from the practices across Europe through the lens of gaps, weaknesses, and strengths, by identifying areas that need improvement and leveraging existing capabilities.

To improve MPAs and MSP integration in the **Baltic Sea basin**, the following set of recommendations is proposed:

Strengthen Legal Frameworks and Enforcement:

Enhance legal mechanisms for MPA integration into MSP, or other "soft" coordination mechanisms particularly in Poland and Denmark, where gaps have been identified. Additionally, Estonia and Finland need to implement stronger enforcement measures to ensure the effectiveness of MPAs;

Improve Cross-Border Coordination and Harmonization:

Address inconsistencies in national regulations that hinder efficient cross-border collaboration in MPA management by building on existing frameworks, such as HELCOM, and strengthen even more alignment of MSP strategies with transboundary goals;

Integrate Climate Change and Cumulative Impact Assessments:

Expand the focus on cumulative impact assessments across the basin and further integrate climate change considerations into MSP processes, which have so far been mentioned but not deeply analysed;

Enhance Adaptive Management and Review Cycles:

Establish or improve adaptive governance models with regular review cycles, flexible decision-making processes, and enhanced monitoring systems to address emerging environmental and societal challenges dynamically;

Increase Stakeholder Coordination and Engagement:

Foster participatory processes for MPA designation and MSP development to ensure stakeholder input is actively considered in decision-making. Countries like Finland and Latvia demonstrate good practices in participatory governance that could be further adopted across the region;

Focus on Connectivity in MSP and MPAs:

Ensure stronger ecological connectivity between MPAs by identifying areas of critical ecological importance and incorporating concepts like blue corridors and functional linkages into MSP frameworks;

Address Monitoring Gaps:

Improve monitoring programs to track MPA effectiveness and MSP implementation across the basin. Denmark and other countries should invest in long-term ecological evaluations and enhance the quality of monitoring efforts to better align with spatial planning goals.

To improve MPAs and MSP integration in the **North Sea Basin**, the following recommendations are proposed:

Enhance Biodiversity and Habitat Assessments:

Improve ecological connectivity assessments and biodiversity evaluations in areas impacted by offshore renewable energy development to ensure that MPAs remain effective in protecting critical habitats;

Strengthen Monitoring Frameworks:

Develop comprehensive monitoring systems to track cumulative impacts of uses and activities, such as offshore wind farms, on MPAs and broader ecosystems. This includes improving data-collection mechanisms and ensuring regular updates to monitoring frameworks;

Harmonize Transboundary Conservation Efforts:

Align regulatory frameworks across countries (in the EU: Belgium, Denmark, the Netherlands, and Germany) to facilitate cross-border marine conservation. Emphasise joint monitoring programs and data sharing for better cohesion in the case of transboundary MPA management;

Refine Adaptive Management Practices:

Regularly update MSP strategies and MPA zoning based on new scientific data, ecological findings, and stakeholder feedback. Germany's adaptive management approach offers a good model for balancing conservation with energy goals;

Address Stakeholder Conflicts:

Enhance stakeholder engagement processes to resolve conflicts between energy industries and traditional maritime sectors. This includes clearer communication channels and participatory governance to ensure all voices are represented in MSP decision-making;

Support Multi-Use Planning:

Promote multi-use spatial planning approaches that integrate energy, fisheries, tourism, and conservation efforts. Develop clear policies to ensure coherence in

multi-use implementations, especially in countries like Denmark where gaps remain;

Expand Knowledge Sharing Platforms:

Foster regional collaboration for sharing best practices on MPA integration into MSP. Platforms like the GeoSea Portal should be enhanced to support data visualisation, ecological mapping, and stakeholder coordination;

Improve Capacity Building:

Invest in training programs and resources for local authorities to build capacity for MPA monitoring and enforcement. This will address gaps in monitoring and enforcement noted in several countries, including Belgium and Denmark.

To improve MPAs and MSP integration in the Eastern **Atlantic Sea basin**, the following recommendations can be proposed:

Deep-Sea Protection Measures:

Expand spatial analysis tools to better evaluate and enhance the ecological connectivity of MPAs, particularly focusing on Portugal and Spain;

Strengthen biodiversity monitoring frameworks:

In order to track long-term ecological and environmental impacts, such as in France, where cumulative impacts need greater attention;

International Cooperation and Legal Harmonization:

Improve legal harmonisation and ensure consistent alignment of regulations between countries to strengthen transboundary MPA management and coherence;

Enhance data-sharing mechanisms:

In especially in Spain, to ensure seamless collaboration and monitoring across jurisdictions;

Assuring mechanisms for Integration of MPAs and MSP:

Further integrate ecosystem-based approaches across countries, ensuring that both existing and potential MPAs are mapped and prioritised within the MSP framework for habitat connectivity and biodiversity conservation;

Address stakeholder conflicts:

Through participatory processes, emphasising resolving tensions between traditional industries (e.g., fisheries) and emerging activities (e.g., renewable energy) in Portugal;

Monitoring and Adaptive Management:

Develop and employ advanced spatial tools like GIS-based platforms to enhance visual integration of MPAs and analyse sectoral overlaps systematically. Implement robust periodic reviews of MSP and MPAs using monitoring outcomes to adapt management strategies to evolving environmental conditions and new scientific findings. Promote cumulative environmental impact tracking across the region, ensuring all maritime activities are sustainable and compliant with conservation goals;

Stakeholder Engagement and Knowledge Sharing:

Strengthen feedback systems to ensure engagement of local communities, industries, and authorities in shaping marine planning frameworks. Establish platforms for knowledge exchange among countries and stakeholders, sharing best practices for effective MPA integration into MSP.

To improve MPAs and MSP integration in the **Mediterranean Sea basin,** the following recommendations are proposed:

Strengthen Connectivity and Integration:

Enhance connectivity between MPAs and offshore areas by implementing ecological corridors with clear management regimes. This includes addressing the current gaps in habitat representation and connectivity evaluations, as seen in Slovenia's Blue Corridor proposals. Prioritise the identification of biodiversity hotspots to support the establishment and integration of ecologically significant areas into MSP frameworks, addressing a key gap in countries like Malta and Cyprus;

Adaptive and Ecosystem-Based Approaches:

Expand adaptive management strategies that adjust to evolving environmental conditions, such as those practised in Cyprus, and align offshore activities with coastal conservation priorities like Malta's cumulative impact assessments. Incorporate long-term ecological, economic, and social sustainability considerations, ensuring the balanced management of marine areas, as highlighted by Italy and Spain;

Enhance Stakeholder Engagement:

Strengthen stakeholder participation, particularly in countries where involvement is limited, such as Cyprus and Malta. Transparent, inclusive decision-making processes should be prioritised to ensure stakeholder concerns are addressed in the planning and implementation stages. Establish structured approaches for stakeholder engagement in transboundary cooperation, improving coordination under regional frameworks like the Barcelona Convention;

Improve Monitoring and Review Mechanisms:

Regularly review management and regulatory measures within MSP and MPAs to incorporate the latest scientific findings, conservation challenges, and regional

priorities. Address gaps in monitoring frameworks, such as insufficient biodiversity monitoring in Malta, ensuring thorough cumulative impact studies and long-term assessments of ecological connectivity;

Strengthen Regional Collaboration:

Harmonise national SEA processes with transboundary environmental assessments to improve regulatory coherence and regional consistency. This includes enhancing ecological connectivity through measures like the proposed transboundary MPAs near the borders of Croatia, Italy, and Slovenia. Promote cross-border alignment by leveraging regional initiatives such as PHAROS4MPAs, or the recently created MSP Mediterranean Community of Practice, improving knowledge exchange and coordination in MP\A design and implementation.

To improve MPAs and MSP integration in the **Black Sea Basin,** the following recommendations can be made:

Address Environmental Pressures on MPAs:

Enhance connectivity and habitat representation assessments to ensure ecological continuity. Strengthen biodiversity monitoring frameworks and cumulative impact evaluations to improve resilience against coastal development and industrial pressures;

Strengthen Regional Cooperation:

Improve cross-border collaboration through joint monitoring initiatives and alignment of ecological priorities across all Black Sea nations, including non-EU countries, for more consistent regional conservation efforts. Foster transboundary connectivity by developing shared objectives under regional frameworks like the Bucharest Convention;

Integrate MPAs with Emerging Blue Economy Sectors:

Expand stakeholder capacity-building programs to improve engagement and participation in MSP processes. Strengthen governance by creating adaptive management frameworks that balance ecological protection with aquaculture, tourism, and other economic priorities. Promote cumulative impact assessments to minimise ecological disruptions while supporting sustainable Blue Economy development;

Enhance Country-Specific Measures:

Romania: Build on strong legal frameworks and foster stakeholder engagement to improve adaptive management practices and ecological connectivity assessments;

Bulgaria: Develop robust biodiversity monitoring systems and address gaps in evaluating ecological connectivity to strengthen adaptive management.

7.2 Recommendations based on analysis of Key levels of integration

The analysis of the key levels of integration between MPAs and MSP, and the importance of MPAs within MSP frameworks across different countries allows the establishment of explicit integration recommendations.

The recommendations serve a dual purpose: they propose improvements within the current key levels of integration of MPAs and MSP, while simultaneously aiming to enhance the higher integration between the two. By addressing gaps such as legal frameworks, stakeholder engagement, and ecological considerations, the recommendations are designed to strengthen institutional processes at their existing operational levels. At the same time, they emphasise achieving better alignment and synergy between MPA goals and MSP strategies, fostering a more cohesive and sustainable approach to marine conservation and resource use.

This dual focus helps ensure that each level has recommendations on its internal mechanisms for improvement while contributing to overarching cross-cutting goals, such as more effective implementation of marine environmental directives or achieving ecological connectivity.

The recommendations drawn and applied for the different MSP and MPAs integration Key levels (2, 3, and 4) may be cumulative because they address common underlying challenges related to integrating MSP and MPAs, despite the varying levels of development among the Key levels. For example, key areas such as strengthening legal frameworks, stakeholder coordination, data integration, monitoring, and enforcement are recurring themes across all MSP and MPAs Key levels, as the effective integration of MSP and MPAs fundamentally requires addressing these core issues.

KEY LEVEL 2 - MPA fully integrated into MSP across sectors

Adopt Binding Legal Frameworks for MSP: In countries like Finland and Sweden some practioners consider that making their MSPs legally binding, would ensure enforceability and alignment with MPA objectives. But this position is not consensual.

Improve Stakeholder Integration: Facilitate better coordination among regional authorities, municipal governments, and key stakeholders to ensure alignment of MSP and MPA goals.

Grant MPAs Stronger Regulatory Power: Regulatory frameworks should explicitly strengthen the authority of MPAs over conflicting maritime activities, ensuring their conservation objectives are not overridden by economic sectors like fisheries or wind energy development.

Enhance Data Availability: Invest more in baseline ecological studies and continuous data collection to support the designation and effective management of MPAs in MSP processes.

Introduce Cross-Border Coordination: Encourage stronger collaboration between neighbouring countries in managing transboundary MPAs, aligning MSP objectives across regions.

Increase Monitoring and Enforcement Capacity: Develop robust monitoring systems and allocate resources for the enforcement of MPA regulations, as current gaps in enforcement reduce effectiveness.

Establish Integration Guidelines: Develop clear guidelines that outline how MPAs should be integrated into MSP processes, reducing existing contradictions between the two frameworks.

Include Potential MPAs in Planning: Designate areas with high ecological value as priority zones or placeholders for future MPAs within the MSP to ensure they are protected during the initial planning stages.

Address Climate Change Impacts: Incorporate climate resilience measures into both MSP and MPA frameworks to proactively address rising sea levels, ocean acidification, and shifting ecosystems.

Promote Inter-Sectoral Dialogue: Empower representatives from potential competing sectors, such as energy, shipping, and fisheries, to create balanced solutions that reconcile conservation and development goals.

Streamline Regional and National Objectives: Ensure alignment between regional MSPs and overarching national conservation goals by adopting standardised practices and alignment benchmarks.

Increase Public Awareness: Educate communities and stakeholders about the importance of MPAs within the MSP process to promote public support and compliance.

Align MSP with EU Directives: Fully integrate EU directives, such as the MSFD, to ensure MSP processes adequately address biodiversity protection and restoration goals.

Simplify Governance Structures: Reduce the complexity of governance frameworks by clarifying roles and improving coordination between the various agencies responsible for MSP and MPA management.

KEY LEVEL 3 - MPA integrated through SEA or other Environmental Spatial Strategy

Streamlined Governance and Responsibilities: Establish an integrated governance framework to address fragmented responsibilities. Clear roles and

responsibilities between MSP implementation and MPA management should be defined to ensure coherence and accountability.

Enhanced Sectoral Coordination: Foster inter-sectoral collaboration among key stakeholders such as fisheries, shipping, energy, and nature conservation sectors. This can reduce conflicts and ensure MPA objectives are embedded into planning processes.

Legislative and Policy Alignment: Strengthen legislative frameworks and align policies to support coherent MSP and MPA integration. For instance, allowing MPAs to directly inform and influence MSP decisions, as seen in Belgium's legally binding priority zones for biodiversity conservation**,** can minimise inconsistencies.

Data-Driven Decision-Making: Invest in comprehensive ecological and socio-economic data monitoring to guide decision-making, similar to approaches integrating SEAs for sustainability.

Stakeholder Involvement and Capacity Building: Create structured processes for stakeholder engagement in both MSP and MPA development. Capacity-building initiatives targeting local authorities, planners, and conservation managers will support adaptive and transparent decision-making.

Adaptive Management Strategies: Develop adaptive management mechanisms to address climate change impacts and unforeseen challenges. This should include regular reviews and updates based on monitoring results to maintain relevance and effectiveness over time.

Integrated Monitoring Programs: Establish unified monitoring and enforcement programs for MSPs and MPAs. For example, Belgium's coordinated monitoring for Natura 2000 sites and environmental restoration projects serves as a best practice.

KEY LEVEL 4 - MPA as a layer or sector in MSP

Strengthen Legal Integration: Establish clear, legally binding mechanisms to align MSP and MPA frameworks. This could involve revising legislation to ensure mutual accountability between MSP and MPA processes or creating a unified framework that explicitly requires the integration of biodiversity goals into spatial planning.

Enhance Governance and Coordination: Institute multi-stakeholder governance structures that include representatives from both MSP and MPA sectors, ensuring better communication and collaboration. Regular dialogues and joint working groups could explicitly address regulatory conflicts and overlap.

Incorporate Ecological Connectivity: Develop regional and transboundary frameworks to identify and incorporate ecological corridors and connectivity into both MSP and MPA strategies. This would foster better networks of protected areas that support ecological resilience.

Provide Financial and Technical Resources: Allocate specific funding and technical support to integrate MPA management goals directly into MSP processes. This includes investments in mapping, ecological assessments, and conflict resolution tools that can be shared between sectors.

Strengthen Monitoring and Enforcement: Create integrated monitoring systems that track both marine conservation outcomes and the adherence of MSP to biodiversity goals. This could involve harmonising reporting frameworks or leveraging remote sensing technologies to ensure compliance.

Increase Public and Stakeholder Engagement: Develop participatory frameworks that actively include relevant stakeholders in decision-making processes. This reduces potential spatial and regulatory conflicts while fostering local stewardship of MPAs within MSP.

In conclusion to address the challenges in integrating MSP and MPAs, several policy recommendations must be implemented:

Harmonisation of Legal Frameworks: Countries should seek the opportunity to revise their legal frameworks to create cohesive policies that explicitly integrate MSP and MPA processes. This could involve amending existing legislation to ensure both processes work synergistically rather than separately. Shift toward making MSP legally binding.

Strengthened Stakeholder Engagement: Enhance public and stakeholder participation in both MSP and MPA planning. This includes developing forums or collaborative platforms where stakeholders can share insights and, address conflicts in a coordinated manner and addressing gaps (e.g. Poland).

Clear Guidance and Protocols: Provide clear guidance on how MPAs can be incorporated into MSP processes. For instance, Denmark's current limited support and unclear integration guidance could be improved by drafting comprehensive guidelines that ensure consistent application of MPA measures within MSP frameworks.

Joint Strategic Environmental Assessment: Conduct joint SEAs for both MSP and MPA initiatives to comprehensively assess environmental impacts, as practised in Germany. This assessment would clarify the relationships and complementary objectives between the two frameworks.

7.3 RECOMMENDATIONS FROM SEA BASIN PRACTICE ANALYSIS

SEA is an opportunity to learn and improve. However, it is often quite limited with regards to social and economic impacts. These aspects should be enlarged from the somehow limited requirements of the EU SEA directive.

SEA is not to be conducted only because the Directive and national legislation requires, but to be used it as an opportunity to bring a more systemic approach to a) assessing impacts and b) reducing the negative and maximising the positive impacts. To achieve integration of MSP and MPAs, a set of recommendations is developed based on the analysis of the practice of SEA in MSP across EU sea basins performed in Section 5 of this document:

Strengthen Legal and Policy Frameworks:

Ensure all SEA processes directly address compliance with international and national frameworks, such as the MSFD, to incorporate MPAs explicitly into MSP objectives

Establish legal mandates for integrating cumulative ecological, economic, and social impacts specific to protected areas during the assessment processes;

Promote Assessment of Cumulative Impacts:

Integrate tools such as SYMPHONY and other cross-border cumulative impact frameworks to evaluate how overlapping activities (e.g., fishing, renewable energy exploitation, shipping) affect ecosystems within MPAs and neighbouring areas:

Emphasise long-term and system-wide analyses of cumulative and transboundary impacts to align MSP goals with MPAs' conservation objectives, ensuring sustainability;

Address Ecosystem Uncertainties:

Apply the precautionary principle rigorously in SEA and MSP processes to manage uncertainties relating to new developments (e.g., aquaculture, offshore wind farms) that may affect MPAs;

Increase research efforts on ecosystem functions, biodiversity, and connectivity to fill knowledge gaps in decision-making for SEA, MPAs and MSP;

Enhance Stakeholder Participation:

Conduct multi-stage consultations and mandate the inclusion of all relevant stakeholders, including MPA managers, marine scientists, and local communities, to reflect diverse interests in MSP and SEA processes;

Strengthen mechanisms for public participation and transparency through accessible platforms, active dissemination of information, and social media engagement to ensure inclusive governance;

Improve Monitoring and Adaptation Frameworks:

Develop adaptive management mechanisms that incorporate SEA findings, ensure continuous monitoring of environmental performance, and allow MSP revisions to account for evolving MPA needs and new scientific inputs;

Integrate ecosystem-based approaches and service evaluations (e.g., cultural, economical, and recreational) to measure the effectiveness of MSP in maintaining and enhancing MPAs;

Create Sustainability Baselines for MPAs and Ecosystems:

Use comprehensive scoping and impact assessments to establish sustainability baselines for MPAs and neighbouring areas, ensuring that MSP processes recognise and prioritise key ecological thresholds;

Combine socioeconomic analysis and ecological performance indicators to align MSP economic activities (e.g., renewable energy, fisheries) with the conservation goals of MPAs;

Facilitate Transparency and Accountability:

Publish SEA and MSP findings, scenarios, and decisions in user-friendly formats to foster trust and accountability, particularly regarding how MPAs are integrated into broader MSP frameworks;

Implement feedback mechanisms for stakeholders to ensure ongoing dialogue between MSP planners and MPA managers, improving the responsiveness of decision-making processes to MPA priorities.

7.4 Strategic Guidelines for MPA/MSP Integration

Deliverable 4.4 will serve as a crucial tool for advancing the integration of MPAs and MSP across European waters. This report will support the achievement of EU environmental and economic objectives while ensuring sustainable marine resource management by providing strategic guidance that considers various governance levels, ecosystem characteristics, and spatial dimensions. The framework will facilitate improved coordination between conservation efforts and maritime spatial planning, supporting the next generation of MSPs in meeting evolving EU requirements for energy development and biodiversity protection.

Strategic Guidelines for the Integration of MPAs and MSP:

To ensure seamless integration between MSP and MPAs, the most reiterated and significant recommendations across this Deliverable can be consolidated as follows:

Strengthening Legal and Policy Frameworks:

Adopt Binding Legal Frameworks for MSP: In countries like Finland and Sweden where MSPs currently have non-binding status, transitioning to legally binding frameworks can ensure enforceability and alignment with MPA goals;

Harmonisation of Legal Frameworks:

Countries should revise their laws to foster integration between MSP and MPA processes, minimising conflicts and enhancing synergy. Examples like Denmark highlight the need to address gaps in current legal integration;

Incorporate Biodiversity Goals into MSP: MSP processes should explicitly integrate EU directives such as the MSFD, and the Habitat Directive to prioritise the protection and restoration of biodiversity;

Improving Stakeholder Engagement and Governance:

Enhance Stakeholder Integration: Structured participation of local communities, conservation managers, and sectoral representatives (e.g., fisheries, energy, shipping) can align MSP and MPA objectives. Countries like Poland demonstrate the need for collaborative stakeholder forums. Poland has implemented management plans for MPAs through interactive processes involving stakeholders, although this occurs outside the MSP framework. Fostering such engagement enhances transparency and buy-in from involved parties, contributing to effective management;

Robust Engagement Frameworks: Develop comprehensive public engagement strategies that incorporate various forms of outreach, including education campaigns on marine conservation, to increase participation rates. Invest in technology platforms for virtual consultations to accommodate diverse stakeholders, ensuring inclusivity and accessibility;

Establish Multi-Stakeholder Governance Structures: Ensure representatives from both MSP and MPA sectors engage in regular dialogue to address regulatory conflicts, streamline roles, and improve coordination;

Increase Public Awareness: Educate communities on the ecological, social, and economic importance of MPAs within MSP processes to gain public support;

Enhancing Monitoring, Data Integration, and Adaptive Frameworks:

Invest in Data Availability and Monitoring: Ensure robust ecological data collection and monitoring systems to support adaptive management and effective enforcement. Belgium's coordinated monitoring of Natura 2000 sites serves as an exemplary practice;

Enhance Monitoring and Enforcement Capacity: Allocate resources to track both conservation progress and MSP compliance using advanced tools like remote sensing or cross-border cumulative impact frameworks (e.g., SYMPHONY). Develop Adaptive Management Strategies: Regularly update decision-making processes and MSP frameworks to reflect changes in scientific knowledge, climate resilience needs, and MPA requirements;

Open Data Initiatives: Establish open data initiatives that grant stakeholders access to real-time information regarding MSP processes, impact assessments, and sustainability metrics. Encourage collaboration with research institutions to maintain a comprehensive image at all stages of the processes;

Regular Information Dissemination: Formulate a strategy for regular dissemination of SEA results and updates through newsletters, webinars, and social media campaigns that engage the community effectively and promote transparency;

Recognising Existing MPAs:

Countries like Latvia have created legally binding MSP that require consideration of MPAs when developing public infrastructure, which promotes alignment between MSP and MPA objectives. This approach helps ensure that ecological assessments drive decisions regarding area designation and usage of Strong Legislative Frameworks;

Comprehensive Ecological Assessments: Undertake multi-dimensional ecological assessments, utilising spatial analysis tools to evaluate existing MPAs based on biodiversity indices, resilience metrics, and ecosystem health indicators. This approach should include stakeholder participation in identifying areas where enhancements or expansions are crucial for ecological connectivity and biodiversity;

Detailed Conflict Resolution Strategies: Use stakeholder mapping to proactively identify potential conflicts between MPAs and other marine activities. Develop dedicated resolution frameworks that allow for negotiated trade-offs and stakeholder-driven compromises;

Advanced Spatial Planning Tools: Enhance GIS capabilities within MSP processes to allow for multi-layered spatial analyses that benchmark various marine activities against ecological needs, ensuring informed decision-making;

Dynamic Mapping Technologies: Establish systems for dynamic mapping that not only identify current MPAs but also integrate predictive models to anticipate future ecological needs based on emerging data. These maps can be updated regularly through community science initiatives to involve local stakeholders in ongoing assessments;

Integration of Emerging Technologies: Utilize emerging technologies, such as drones and remote sensing, to enhance monitoring capabilities and facilitate real-time data collection that feeds back into adaptive management frameworks;

Integrating Ecological Connectivity and Climate Resilience:

Address Ecological Corridors and Connectivity: MSP processes should include ecological corridors and foster networks of connected MPAs to mitigate habitat fragmentation, as demonstrated in transboundary practices;

Address Climate Change Impacts: Incorporate strategies to combat rising sea levels, ocean acidification, and ecosystem shifts by embedding resilience measures into both MSP and MPA frameworks;

Leveraging Strategic Environmental Assessment:

Conduct Joint SEAs for MSP and MPA: Assess environmental, social, and economic impacts at the intersection of MSP and MPA. Germany's use of SEAs for integrated planning sets an example for addressing cumulative impacts systematically;

Application of the Ecosystem-Based Approach: Promote the early adoption of SEAs within MSP processes to ensure conservation priorities are embedded and biodiversity protection is sustained. Implement an ecosystem-based management framework prioritising integrative strategies across environmental, social, and economic dimensions. This includes developing sustainability metrics tailored to specific marine contexts, assessing their effectiveness through periodic reviews, and adjusting strategies based on monitoring results;

Enhance Sustainability Baselines: Establish ecological and socioeconomic baselines in SEA processes to guide MSP decisions concerning future MPA designations;

Long-Term Strategic Planning: Encourage long-term perspectives in MSP by creating multi-year plans that set measurable sustainability goals. Integrate marine renewable energy initiatives and prioritise "low-impact" developmental pathways in planning documents;

Transparency in SEA: Estonia illustrates the effectiveness of a collaborative process where MSP explicitly acknowledges MPAs and incorporates relevant EU directives. While the processes are distinct, their coordinated planning emphasises mutual objectives and regulatory considerations are considered in the stage of the SEA Framework;

Cross-Border Coordination:

Encourage Transboundary Cooperation: Neighbouring countries should align MSP objectives to jointly manage transboundary MPAs and address cumulative impacts effectively, as seen in collaborative EU initiatives;

Standardise Practices and Objectives: Harmonize national and regional MSP implementation to align with broader EU biodiversity and conservation directives;

Cumulative Impact Assessments:

Standardised Cumulative Impact Assessment Protocols: Develop guidelines that standardise the approach for cumulative impact assessments across various sectors, providing clarity and consistency in evaluating marine impacts;

Innovative Assessment Tools: Implement advanced simulation and modelling tools, such as ecosystem service valuation frameworks and pressure-impact matrices, to better understand cumulative impacts and inform adaptive management responses;

Knowledge Sharing and Collaboration:

Cross-Sectoral Task Forces: Form cross-sectoral task forces to facilitate the continuous sharing of knowledge between maritime stakeholders, ensuring that best practices are highlighted and lessons learned are documented thoroughly;

Collaborative Educational Programs: Initiate joint educational programs or workshops that involve academia, government, and non-profits to build knowledge on MPA conservation approaches and integrated marine management practices;

Adaptive Management Principles:

Successful policies often include mechanisms for continuous adaptation based on ongoing assessments and scientific research, allowing countries to respond effectively to changing environmental and socio-economic conditions;

Regular Review Cycles: Incorporate mandatory review cycles for MSP documents that ensure strategies are continuously aligned with current scientific understanding and stakeholder needs. Assess effectiveness based on clearly defined indicators of environmental health and stakeholder satisfaction;

Clear Guidance and Protocols:

Countries like Sweden have established robust regulatory frameworks to guide the integration of MPAs into MSP. The legal backing ensures that sustainable use and conservation are balanced in regional planning efforts.

7.5 A Model proposal for MPAs and MSP Integration

Integrating MPAs and MSP is a multi-staged process requiring careful consideration of relevant criteria, recommendations, and environmental analyses, as outlined in Figure 15.

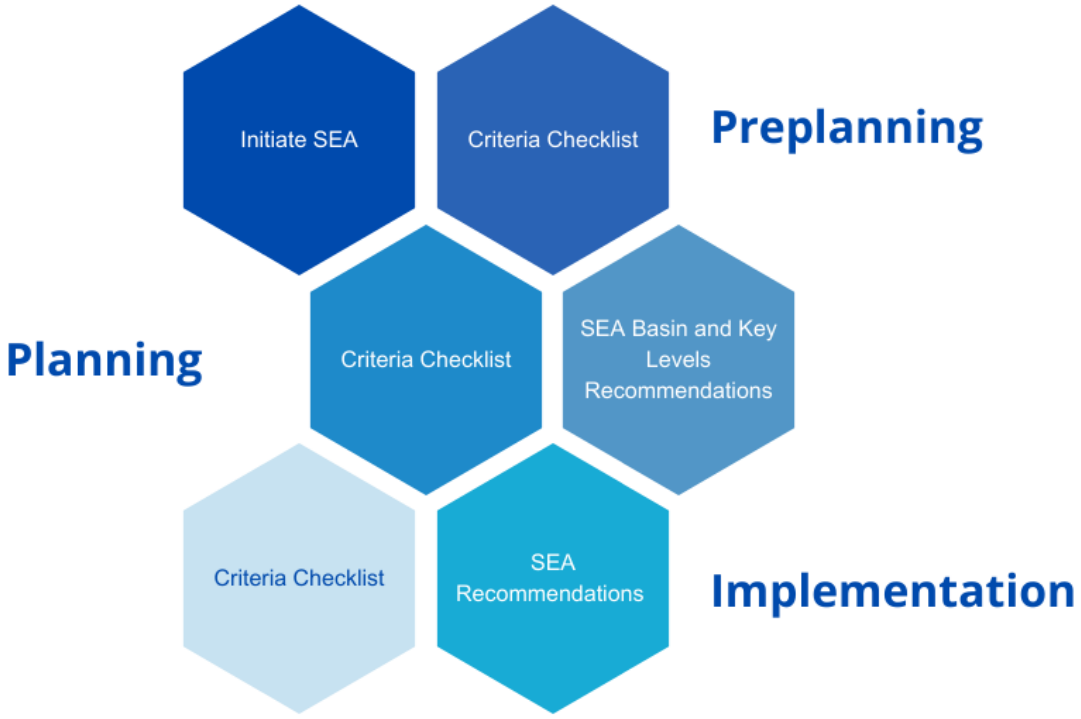


Figure 15: Model for MPA/MSP Integration Conclusions

To better align with the idea of integrating MPA and MSP processes into a clear and structured three-stage planning process—while addressing the user's concerns—the following approach is proposed. The stages emphasise the initiation, development, and adaptation of SEA as a tool for proper integration throughout the process:

Pre-Planning Stage:

Initiating SEA: Begin the process by conducting an initial SEA that is specifically designed to enable meaningful integration of the MPA and MSP processes. This involves setting the groundwork for integration by identifying key environmental risks, goals, and parameters. The SEA at this stage focuses on ensuring that conservation objectives, ecological importance, and stakeholder needs are appropriately balanced and taken into account at the start;

Criteria Checklist: Prepare and use the criteria checklist to define key parameters and foundational goals for the integration of MPAs and MSP. This guarantees that early decisions reflect ecological, social, and economic objectives;

Stakeholder Engagement: Establish processes to include stakeholders from the outset to ensure transparency, accountability, and collaboration towards a shared vision.

Planning Stage:

Expand and refine the SEA initiated during the pre-planning stage by incorporating data and insights gathered on biodiversity hotspots, ecological connections, transboundary concerns, and human impacts. Tailor SEA evaluation to address basin-specific and/or governance-level challenges (e.g., local, national, or international);

Criteria Checklist: Use the checklist dynamically to guide the design, and integration of the planning phase of both processes. Ensure that ecological sustainability aligns with social and economic considerations during the planning of MSP activities;

MPA and MSP Recommendations:

By Sea Basin: Focus on ecological connectivity and biodiversity hotspots while addressing transboundary considerations;

By Governance Level: Align planning with legal frameworks at local, national, or international levels to foster effective governance;

Stakeholder Involvement: Continue active collaboration with stakeholders to ensure inclusive, adaptive, and cohesive planning efforts.

Implementation Stage:

Adapting SEA (as relevant): Ensure the SEA remains a relevant tool during this stage, particularly for monitoring cumulative environmental impacts and making necessary adjustments to activities within the MSP framework. Use SEA insights to measure how well established MPAs contribute to broader MSP goals in terms of ecological and social outcomes;

Criteria Checklist: Employ the checklist for ongoing monitoring and management. This step includes assessing the integration and performance of MPAs against predefined objectives;

Outcome Evaluation and Adjustments: Measure implementation results and adjust the management framework to ensure MPAs are effectively contributing to sustainability and conservation goals.

To support the use of the findings in this Deliverable “A Guide to support the integration of Marine Protected Areas into Maritime Spatial Planning” was produced and is now in Annex 6.

This guide supports the integration of MPAs into MSP through three core components: Strategic Environmental Assessment, Strategic Recommendations, and a Criteria Checklist. It is structured around the three main stages of

planning—Pre-Planning, Planning, and Implementation—and is designed to be flexible and adaptable to various contexts and practitioner needs.

SEA is a continuous tool used across all planning stages to identify environmental risks and goals, helping balance conservation priorities with stakeholder interests. Strategic Recommendations offer practical advice on legal frameworks, stakeholder engagement, data sharing, and adaptive management. The Criteria Checklist defines key parameters and goals, ensuring ecological, social, and economic objectives are considered throughout the planning process and during ongoing monitoring.

The guide is based on a comprehensive review of MSP practices across Europe, highlighting gaps, barriers, and lessons learned in integrating MPAs. Further details and supporting materials are available in Calado H. et al. (2025), as part of the MSP4BIO project.

8. Conclusion

By systematically applying the criteria checklist, MPA-specific recommendations, and SEA recommendations at each stage of MSP, MPAs can be seamlessly integrated into maritime spatial plans, balancing conservation goals with sustainable use of marine resources. This approach ensures a well-structured and ecologically sound framework for managing marine environments.

The recommendations across all integration levels (Key Levels 2, 3, and 4) emphasise recurring themes, including legal alignment, stakeholder governance, enhanced monitoring, ecological connectivity, and climate resilience. These actions are necessary to foster long-term, sustainable integration between MSP and MPAs, ensuring that marine conservation objectives are not sidelined by economic activities but are adequately embedded into planning processes. This cumulative focus will strengthen institutional frameworks and advance ecosystem-based marine governance.

9. References

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10. Annexes

1. Guidelines Screening MSP Plans
2. Criteria - MSPlans
3. Resume of interviews per country (stakeholder engagement)
4. MSP Plans Assessment bibliography
5. A guide to support the integration of MPAs into MSP
6. Process of selection of the most relevant criteria

Guidelines Screening MSP Plans

23/06/2023

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Introduction

Welcome to this guide for carrying out the MSP Plans Screening as part of the MSP4BIO task T4.4 Part I. The screening will be followed by an expert judgement in two phases: Criteria Table (A) and the following questions (B).

UAc Team had provided a list of partners responsible for MSP screening in each of the countries integrated into the assessment in the MSP-SEA_EU_UK table.

The screening (A) was prepared by compiling all criteria to evaluate MSP under a bibliography review. Each selected partner will screen the MSP Plan of the chosen country accordingly with Criteria_-_MSPlans table. The screening will be held under expert judgement.

Expert judgement preferably:

- 1 member of the planning team - who made
- 1 officer member - who applies
- Or responsible partner

The aim of this document is to understand how the MPAs and MSP processes "dialogue"…or not. So far, we have identified 4 main types of relations MPAs *versus* MSP:

1 - Conservation /MPA is the driver for MSP

The **Great Barrier Reef** (GBR) Marine Park and the adjoining GBR Coast Marine Park are zoned to allow for a wide range of reasonable uses while ensuring overall protection, with conservation being the primary aim. This provides increasing levels of protection for the 'core conservation areas', which comprise the 115,000 square kilometres of 'no-take' and 'no-entry' zones within the GBR. zoning is only one of many spatial management tools and policies applied to collectively protect the GBR. Others are spatial and temporal management tools like Plans of Management, Special Management Areas, Agreements with Traditional Owners and permits (often tied to specific zones or smaller areas within zones but providing a detailed level of management not possible by zoning alone). (https://whc.unesco.org/en/list/154/, 2023).

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2 - Conservation /MPA is fully integrated into MSP across sectors

The **Swedish** MSP includes a specific section on biodiversity conservation, including policies and indicators for MPAs and EBSAs. It also establishes a coordination group to support cross-sectoral cooperation in the implementation of MSP.

3 - Conservation/MPA is integrated through SEA

The **Spanish** MSP includes strategic environmental assessment (SEA) that provides a detailed analysis of ecological values and functions, including habitat mapping, ecological connectivity, and vulnerability assessments. It also establishes a participatory process involving stakeholders and the public.

4 - Conservation/MPA is a layer/sector in MSP

In the **Portuguese** case, although it presents a legal framework on SEA, conservation and MPA have been included in MSP as a layer/sector – of the existing ones and not the potential - that constrains or restricts other activities/sectors.

A - MSP structure/process: briefly describe how **MSP** is developed/implemented: it's a bindery instrument for all other policies/legal instruments? Developed by a team of experts/gov technical staff/mix? Is it subject to SEA? Does it integrate all sectors?

B - MPA structure/process: briefly describe how **MPAs** are developed/implemented: is there a legal framework with bindery power over other sector policies? How are sectors involved? Describe the MPA system/network?

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With the following questions (B) on methods and approaches to be used to ensure integration of MPAs into MSP, its aimed to establish if the MSPlan you are screening has taken into consideration these steps and integration needs:

1. Policy and legal frameworks:

a) Does the policy and legal frameworks governing MSP explicitly recognise and support the establishment and management of MPAs? How?

The Spanish MSPlan states the independence of the Spanish Marine Protected Areas created and regulated under different legal instruments, highlighting their precedence over regulatory documents related to sectoral plans as well as marine spatial plans. The MPAs are identified in the MSPlans as “Conservation Priority Zones”.

b) Did conflicts and gaps between MSP and MPA regulations have been assessed to promote coherence and coordination?

As previously stated, the management plans of Marine Protected Areas (MPAs) serve as the primary instrument for overseeing the conservation and sustainable management of marine areas. However, in instances where an MPA lacks a comprehensive management plan, the Marine Spatial Planning (MSP) authority must engage with the responsible entity for the MPA to collaboratively develop a tailored plan for the area. This consultation process ensures that any planning initiatives undertaken within the MPA's jurisdiction align with its conservation objectives and do not compromise the integrity of the area for which the MPA was established.

2. Identify MPA networks and ecological coherence:

a) Has the MSP process identified existing and potential MPAs, taking into account their ecological significance, representation of different habitat types, and connectivity?

b) Has the MSP process assessed the ecological coherence of the MPA network to ensure the effective conservation of biodiversity, considering factors such as size, spacing, and connectivity between MPAs?

c) Has the MSP process identified existing and potential MPAs, taking into account their social and economic importance? How?

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3. Spatial analysis and mapping:

a) Did you use spatial analysis tools to identify suitable locations for MPAs within the MSP area, considering ecological criteria, biodiversity hotspots, sensitive habitats, and connectivity?

b) Did you develop maps that turn possible to overlay the MSP zones or areas with the designated MPAs to visualise the integration and potential overlap?

4. Stakeholder engagement and consultation:

a) In the participation process were stakeholders, including government agencies, local communities, fishing industries, environmental organisations, and scientists, involved in the MSP process to ensure their input in MPA integration?

b) In specific, did you seek input on MPA selection criteria, boundaries, and management objectives to enhance acceptance and promote collaborative decision-making?

c) Were the results of participation/engagement (the way they were integrated or not into MSP) returned to stakeholders?

5. Ecosystem-based approach:

a) Did the Plan elaboration/implementation promote an ecosystem-based approach within MSP that recognises the interconnectedness of ecological systems and the need to protect ecosystem functions and services?

b) Did the Plan elaboration/implementation consider ecological processes, 3 ocean dimensions, species interactions, and ecosystem resilience when designing MPA networks within the MSP framework?

6. Adaptive management and monitoring:

a) Have management principles for adaptive management been incorporated into MSP to allow for flexibility and adjustment of MPA designations and management measures based on scientific research, monitoring data, and changing ecological conditions?

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b) Was established/performed robust monitoring programs to assess the effectiveness of MPAs and their integration into MSP, including monitoring of biodiversity, habitat condition, and socioeconomic impacts?

7. Capacity building and knowledge sharing:

a) Was there a concern about building the capacity of relevant stakeholders, including planners, decision-makers, and local communities, in understanding the importance of MPAs, their integration into MSP, and effective management practices?

b) Did the Plan elaboration/implementation consider fostering knowledge sharing and collaboration among different stakeholders to facilitate learning from successful MPA-MSP integration experiences?

8. Evaluation and review:

a) Are the effectiveness and outcomes of integrating MPAs into MSP regularly evaluated, considering ecological, social, and economic aspects? If No, Is it possible? How (answer for any case - yes or no)?

b) Is the MSPlan and MPA designations periodically reviewed based on new scientific information, emerging threats, and changing conservation goals? If No, Is it possible? How (answer for any case - Yes or No)?

The Plan have not been under any revision since the first version was approved March 2023 and the revision cycle is expected to occur at least each 10 years with annually report from the ministerial departments affected by the plan.

In the case of the MPA, there is a revision of the management plan that can vary depends on each MPA and the management behind. For example, the Parque Natural de la Bahia de Cadiz ...

9. Strategic Environmental Assessment (SEA)

9.1 – Process

a) SEA must adhere to national and international legal and policy frameworks. SEA legislation must also ensure that environmental performance is taken into account during MSP decision-making. Please explain how this process is ensured

in the SEA/MSPlan? Is there a diagnosis of the legal instruments overlaps/conflicts/gaps of the strategic and legal framework?

b) Dealing with Uncertainty Future development is difficult to predict, leading to uncertainty in future ecosystem impacts, were these accounted for in the SEA process?

9.2- Principles

a) The aim of SEA for MSP is to integrate environmental considerations into the MSP process. Key principles for environmental assessment include participation, sustainability, and transparency. Are these established in the MSP SEA?

b) Transparency is required to ensure that all stakeholders have access to information about MSP decisions. How was this assured? Stakeholders are an essential part of MSP and must provide input at the beginning of any SEA process. Was Stakeholder engagement defined for participatory decision-making?

9.3 - Methodologies

a) Several methodologies are available, including scoping, impact assessment, monitoring and review. Were these used to identify the sustainability baseline of the MSPLan area in question?

b) Sustainability MSP requires consideration of the long-term ecological, economic and social implications of marine uses, were these particularly assessed in the SEA process?

c) Were cumulative impacts addressed? How?

TABLES (ANNEX 02)

Most used and highly valued criteria.

Category	Criteria	Frequency of Use	Mean Importance
ENVIRONMENTAL	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	18	2.63
PLANS	MSP goals identified and objectives specified	18	2.57
PLANS	MSP team established	18	2.43
PLANS	Entire sea area covered	17	2.73
SOCIO-ECONOMIC	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	17	2.32
POLITICS/GOVERNANCE	Transparent decision-making process is ensured, including the public sharing of relevant documents	16	2.85
POLITICS/GOVERNANCE	Effective authority for MSP established, including a balanced representation of government powers	16	2.57
PLANS	Work plan completed	16	2.35
PLANS	Zoning Plan and Regulations completed, approved and implemented	15	2.65
ENVIRONMENTAL	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	15	2.61
POLITICS/GOVERNANCE	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	15	2.46
ENVIRONMENTAL	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	15	2.43

SOCIO-ECONOMIC	Coordination of authorization, certification and planning procedures are established	15	2.3
POLITICS/GOVERNANCE	Legally-binding plan	15	2.14
PLANS	Preferred vision selected	15	2.3
ENVIRONMENTAL	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	14	2.86
POLITICS/GOVERNANCE	Other relevant international, EU, regional and national policies are identified and consistently articulated, including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations, national energy and climate plans)	14	2.56
POLITICS/GOVERNANCE	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	14	2.5
POLITICS/GOVERNANCE	Community, multi-stakeholder and public participation is ensured	14	2.46
ENVIRONMENTAL	Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans	14	2.12
SOCIO-ECONOMIC	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	14	2.27
SOCIO-ECONOMIC	Recreation opportunities enhanced or maintained	14	1.64
POLITICS/GOVERNANCE	Competent authority for delivering EBA-MSP is in place	13	2.74

Top 25% most important criteria for sea basin

Sea basins	Criteria	Frequency of use	Mean Importance of Integration
Baltic Sea	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	8	3
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	8	2.75
	Zoning Plan and Regulations completed, approved and implemented	8	2.55
	MSP team established	8	2.36
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	8	2.17
	Work plan completed	8	2.13
	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	8	2.11
	Adaptive management framework applied	8	2.09
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan	8	1.89
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	7	2.78
	MSP goals identified and objectives specified	7	2.64
	Risk in conflicts among users addressed	7	2.44
	Offshore renewable energy development is foreseen, which is sufficient for just energy transition and climate goals and is located in areas compatible with biodiversity recovery and resilience. CO2 neutrality respects biodiversity objectives	7	2.38
	Clear political, social and cultural objectives/ values, associated with measures and obtained through an open and participative consultation process, are defined	7	2.33

	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	7	2.22
	Community, multi-stakeholder and public participation is ensured	7	2.13
	Tools are devised to translate spatial data into actionable information fit for planning purposes, and end users can evaluate the usability and quality of spatial data and maps	7	2
	“Coordination of authorization, certification and planning procedures” are established	7	1.83
	Entire sea area covered	6	2.62
	Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement	6	2.38
	Forecasts of future human activities documented and mapped	6	2.36
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	6	2.18
	Effective authority for MSP established, including a balanced representation of government powers	6	2.13
Black Sea	“Coordination of authorization, certification and planning procedures” are established	2	3
	Entire sea area covered	2	3
	Scientific understanding expanded through research and monitoring	2	3
	Strategic Environmental Assessment is applied in line with the Strategic Environmental Assessment directive	2	3
	Transparent decision-making process is ensured, including the public sharing of relevant documents	2	3
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	2	2.8

	Planned activities fall within environmentally-sustainable limits, not exceeding the carrying capacity or limiting achievement of Good Environmental Status	2	2.8
	Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement	2	2.67
	Effective authority for MSP established, including a balanced representation of government powers	2	2.67
	MSP goals identified and objectives specified	2	2.67
	Multi-use of marine space is promoted	2	2.67
	Preferred vision selected	2	2.67
	SWOT analysis was conducted, identifying in particular which of the opportunities and strengths can be influenced by MSP	2	2.67
	Spatial and temporal utilisation of maritime space for different sea uses and activities is identified	2	2.67
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	2	2.4
	Recreation opportunities enhanced or maintained	2	2
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	2	2
	Alien and invasive species and genotypes removed or prevented from becoming established	1	3
	Catch yields are improved or sustained in fishing within the marine area	1	3
	Community, multi-stakeholder and public participation is ensured	1	3
	Competent authority for delivering EBA-MSP is in place	1	3
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	1	2.67
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan	1	2.67

Mediterranean Sea	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	6	2.57
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	6	2.4
	Legally-binding plan	6	2
	MSP goals identified and objectives specified	6	2
	MSP team established	6	2
	Adaptive management framework applied	5	2.8
	Effective authority for MSP established, including a balanced representation of government powers	5	2.8
	Entire sea area covered	5	2.6
	Other relevant international, EU, regional and national policies are identified and consistently articulated, including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations, national energy and climate plans)	5	2.57
	Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans	5	2.34
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	5	2
	Competent authority for delivering EBA-MSP is in place	5	0
	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	4	2.85
	Transparent decision-making process is ensured, including the public sharing of relevant documents	4	2.43
	Preferred vision selected	4	2.4

	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	4	2.4
	Sea use by fisheries assessed and included	4	2.14
	Required staff with appropriate skills provided	4	2
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	4	2
	Work plan completed	4	2
	“Coordination of authorization, certification and planning procedures” are established	4	1.71
	Cultural value enhanced or maintained	4	1.57
	Recreation opportunities enhanced or maintained	4	1.43
North-East Atlantic	Entire sea area covered	4	3
	MSP goals identified and objectives specified	4	3
	MSP team established	4	3
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	4	3
	Competent authority for delivering EBA-MSP is in place	3	3
	“Coordination of authorization, certification and planning procedures” are established	3	3
	Legally-binding plan	3	3
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	3	3
	Transparent decision-making process is ensured, including the public sharing of relevant documents	3	3
	Management Plan completed	3	3
	Zoning Plan and Regulations completed, approved and implemented	3	3
	Effective authority for MSP established, including a balanced representation of government powers	3	2.83

	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	3	2.83
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	3	2.83
	Regulatory and enforceability set up	3	2.5
	“Greater confidence and certainty for investors” is provided	3	2.5
	Other relevant international, EU, regional and national policies are identified and consistently articulated, including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations, national energy and climate plans)	3	2.5
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	3	2.33
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	3	2.33
	Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement	3	2.2
	Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans	3	1.8
	Adaptive management framework applied	2	3
	Clear political, social and cultural objectives/ values, associated with measures and obtained through an open and participative consultation process, are defined	2	2.83
North Sea	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	4	3
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	4	3
	Work plan completed	4	3

	Entire sea area covered	4	2.8
	Effective authority for MSP established, including a balanced representation of government powers	3	3
	MSP team established	3	3
	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	3	3
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	3	3
	Transparent decision-making process is ensured, including the public sharing of relevant documents	3	3
	Zoning Plan and Regulations completed, approved and implemented	3	3
	Environmental baseline studies and identification of ecosystem services and functionality are carried out	3	2.75
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan	3	2.25
	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	3	2.25
	Preferred vision selected	3	2.25
	Legally-binding plan	3	2.25
	Competent authority for delivering EBA-MSP is in place	2	3
	“Coordination of authorization, certification and planning procedures” are established	2	3
	Adaptive management framework applied	2	2.25
	Across borders coherency with major ecosystem boundaries and ecological features is considered	2	2
	Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions	2	2

	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	2	2
	Community, multi-stakeholder and public participation is ensured	2	2
	Cultural value enhanced or maintained	2	1
Taiwan	Catch yields are improved or sustained in fishing within the marine area	1	2
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	1	2
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	1	2
	Focal species abundance increased or maintained	1	2
	Public's understanding of environmental and social 'sustainability' improved	1	2
	Regulatory and enforceability set up	1	2
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	1	2
	Across borders coherency with major ecosystem boundaries and ecological features is considered	0	2
	Adaptive management framework applied	0	2
	Adverse effects on traditional practices and relationships or social systems avoided or minimized	0	2
	Aesthetic value enhanced or maintained	0	2
	Alien and invasive species and genotypes removed or prevented from becoming established	0	2
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	0	2
	Alternative management actions to achieve Preferred vision identified	0	2

	Appropriate sensitivity mappings and analysis and reflections of sensitive areas in the drafting of the plan are included	0	2
	Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions	0	2
	Based on SMART objectives associated with management measures and indicators to allow for proactive, iterative, and adaptive management	0	2
	Blue Carbon ecosystems protected	0	2
	Clear political, social and cultural objectives/ values, associated with measures and obtained through an open and participative consultation process, are defined	0	2
	Coherent, well-connected and representative network of MPAs and areas of ecological importance are integrated, ensuring connectivity through respective provisions outside MPAs, in line with the Biodiversity Strategy spatial targets, and associated with management plans	0	2
	Community, multi-stakeholder and public participation is ensured	0	2
	Competent authority for delivering EBA-MSP is in place	0	2
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan	0	2

Top 25% most important criteria by type of MPA-MSP relationship

Type MPA-MSP	Criteria	Frequency of use	Mean Importance
2 - Conservation /MPA is fully integrated into	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	4	3
	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	4	3

MSP across sectors	Forecasts of future human activities documented and mapped	4	3
	Preferred vision selected	4	3
	Work plan completed	4	3
	Transparent decision-making process is ensured, including the public sharing of relevant documents	4	NA
	Adaptive management framework applied	3	3
	MSP goals identified and objectives specified	3	3
	MSP team established	3	3
	Required funding for MSP provided	3	3
	Appropriate sensitivity mappings and analysis and reflections of sensitive areas in the drafting of the plan are included	3	2
	Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans	3	2
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	3	NA
	Clear political, social and cultural objectives/ values, associated with measures and obtained through an open and participative consultation process, are defined	3	NA
	Community, multi-stakeholder and public participation is ensured	3	NA
	Competent authority for delivering EBA-MSP is in place	3	NA
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan	3	NA
	Coordination of authorization, certification and planning procedures are established	3	NA
	Effective authority for MSP established, including a balanced representation of government powers	3	NA

	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	3	NA
	Offshore renewable energy development is foreseen, which is sufficient for just energy transition and climate goals, and is located in areas compatible with biodiversity recovery and resilience. CO2 neutrality respects biodiversity objectives	3	NA
	Other relevant international, EU, regional and national policies are identified and consistently articulated, including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations, national energy and climate plans)	3	NA
	Precautionary principle and the principle of preventive action are applied, when data is missing/ insufficient	3	NA
3 - Conservation/MPA is integrated through SEA	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	6	3
	Entire sea area covered	6	2.86
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives. the MSFD. the CFP. and the Biodiversity Strategy)	6	2.83
	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	6	2.75
	MSP goals identified and objectives specified	6	2.75
	MSP team established	6	2.75
	Work plan completed	6	2.75
	Effective authority for MSP established, including a balanced representation of government powers	6	2.75
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	6	2.67
	Zoning Plan and Regulations completed, approved and implemented	6	2.5

	Competent authority for delivering EBA-MSP is in place	6	2.5
	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	6	2.33
	Legally-binding plan	6	1.5
	High quality spatial data is shared publicly and utilized across administrative and sectoral borders	5	3
	Community, multi-stakeholder and public participation is ensured	5	2.83
	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	5	2.83
	Other relevant international. EU. regional and national policies are identified and consistently articulated. including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations. national energy and climate plans)	5	2.83
	Comprehensive public consultation involving all relevant stakeholders (including minority groups) has been run by public authorities, and inputs from public consultation are taken into account in the drafting of the plan	5	2.75
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	5	2.5
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	5	2.5
	Management Plan completed	5	2.25
	Greater confidence and certainty for investors is provided	5	1.83
	Recreation opportunities enhanced or maintained	5	1.33
4 - Conservation/MPA	Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	8	2.71
	Entire sea area covered	8	2.65

is a layer/sector in MSP	Coordination of authorization, certification and planning procedures are established	8	2.53
	MSP goals identified and objectives specified	8	2.47
	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	8	2.36
	Legally-binding plan	8	2.29
	MSP team established	8	2.29
	Effective authority for MSP established, including a balanced representation of government powers	7	2.53
	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	7	2.45
	All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations	7	2.45
	Multi-use of marine space is promoted	7	2.32
	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	7	2.24
	Preferred vision selected	7	2.24
	Recreation opportunities enhanced or maintained	7	1.74
	Transparent decision-making process is ensured, including the public sharing of relevant documents	6	2.8
	Scientific understanding expanded through research and monitoring	6	2.63
	Adaptive management framework applied	6	2.6
	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	6	2.59
	Other relevant international, EU, regional and national policies are identified and consistently articulated, including their targets and timeline (e.g.	6	2.47

	integrated coastal zone management or the Water Framework Directive-related legislations, national energy and climate plans)		
	Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement	6	2.33
	Risk in conflicts among users addressed	6	2.26
	Land sea interactions are identified and analysed, including coastal uses and activities' effects on the marine environment and measures proposed to address those effects through the marine spatial plans	6	2.24
	Cultural value enhanced or maintained	6	1.74

Top 25% most important criteria for the integration of MPAs and MSP within each area

Area	Criteria	Integration Importance	Q3
Coastal	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	3	2.7
	Environmental Impact Assessments are used. in line with the Environmental Impact Assessment directive	3	
	Cumulative impact assessment of all activities at sea is used	2.9	
	Transparent decision-making process is ensured. including the public sharing of relevant documents	2.89	
	Future expansion of marine protected areas / 30% area protection. of which 10% strictly protected	2.88	
	Competent authority for delivering EBA-MSP is in place	2.83	
	Planning based on spatio-temporal analysis and protection of species and habitats sensitivity in the long run and considering climate change impacts	2.82	
	Entire sea area covered	2.8	

	Long term perspective is adopted. including identification of how MSP can support adaptive conservation strategies to cater for spatial changes in ecosystems (e.g. migration of species. change of critical conditions for habitats)	2.8	
	Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	2.78	
	Risk in conflicts among users addressed	2.78	
	Scientific understanding expanded through research and monitoring	2.78	
	Wilderness value enhanced or maintained	2.78	
	All maritime sectors are integrated with their objectives aligned with MSP objectives. targets and timelines already set by relevant other policies and legislations	2.75	
	Effective authority for MSP established. including a balanced representation of government powers	2.75	
	High quality spatial data is shared publicly and utilized across administrative and sectoral borders	2.75	
	Public's understanding of environmental and social 'sustainability' improved	2.75	
	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	2.75	
	Zoning Plan and Regulations completed. approved and implemented	2.75	
	Coherent. well-connected and representative network of MPAs and areas of ecological importance are integrated. ensuring connectivity through respective provisions outside MPAs. in line with the Biodiversity Strategy spatial targets. and associated with management plans	2.73	
	Protection of migratory routes for birds	2.71	
	Respect for and/or understanding of local knowledge enhanced	2.71	
Offshore	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	2.92	2.55
	Future expansion of marine protected areas / 30% area protection. of which 10% strictly protected	2.89	

	Competent authority for delivering EBA-MSP is in place	2.86	
	Entire sea area covered	2.8	
	Scientific understanding expanded through research and monitoring	2.8	
	Transparent decision-making process is ensured. including the public sharing of relevant documents	2.8	
	Effective authority for MSP established. including a balanced representation of government powers	2.78	
	High quality spatial data is shared publicly and utilized across administrative and sectoral borders	2.78	
	Zoning Plan and Regulations completed. approved and implemented	2.78	
	Long term perspective is adopted. including identification of how MSP can support adaptive conservation strategies to cater for spatial changes in ecosystems (e.g. migration of species. change of critical conditions for habitats)	2.73	
	Adaptive management framework applied	2.7	
	Strategic Environmental Assessment is applied. in line with the Strategic Environmental Assessment directive	2.7	
	Planning based on spatio-temporal analysis and protection of species and habitats sensitivity in the long run and considering climate change impacts	2.67	
	Environmental Impact Assessments are used. in line with the Environmental Impact Assessment directive	2.67	
	Forecasts of future human activities documented and mapped	2.67	
	MSP goals identified and objectives specified	2.67	
	Required funding for MSP provided	2.67	
	Required staff with appropriate skills provided	2.67	
	Spatial and temporal utilization of maritime space for different sea uses and activities is identified	2.67	

	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives. the MSFD. the CFP. and the Biodiversity Strategy)	2.58	
	Management Plan enforced	2.57	
High Seas	Transparent decision-making process is ensured. including the public sharing of relevant documents	2.86	2.25
	High quality spatial data is shared publicly and utilized across administrative and sectoral borders	2.67	
	Planning based on data and assessments of the functionality of natural processes. ecosystem structure. functioning and services to prevent their losses. Marine ecosystem services are assessed and included	2.67	
	Planning based on spatio-temporal analysis and protection of species and habitats sensitivity in the long run and considering climate change impacts	2.67	
	Across borders coherency with major ecosystem boundaries and ecological features is considered	2.6	
	Future expansion of marine protected areas / 30% area protection. of which 10% strictly protected	2.57	
	Competent authority for delivering EBA-MSP is in place	2.5	
	Cross-border cooperation and mechanisms are ensured for good planning. monitoring and enforcement	2.5	
	Entire sea area covered	2.5	
	Environmental baseline studies and identification of ecosystem services and functionality are carried out	2.5	
	Other relevant international. EU. regional and national policies are identified and consistently articulated. including their targets and timeline (e.g. integrated coastal zone management or the Water Framework Directive-related legislations. national energy and climate plans)	2.5	
	Planning based on best-available scientific evidence. Interdisciplinary science-supported decisions	2.5	

	Scientific understanding expanded through research and monitoring	2.5
	Populations of target species for extractive or non-extractive use are restored to or maintained at desired reference points	2.4
	Precautionary principle and the principle of preventive action are applied. when data is missing/ insufficient	2.4
	Coordination of authorization. certification and planning procedures are established	2.33
	Long term perspective is adopted. including identification of how MSP can support adaptive conservation strategies to cater for spatial changes in ecosystems (e.g. migration of species. change of critical conditions for habitats)	2.33
	MSP goals identified and objectives specified	2.33
	Multi-use of marine space is promoted	2.33
	Required staff with appropriate skills provided	2.33
	Zoning Plan and Regulations completed. approved and implemented	2.33
	Adaptive management framework applied	2.29

Percentage of the 10 most frequently used criteria by countries that implemented Cumulative Impact Assessments (CIA) and those that did not (No CIA):

Indicator	CIA (%)	Indicator	No CIA (%)
MSP team established	100	Environmental Impact Assessments are used, in line with the Environmental Impact Assessment directive	100

MSP goals identified and objectives specified	93.33	Transparent decision-making process is ensured, including the public sharing of relevant documents	100
Strategic Environmental Assessment is applied, in line with the Strategic Environmental Assessment directive	93.33	Cross-border cooperation and mechanisms are ensured for good planning, monitoring and enforcement	85.71
Entire sea area covered	86.67	Effective authority for MSP established, including a balanced representation of government powers	85.71
Legally-binding plan	86.67	Entire sea area covered	85.71
Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	86.67	Work plan completed	85.71
“Coordination of authorization, certification and planning procedures” are established	80	Environmental provisions and objectives of relevant interconnected policies are considered and supported by (e.g. Birds and Habitats directives, the MSFD, the CFP, and the Biodiversity Strategy)	85.71
Community, multi-stakeholder and public participation is ensured	80	MSP goals identified and objectives specified	85.71
Effective authority for MSP established, including a balanced representation of government powers	80	Preferred vision selected	85.71
Ocean uses are identified and analysed and measures proposed to reduce conflicts that can potentially lead to social tensions and accidents/pollution events	80	Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available	85.71

Most used integration dimensions in the EU

Short title	Syntheses
MPA Recognition in MSP Policies	MPAs are integrated into MSP through strong alignment with legal frameworks and environmental directives. These frameworks often incorporate the objectives of the EU Marine Strategy Framework Directive (MSFD) and other relevant legislation to ensure MPAs are legally recognized and supported. The plans typically outline specific conservation goals for MPAs and provide provisions to ensure that human activities do not undermine their ecological integrity. These processes often involve multi-level governance, where different stakeholders, including environmental agencies and local authorities, contribute to the establishment and management of MPAs.
Identification of Existing MPAs	MPAs are identified and integrated into Marine Spatial Planning (MSP) through detailed mapping and spatial zoning, emphasizing their ecological significance, habitat diversity, and contribution to marine ecosystem health. Existing MPAs are incorporated into zoning schemes, ensuring they are respected while balancing human activities like fishing and tourism. The plans also consider potential expansions of the MPA network, promoting the establishment of ecological corridors to enhance connectivity and resilience. Adaptive management practices are employed, with regular monitoring and assessments to update MPA status, ensuring their effectiveness in conserving biodiversity and addressing evolving marine pressures.
Identification of Potential MPAs	The MSP process incorporates the identification of both existing and potential MPAs, focusing on their ecological significance, habitat representation, and connectivity. Existing MPAs, Natura 2000 areas, and proposed areas are considered when zoning marine spaces. The inclusion of future MPAs aligns with national laws, ecological priorities, and aims to enhance ecological networks, with some areas already being reflected in the planning process, such as Selvagens and Ponta do Pargo. Additionally, the MSP identifies and supports blue corridors to ensure connectivity between protected areas and facilitates biodiversity conservation across marine zones.
Habitat Representation in Existing MPAs	The MSP ensures that the representation of different habitat types is taken into account within existing MPAs, focusing on the protection of critical biotopes and species. Efforts are made to expand the ecological network, ensuring the integrity of various marine habitats. The MSP process prioritizes areas based on their ecological value and distribution, with a special emphasis on habitat types like sandbanks and reefs, which are critical for maintaining biodiversity. These habitats are mapped, and

	new MPAs are proposed to cover unrepresented or underrepresented habitats, promoting the long-term protection of marine ecosystems.
Mapping and Integration of MPAs in MSP	Mapping and integration of MPAs in the MSP process help visualize spatial overlaps and interactions with other marine uses such as fisheries, shipping, and energy. Dedicated mapping tools and GIS systems, like Finland's ArcGIS-based application and the BSH Geoportal, are used to overlay MPAs with other maritime activities, ensuring an integrated spatial planning approach. The development of such maps allows for the identification of conflicts and synergies between sectors, enhancing the planning process and facilitating better management of marine spaces. The maps also provide important information for stakeholder engagement, guiding discussions and decision-making on the establishment of new MPAs.
Stakeholder Participation in MPA Integration	Stakeholder engagement in MPA integration within MSP processes is critical for achieving effective and inclusive planning. Various methods such as public consultations, workshops, and advisory groups are employed across multiple stages of the planning process to gather diverse inputs from government agencies, local communities, environmental organizations, industry sectors (e.g., fishing, shipping, and energy), and researchers. In several regions, consultation processes have included national and international meetings, with efforts to ensure broad participation. The use of feedback mechanisms, such as providing written responses to stakeholder suggestions and publishing consultation results, helps improve the transparency and effectiveness of the planning process. Special focus is given to integrating biodiversity concerns and achieving synergies between marine conservation goals and other maritime activities, ensuring MPAs are considered during every step of MSP development.
Feedback to Stakeholders	Feedback mechanisms play an essential role in ensuring transparency and accountability in the MSP process. Once consultation and engagement phases are completed, stakeholders receive clear and detailed feedback regarding how their input has been integrated into the planning process. This can include publishing summaries of consultation responses, providing written reports on public hearings, and issuing documents that outline how stakeholders' comments have been addressed. In some cases, specific agreements and conflicts are documented, and their resolution is shared with stakeholders. Additionally, detailed responses are made available online, with consultation results being summarized and communicated through official channels, such as websites, ensuring that stakeholders are continuously informed on the progression of the MSP and its adjustments based on feedback.

Ecosystem-Based Approach in MSP	The ecosystem-based approach (EBA) is fundamental in guiding the development of MSPs. It integrates ecological, social, economic, and institutional perspectives, recognizing the interconnections between ecosystems and the human activities they support. Key elements of the approach include prioritizing the protection and restoration of ecosystems, considering cumulative impacts, and promoting the sustainable use of marine resources. Across several countries, such as Ireland, Sweden, and Finland, the EBA has been applied by integrating environmental policies like the Marine Strategy Framework Directive (MSFD) to protect marine biodiversity and ecosystem services. The identification of blue corridors, the preservation of ecosystem functions, and the precautionary principle are also crucial components of the planning process, ensuring that marine areas are managed in a way that supports both ecological health and sustainable economic development. Additionally, adaptive management strategies are emphasized to respond to environmental changes and emerging scientific knowledge, ensuring the long-term sustainability of marine ecosystems.
Adaptive Management Principles in MSP	Several MSP approaches embed adaptive management principles, which allow for flexibility and continuous adjustments based on emerging scientific data and environmental conditions. This approach includes structured processes like regular reviews, stakeholder engagement, and updates informed by new insights. Finland's adoption of a ten-year review cycle exemplifies this, with an ongoing assessment of marine developments like offshore renewables. Similarly, Denmark and the North Sea region incorporate flexible policies, evolving with new data and socio-political factors to ensure sustainability.
Knowledge Sharing for MPA Integration	Knowledge sharing and stakeholder engagement are key components of successful MSP implementation. Participatory processes foster collaboration between authorities, businesses, and the public, ensuring integration across various marine stakeholders. Finland's MSP process, for example, used national and international consultations to enhance understanding and improve socio-ecological planning. Similarly, Denmark leveraged a consultation process that catalyzed political and public interest, leading to increased awareness and collaboration on MSP and MPA integration.
Periodic Review of MSP and MPAs	Periodic reviews of MSP and MPAs are a foundational element for ensuring that these plans remain relevant and effective in the face of changing ecological conditions, scientific developments, and policy shifts. These reviews, mandated at intervals of five to ten years, allow for the integration of new monitoring data and the updating of management objectives. For instance, the North Sea's comprehensive monitoring and research program provides critical data to refine MSP and MPA

	boundaries, ensuring that management measures evolve with emerging threats and opportunities for conservation.
Adherence to Legal Frameworks in SEA	The SEA processes across various countries demonstrate a strong alignment with both EU and national legal frameworks, ensuring comprehensive environmental assessments. For example, the Irish SEA employs an "objectives-led" assessment, testing policies against defined strategic environmental objectives, ensuring legal compliance while exploring reasonable alternatives. Similarly, countries like Latvia emphasize linking their MSP to the Marine Strategy Framework Directive (MSFD), integrating the ecosystem service approach, and applying multi-criteria analysis. In countries like Finland, while SEA may not have legal enforcement, the authorities still ensure thorough environmental impact studies, integrating ecological, economic, social, and cultural aspects into the impact assessment.
Environmental Performance in SEA	The integration of legal frameworks and environmental performance in SEA ensures that decisions made within maritime spatial planning consider sustainability principles. Countries like Bulgaria and Malta demonstrate detailed adherence to international, EU, and national laws, focusing on environmental protection and sustainable development principles. In Slovenia and Germany, SEA processes are robust, considering national and international policies while including stakeholders in consultations, ensuring environmental impacts are thoroughly assessed. Additionally, Latvia's multi-criteria analysis offers a systematic approach to evaluating environmental, economic, and social impacts, aligning with the principles of sustainable development.
Ecosystem Impact Uncertainties in SEA	The SEA process integrates uncertainty by considering potential ecosystem impacts through a precautionary and adaptive approach. It identifies data gaps, particularly concerning biodiversity and cumulative impacts, and incorporates evolving scientific knowledge and monitoring data. Key mechanisms include acknowledging knowledge limitations, employing scenario planning, and adapting based on new information from the six-year revision cycle, allowing for the inclusion of emerging environmental threats such as climate change and future developments like wind energy.
Participation in SEA	Effective participation is a key principle in SEA processes, with various methodologies employed to ensure broad stakeholder engagement. Participation is integrated at all stages, including informal dialogues, public consultations, and providing transparency in decision-making. However, stakeholder involvement can sometimes be limited to governmental bodies or key sectors, as seen in Ireland's and Estonia's MSP SEA. Collaboration is also promoted with neighboring countries, particularly in cross-

	border marine ecosystems, emphasizing the importance of sustainability, stakeholder inclusion, and transparency.
Sustainability in SEA	Sustainability within the SEA framework for Marine Spatial Planning (MSP) is underpinned by principles such as the integration of ecological, economic, and social considerations into the planning process. This involves ensuring the long-term viability of marine resources, with a focus on maintaining good ecological status and promoting the decarbonization of marine activities, such as marine renewable energy. Alternative scenarios are evaluated with an eye on sustainability objectives, including adherence to the Sustainable Development Goals (SDGs), and continuous monitoring and reporting are employed to track progress and adapt to new challenges.
Transparency in SEA	Transparency in SEA processes is achieved through open access to information, ensuring that stakeholders are informed and involved at every stage. This includes making documents available online, organizing public consultations, and responding to feedback. In some cases, stakeholder engagement is further enhanced through formal events, online consultations, and transboundary cooperation. The transparency approach is bolstered by clear documentation of decisions, identification of data gaps, and public sharing of all consultation responses and their outcomes, ensuring stakeholders are part of the decision-making process from the outset.
Stakeholder Engagement in SEA	Effective stakeholder engagement is considered a vital component of successful SEA and MSP processes. Common practices include public participation through various formal and informal channels, with stakeholders from diverse sectors (e.g., fisheries, environment, shipping) actively involved in planning and review. Methods like targeted consultations, online events, and social media outreach are frequently used to foster broad participation. This multi-stage involvement, evident in countries like Finland, France, and Poland, ensures a participatory decision-making process where stakeholder concerns are addressed. Continuous cooperation between planners, SEA experts, and stakeholders is encouraged to improve engagement outcomes and ensure decisions align with public and environmental needs.
Scoping for Sustainability Baseline	In order to assess sustainability impacts, several methodologies—such as scoping, impact assessment, and monitoring—are employed to establish a sustainability baseline for MSP processes. Scoping helps identify key environmental and socio-economic factors that could be impacted by the plans, followed by detailed assessments to evaluate those impacts. Countries such as Estonia and Finland use sophisticated methods, integrating ecosystem-based approaches, data collection, and expert inputs to

	ensure comprehensive sustainability analysis. These approaches ensure that potential negative consequences are understood and mitigated before decisions are made, fostering more sustainable marine planning outcomes.
Impact Assessment for Sustainability	Impact assessment for sustainability within the SEA process typically involves a combination of scoping, impact assessment, and monitoring to identify the potential consequences of marine spatial planning. These methodologies help establish sustainability baselines and evaluate the environmental, economic, and social impacts of proposed plans. Common approaches include identifying key components of ecosystems, assessing cumulative impacts, and using both qualitative and semi-quantitative methods to evaluate various planning alternatives. Emphasis is placed on ensuring the protection of marine environments, good ecological status, and compliance with conservation objectives, alongside maintaining a balance between development and sustainability goals.
Review for Sustainability Baseline	Reviewing the sustainability baseline ensures the continual monitoring of marine spatial plans and their ongoing impacts. This process includes the specification and updating of marine area information to reflect environmental changes, and it involves action plans for follow-up activities. Typically, monitoring and review activities also consider transboundary impacts and cumulative effects, ensuring that potential environmental concerns are addressed in both the short and long term. Effective review mechanisms contribute to the continuous refinement of planning strategies and their alignment with sustainability goals, ultimately ensuring that marine spatial plans remain adaptive to evolving conditions.
Long-term Ecological Impacts in SEA	Long-term ecological impacts are a core focus of SEA processes, requiring an integrated approach that considers environmental, economic, and social factors. Key considerations include the preservation of biodiversity, the protection of ecosystems, and the promotion of sustainable economic development. Long-term planning addresses potential conflicts between different marine uses, such as tourism, industrial activities, and conservation efforts. The SEA process often evaluates ecological resilience, taking into account predicted future conditions (e.g., sea level rise) and ensuring that development aligns with long-term sustainability goals. This holistic approach fosters balanced marine space use while protecting both human health and the natural environment for future generations.
Long-term Economic Impacts in SEA	The long-term economic impacts in the SEA process are analyzed through a comprehensive approach, focusing on key sectors like tourism, renewable energy, and fisheries, while balancing them against potential conflicts with land and marine uses, such as mineral extraction and residential development. This evaluation often includes identifying direct and indirect economic benefits and costs associated

	with both development and environmental protection. The process also emphasizes the importance of sustainable blue economy development, ensuring that economic growth is achieved without compromising environmental integrity. Integrated approaches are used to predict and manage the long-term economic sustainability of marine spaces.
Long-term Social Impacts in SEA	Social impacts are an essential element of SEA, often examined alongside ecological and economic factors. The process integrates stakeholder engagement to ensure diverse perspectives are considered in decision-making, especially when evaluating activities near shorelines that affect public landscapes and local communities. The long-term social implications of marine uses are analyzed within a broader framework, considering cultural, social, and human health factors, ensuring that the spatial planning process aligns with the well-being of coastal populations. The goal is to balance environmental, social, and economic needs while planning for sustainable coastal and marine development.
Cumulative Impacts in SEA	Cumulative impacts in SEA are assessed by considering the combined effects of multiple activities on marine ecosystems. This includes both direct and indirect effects, from biodiversity loss to changes in environmental conditions like noise, air, and water quality. The process highlights the importance of understanding and mitigating these impacts, especially when multiple activities occur simultaneously or in close proximity. While cumulative impact assessments are often approached qualitatively, they are critical for ensuring that marine spatial plans do not inadvertently compromise ecosystem health. Adaptive management is emphasized to respond to uncertainties and evolving environmental conditions, ensuring that cumulative impacts are minimized and sustainable practices are maintained across sectors.

Question's short title

Group	Question	Short title
Policy and Legal Frameworks	1.1. Does the policy and legal frameworks governing MSP explicitly recognize and support the establishment and management of MPAs?	MPA Recognition in MSP Policies
	1.2. Have conflicts between MSP and MPA regulations been assessed to promote coherence and coordination?	Conflict Assessment Between MSP and MPA

	1.3. Have gaps between MSP and MPA regulations been assessed to promote coherence and coordination?	Gap Analysis Between MSP and MPA
Identify MPA Networks	2.1 Has the MSP process identified existing MPAs, taking into account their ecological significance, representation of different habitat types, and connectivity?	Ecological Significance, Habitat Representation, Connectivity in Existing MPAs
	2.1 Has the MSP process identified potential MPAs, taking into account their ecological significance, representation of different habitat types, and connectivity?	Ecological Significance, Habitat Representation, Connectivity in Potential MPAs
	2.4. Has the MSP process assessed the ecological coherence of the MPA network to ensure the effective conservation of biodiversity?	Assessment of MPA Network Coherence
	2.5. Has the MSP process identified existing MPAs, taking into account their social and economic importance?	Socioeconomic Importance of Existing MPAs
	2.6. Has the MSP process identified potential MPAs, taking into account their social and economic importance?	Socioeconomic Importance of Potential MPAs
Spatial Analysis and Mapping	3.1. Were spatial analysis tools used to identify suitable locations for MPAs within the MSP area?	Spatial Tools for MPA Identification
	3.2. Did the spatial analysis consider ecological criteria for identifying MPA locations?	Ecological Criteria in Spatial Analysis
	3.3. Did the spatial analysis consider biodiversity hotspot for identifying MPA locations?	Biodiversity Hotspots in Spatial Analysis
	3.4. Did the spatial analysis consider sensitive habitats for identifying MPA locations?	Sensitive Habitats in Spatial Analysis
	3.5. Did the spatial analysis consider connectivity for identifying MPA locations?	Connectivity in Spatial Analysis
	3.6. Did you develop maps that turn possible to overlay the MSP zones or areas with the designated MPAs to visualise the integration and potential overlap?	Mapping and Integration of MPAs in MSP

Stakeholder Engagement	4.1. In the participation process were stakeholders, including government agencies, local communities, fishing industries, environmental organisations, and scientists, involved in the MSP process to ensure their input in MPA integration?	Stakeholder Participation in MPA Integration
	4.2. Was input specifically sought on MPA selection criteria to enhance acceptance and promote collaborative decision-making?	Input on MPA Selection Criteria
	4.3. Was input specifically sought on MPA boundaries to enhance acceptance and promote collaborative decision-making?	Input on MPA Boundaries
	4.4. Was input specifically sought on MPA management objectives to enhance acceptance and promote collaborative decision-making?	Input on MPA Management Objectives
	4.5. Were the results of the participation/engagement returned to stakeholders?	Feedback to Stakeholders
Ecosystem-based Approach	5.1. Did the Plan elaboration/implementation promote an ecosystem-based approach within MSP that recognises the interconnectedness of ecological systems and the need to protect ecosystem functions and services?	Ecosystem-Based Approach in MSP
	5.2. Did the Plan consider ecological processes, ocean dimensions, species interactions, and resilience for MPA networks?	Ecosystem Considerations for MPA Networks
Adaptive Management	6.1. Have management principles for adaptive management been incorporated into MSP to allow for flexibility and adjustment of MPA designations and management measures based on scientific research, monitoring data, and changing ecological conditions?	Adaptive Management Principles in MSP
	6.2. Were robust monitoring programs established to assess the effectiveness of MPAs and their integration into MSP?	Monitoring Programs for MPA Effectiveness
Capacity Building	7.1. Was there a concern about building the capacity of stakeholders in understanding the importance of MPAs?	Capacity Building for MPA Integration
	7.2. Did the Plan consider fostering knowledge sharing and collaboration among stakeholders?	Knowledge Sharing for MPA Integration
Evaluation and Review	8.1. Are the effectiveness of integrating MPAs into MSP regularly evaluated?	Evaluation of MPA Integration Effectiveness
	8.2. Are the outcomes of integrating MPAs into MSP regularly evaluated?	Evaluation of MPA Integration Outcomes

	8.3. Is the MSPlan and MPA designations periodically reviewed based on new scientific information, emerging threats, and changing conservation goals? If No, Is it possible?	Periodic Review of MSP and MPAs
SEA	9.1.1. How does the SEA/MSPlan process ensure adherence to national and international legal and policy frameworks?	Adherence to Legal Frameworks and Environmental Performance in SEA
	9.1.2. How does the SEA/MSPlan process ensure that environmental performance is taken into account during MSP decision-making?	
	9.1.3. Is there a diagnosis of the legal instrument overlaps in the SEA/MSPlan?	Legal Overlaps in SEA
	9.1.4. Is there a diagnosis of the conflicts in the legal frameworks within the SEA/MSPlan?	Legal Conflicts in SEA
	9.1.5. Is there a diagnosis of the gaps in the strategic and legal framework of the SEA/MSPlan?	Strategic and Legal Gaps in SEA
	9.1.6. Were uncertainties in future ecosystem impacts accounted for in the SEA process?	Ecosystem Impact Uncertainties in SEA
	9.2.1. Is participation established in the MSP SEA?	Participation in SEA
	9.2.2. Is sustainability established in the MSP SEA?	Sustainability in SEA
	9.2.3. Is transparency established in the MSP SEA?	Transparency in SEA
	9.2.4. How was transparency ensured in the SEA process?	
	9.2.5. Was stakeholder engagement defined for participatory decision-making in the SEA?	Stakeholder Engagement in SEA
	9.3.1. Were scoping methodologies used to identify the sustainability baseline of the MSP area?	Scoping for Sustainability Baseline
	9.3.2. Was impact assessment used to identify the sustainability baseline of the MSP area?	Impact Assessment for Sustainability
	9.3.3. Was monitoring used to identify the sustainability baseline of the MSP area?	Monitoring for Sustainability Baseline
	9.3.4. Was review used to identify the sustainability baseline of the MSP area?	Review for Sustainability Baseline

	9.3.5. Were long-term ecological implications of marine uses assessed in the SEA process?	Long-term Ecological, Social, and Economic Impacts in SEA
	9.3.6. Were long-term economic implications of marine uses assessed in the SEA process?	
	9.3.7. Were long-term social implications of marine uses assessed in the SEA process?	
	9.3.8. Were cumulative impacts addressed in the SEA process?	Cumulative Impacts in SEA

Key Integration Dimensions in the EU by MPA-MSP Relationship Type

Type relations MPA-MSP	Short title	Syntheses
2 - MPA is fully integrated into MSP across sectors	**Adaptive Management Principles in MSP**	Adaptive management principles have been integrated into MSP through collaboration between planning authorities and scientific institutions, ensuring flexibility in MPA designations and management based on ecological data. Regular review cycles and emerging trends, such as offshore renewable energy and conservation targets, inform adjustments to marine policies. Adaptive planning frameworks allow for policy amendments during the implementation period based on new insights and evaluations.
	Adherence to Legal Frameworks in SEA	The SEA/MSPlan process ensures adherence to legal and policy frameworks by integrating the ecosystem approach, aligning with the Marine Strategy Framework Directive, and conducting multi-criteria assessments. Impact evaluations incorporate ecological, economic, and social considerations, and legal analyses determine the need for SEA and Natura 2000 assessments. The process includes stakeholder engagement and systematic policy diagnostics to ensure compliance.
	Connectivity in Existing and Potential MPAs	Connectivity considerations in MSP are addressed by mapping ecological significance, habitat representation, and transboundary corridors. Spatial planning includes marine protected areas (MPAs) based on environmental

		parameters, species life cycles, and conservation priorities, ensuring ecosystem coherence across jurisdictions
	Cumulative Impacts in SEA	Cumulative impact assessments are incorporated into SEA through systematic evaluation of planning alternatives. Environmental assessment tools, such as SYMPHONY, support impact quantification, with methodologies developed for spatial cumulative impact evaluation. Cross-border assessments and adaptive management approaches prevent unacceptable cumulative effects on ecosystems.
	Ecological Criteria in Spatial Analysis	Spatial analysis tools, ecosystem service mapping, and species distribution data guide MPA identification. Methods include hotspot mapping, sediment analysis, and avian concentration studies, ensuring ecological criteria are central to MPA designation.
	Ecosystem Considerations for MPA Networks	The MSP framework integrates ecosystem resilience, biodiversity maintenance, and multi-dimensional ecological processes. Environmental impact assessment tools and conservation policies ensure species interactions and marine ecosystem functions are considered in MPA network design.
	Ecosystem Impact Uncertainties in SEA	Future ecosystem impact uncertainties are managed through the precautionary principle, requiring dedicated research and EIA approvals before introducing new marine activities. Scenario-based planning and long-term visioning contribute to strategic adaptation in MSP processes.
	Ecosystem-Based Approach in MSP	The ecosystem-based approach is embedded in MSP through integration of social-ecological systems, co-creation processes, and adherence to international marine directives. Policies emphasize marine biodiversity

		protection, pollution reduction, and sustainable resource use, ensuring alignment with conservation goals.
	Environmental Performance in SEA	Environmental performance in MSP decision-making is ensured through SEA methodologies incorporating ecosystem service assessments, multi-criteria evaluations, and scenario-based impact studies. Stakeholder feedback mechanisms contribute to adaptive planning and policy refinement.
	Feedback to Stakeholders	Stakeholder engagement results are formally documented and returned through consultation reports, public hearing summaries, and review memoranda, ensuring transparency and inclusivity in decision-making processes.
	Habitat Representation in Existing and Potential MPAs	MSP ensures representation of habitat types in MPA identification through ecological significance assessments, habitat connectivity evaluations, and biodiversity conservation measures. Spatial prioritization and transboundary cooperation enhance the coherence of protected areas, supporting sustainable marine management.
	Identification of Existing and Potential MPAs	The MSP process has identified existing MPAs by considering their ecological significance, habitat representation, and connectivity. Plans address areas of national interest for nature conservation, fish spawning zones, and potential blue corridors. Additionally, some MSPs include measures to enhance MPA coherence and connectivity, aligning cross-border management solutions where applicable.

	Impact Assessment for Sustainability	Impact assessment has been utilized to establish the sustainability baseline of the MSP area. Specific methodologies, such as those referenced in Airaksinen et al. (2020), have been applied.
	Knowledge Sharing for MPA Integration	The MSP process promotes stakeholder collaboration and knowledge sharing through structured consultations, participatory events, and international meetings. This facilitates a shared understanding of MSP planning and the integration of ecological and socio-economic considerations.
	Long-term Ecological, Economic and Social Impacts in SEA	The SEA process has assessed long-term ecological, economic and social implications of marine uses, with some MSPs considering economic and social dimensions as well. While not all assessments follow formal SEA procedures, methodologies like those in Airaksinen et al. (2020) incorporate comprehensive impact evaluations.
	Mapping and Integration of MPAs in MSP	MSP processes have developed maps that overlay MSP zones with designated MPAs to visualize integration and potential overlaps. Some MSPs provide web-based GIS tools, allowing stakeholders to toggle layers such as MPAs and Important Bird Areas for better spatial analysis. Additionally, national geoportals host MSP data in accessible formats.

	Monitoring Programs for MPA Effectiveness	Marine monitoring programs are implemented to assess biodiversity, habitat conditions, and socioeconomic impacts in accordance with the Marine Strategy Framework Directive (MSFD). Regular updates ensure adaptive management, integrating new environmental data and proposing improved marine indicators. Socioeconomic assessments, strategic environmental evaluations, and state monitoring programs support informed decision-making, with coastal process monitoring included to enhance sustainability.
	MPA Recognition in MSP Policies	MSP frameworks recognize and support MPAs through legal instruments such as the Marine Spatial Planning Ordinance, Environmental Codes, and Water Acts. These frameworks ensure biodiversity protection and ecosystem restoration, aligning with EU directives. MPAs are designated under national strategies, integrating nature conservation priorities into spatial plans, with measures including restrictions on harmful activities, habitat protection, and sustainable resource management.
	Periodic Review of MSP and MPAs	MSP and MPA designations undergo systematic reviews based on emerging scientific data, shifting conservation priorities, and new threats. Updates include geospatial assessments, economic and environmental impact evaluations, and adaptive management strategies. Long-term monitoring, such as Natura 2000 assessments and North Sea ecological studies, supports evidence-based adjustments to enhance marine protection measures.
	Spatial Tools for MPA Identification	Advanced spatial analysis tools, including ecological modelling, habitat mapping, and species distribution assessments, are utilized for MPA designation. Yearly evaluations of key species and ecosystem services inform spatial planning, ensuring effective protection measures.
	Stakeholder Engagement in SEA	Stakeholder engagement is structured through participatory frameworks, including public consultations, expert workshops, and cross-sectoral forums. Legislative mandates ensure broad representation, fostering collaboration

		between governmental bodies, environmental organizations, and industry stakeholders.
	Stakeholder Participation in MPA Integration	Government agencies, local communities, fishing industries, environmental organizations, and scientists actively participate in MSP processes. Structured engagement mechanisms, such as stakeholder networks, advisory councils, and bilateral consultations, ensure that MPA integration aligns with conservation objectives and sectoral interests.
	Sustainability in SEA	Sustainability principles are embedded in MSP SEA, addressing ecological, economic, and social dimensions. Impact assessments guide decision-making, ensuring long-term environmental resilience and resource optimization.
	Transparency in SEA	Transparency is ensured through public access to MSP documents, online repositories, and regular stakeholder briefings. Open-data platforms, policy publications, and feedback mechanisms promote accountability and informed participation in spatial planning processes.
3 - Conservation/MPA is integrated through SEA	**MPA Recognition in MSP Policies**	MSP frameworks recognize and support MPAs through legal and policy instruments. Many MSPs explicitly identify MPAs, detailing their conservation objectives, species protection, and regulatory measures, as seen in national MSPs that designate priority conservation zones. Some frameworks integrate MPAs within broader biodiversity action plans, ensuring their precedence over sectoral regulations. While some MSPs serve as the primary legal basis for MPA establishment, others reinforce their commitment through legislative development and spatial integration.

		Despite variations, MSPs increasingly align with conservation priorities by formalizing existing MPAs and incorporating potential protected areas into strategic planning.
	Identification of Existing and Potential MPAs	The identification of existing and potential MPAs within MSP frameworks is driven by ecological significance, habitat representation, and connectivity. Processes often include spatial studies, SEA, and conflict evaluations to enhance ecological coherence. Many MSPs outline high-potential areas for biodiversity conservation, incorporating them into future designation strategies. Additionally, certain plans introduce ecological corridors, enhancing habitat connectivity while integrating MPAs within broader conservation networks. Through these strategies, MSPs establish a proactive approach to expanding and strengthening MPA networks.
	Habitat Representation in Existing and Potential MPAs	The MSP process has considered habitat representation in MPA designation, emphasizing ecological significance and connectivity. Potential MPAs were identified with a strong focus on representativeness and connectivity, particularly in smaller marine areas where natural connectivity is high. The significance of MPAs and their spatial distribution were continuously assessed throughout the MSP process, including in SEA evaluations.
	Connectivity in Existing and Potential MPAs	Connectivity has been a core principle in identifying both existing and potential MPAs, with MPAs integrated into the Natura 2000 Network, ensuring protection across national borders. The MSP aims to maintain

		functional ecological connections, avoiding barriers to migratory species and ensuring marine permeability.
	Assessment of MPA Network Coherence	The MSP process has assessed ecological coherence by considering size, spacing, and connectivity between MPAs to enhance biodiversity conservation. SEA evaluations ensure that long-range impacts on protected areas—including cross-border effects—are accounted for, particularly regarding migratory species. While efforts have been made to establish ecological corridors, comprehensive analyses of connectivity, spacing, and productivity within the MSP framework remain limited, with MPAs often being considered pre-existing designations.
	Mapping and Integration of MPAs in MSP	Comprehensive mapping has been developed to visualize overlaps between MPAs and MSP zones, supporting spatial planning and conflict analysis. Key tools include integrated MSP maps, the BSH Geoportal (GeoSea Portal) for GIS-based analysis, and detailed sectoral mapping of marine uses.
	Stakeholder Participation in MPA Integration	Stakeholder participation in the integration of MPAs into MSP processes is actively promoted. Various consultation formats, including national and international meetings, workshops, and online platforms, facilitate input from stakeholders across sectors such as fisheries, environment, energy, and tourism. Engagement ensures that MPAs are recognized and integrated into the planning process, considering biodiversity, conservation, and sustainable marine use. Detailed feedback from consultations often results in the inclusion of specific protection measures and the designation of new MPAs based on stakeholder input.

	Input on MPA Selection Criteria	Although MPAs were largely predefined, engagement with competent authorities and working groups ensured their consideration in MSP planning. Scientific studies assessed species protection within MPAs, and SEA processes evaluated ecological significance. However, formal discussions on selection criteria were limited, with most decisions based on prior MPA designations and expert input rather than a participatory selection process.
	Feedback to Stakeholders	Effective stakeholder engagement is a key component of the MSP process, ensuring transparency and responsiveness to public concerns. Feedback mechanisms include public consultations, workshops, and written responses to stakeholder comments. The integration of stakeholder input into decision-making processes helps align MSP plans with local and sectoral interests, fostering cooperation across different marine industries and conservation groups. By documenting and addressing stakeholder feedback, MSPs aim to build consensus and improve planning outcomes.
	Ecosystem-Based Approach in MSP	The MSP framework integrates an ecosystem-based approach, recognizing ecological connectivity and ecosystem services. Key principles include blue corridors for species migration, the precautionary principle, and adherence to international conservation standards such as OSPAR and the Marine Strategy Framework Directive (MSFD). By aligning with these principles, the MSP aims to maintain ecological integrity while balancing sustainable human activities.
	Adaptive Management Principles in MSP	Adaptive management principles are embedded in MSP to allow flexibility in MPA designations based on scientific research and monitoring. Regular assessments ensure that spatial planning can respond to ecological changes, with data-driven decision-making guiding licensing and conservation measures. The monitoring framework is designed to inform future revisions of MSP, ensuring that planning remains dynamic and responsive to emerging environmental challenges.

	Knowledge Sharing for MPA Integration	While the sources highlight stakeholder engagement, they do not directly connect it to fostering learning from specific integration experiences. Interviews emphasized the importance of not only uniting diverse interests but also promoting bilateral meetings, like the 4Sea coalition's approach. Additionally, the MSP participatory process has been recognized as an effective learning tool that involves continuous collaboration between the MSP and MPA agencies, particularly through monitoring, data exchange, and feedback loops.
	Periodic Review of MSP and MPAs	The sources indicate that both the MSPlan and MPA designations in Ireland are regularly reviewed, guided by new scientific insights and changing conservation objectives. Reviews should also be based on monitoring results, industry developments, and evolving policies. For instance, Ireland's MPA network may be adapted to better respond to environmental changes. Similar processes are observed in other regions, with revisions incorporating Environmental Impact Assessments (EIAs) and incorporating stakeholder feedback, ensuring ongoing alignment with environmental and societal needs.
	Adherence to Legal Frameworks in SEA	The SEA/MSP process ensures compliance with legal and policy frameworks by integrating national, regional, and international legal requirements, guaranteeing that marine plans are legally sound. The process involves systematic approaches, such as testing against objectives in the SEA, or merging SEA and MSP procedures to promote efficiency and timely adjustments. Legal acts, including EIA and SEA regulations, form the core of these procedures, ensuring environmental concerns are consistently addressed. Similar principles are applied in various regions, aligning the SEA with environmental protection goals and ensuring the legal compatibility of spatial plans.
	Environmental Performance in SEA	The SEA process involves evaluating policies against defined environmental objectives to guide decision-making. Similarly, other regions integrate environmental concerns early in the planning stages, ensuring that potential

		impacts are mitigated through spatial designations and alternative solutions. A parallel SEA/MSP approach emphasizes adaptive learning, allowing for ongoing adjustments during the planning process.
	Ecosystem Impact Uncertainties in SEA	The SEA processes across various regions, including Ireland, Belgium, and Slovenia, explicitly account for uncertainties in future ecosystem impacts. In Ireland, the SEA acknowledges data gaps, especially regarding seabird and cetacean data, while Belgium's SEA assesses the uncertainty surrounding development activities. Both countries emphasize adaptive management strategies to address unforeseen adverse effects, with provisions for remedial action if necessary.
	Participation in SEA	The SEA process involves evaluating policies against defined environmental objectives to guide decision-making. Similarly, other regions integrate environmental concerns early in the planning stages, ensuring that potential impacts are mitigated through spatial designations and alternative solutions. A parallel SEA/MSP approach emphasizes adaptive learning, allowing for ongoing adjustments during the planning process.
	Sustainability in SEA	Sustainability is a core value embedded in the SEA processes across various regions. Sustainability is emphasized through ecosystem-based approaches and alignment with global sustainable development goals. These regions also incorporate sustainability into their assessments by considering the long-term impacts of marine planning. Each SEA includes the evaluation of alternatives to ensure the sustainable use of marine resources, with a particular focus on maintaining biodiversity and ecosystem integrity.
	Transparency in SEA	Transparency in the SEA MSP process is a key aspect, ensured through various methods of engaging stakeholders. This includes open access to information, comprehensive documentation, and engagement activities such

		as public consultations, workshops, and thematic sessions. Additionally, the use of transboundary consultations and the online availability of responses and consultations enhances the transparency of the process. While public participation was broad, some regions highlighted the need for greater efforts in social media outreach, especially to reach audiences outside marine areas.
	Stakeholder Engagement in SEA	Stakeholder engagement in the SEA process was well-defined and structured. Active involvement of stakeholders was ensured through diverse methods, guaranteeing the representation of various groups. The process included several stages of consultation and online events, aiming to ensure that the views of all stakeholders were considered in decision-making. Transparency in the process was promoted by ongoing stakeholder participation at different stages of the planning process.
	Scoping for Sustainability Baseline	Scoping methodologies were widely used to identify the sustainability baseline in the MSP areas, with various tools and approaches employed. The approach involved using specialized instruments and collecting relevant data to refine and monitor the environmental baseline. The scoping phase indicated potential significant impacts on environmental factors such as water quality and marine ecosystems, with ongoing assessments to improve data collection and environmental management.
	Impact Assessment for Sustainability	Impact assessment was a central component of the SEA process, focusing on sustainability, environmental impacts, and potential conflicts between marine uses. A qualitative and semi-quantitative assessment of the effects of different alternative scenarios was conducted, along with an analysis of the impacts on marine environmental status and resource protection. The assessment also considered potential impacts on human health and the environment, using sophisticated methodologies to determine the long-term effects of activities on the ecosystem.

	Review for Sustainability Baseline	Review methodologies were crucial for refining the sustainability baseline and ensuring effective environmental management. The review was combined with scoping and impact assessment to provide a more comprehensive evaluation of marine planning and its environmental implications. Reviews continued throughout the process to consider adjacent areas and assess transboundary impacts. The process also included consideration of cumulative impacts and the adaptation of environmental management strategies based on the review outcomes.
	Long-term Ecological and Social Impacts in SEA	he long-term implications of marine activities were carefully assessed in the SEA process, considering ecological, economic, and social sustainability. The integrated approach assessed the interactions between human activities and marine ecosystems, considering long-term resilience and coastal protection. Furthermore, social concerns were addressed in balancing environmental, economic, and social aspects, with a focus on long-term sustainability and adaptation to evolving conditions.
	Cumulative Impacts in SEA	Cumulative impacts were consistently addressed in the SEA process, focusing on understanding how multiple activities may affect the marine environment. The cumulative impact assessment included considering combined effects from various marine activities and interactions between different stressors on the ecosystem. The process recognized challenges related to data gaps and scientific uncertainty, with an emphasis on adaptive management as a response to these challenges. The cumulative impact assessment was tailored to include the most relevant activities and ensure a holistic view of marine planning.
4 - Conservation/MPA is a layer/sector in MSP	**Ecosystem-Based Approach in MSP**	The ecosystem-based approach in MSP incorporates ecological, social, and economic factors, ensuring that marine spatial planning respects the interconnectedness of marine ecosystems and prioritizes the protection and

		restoration of biodiversity. By considering the long-term perspective, adopting precautionary measures, and fostering adaptive management, MSP processes integrate sustainable development goals while minimizing human pressures on sensitive marine environments.
	Feedback to Stakeholders	Effective stakeholder engagement ensures that public consultation responses are incorporated into decision-making. Feedback loops are created by summarizing stakeholder inputs, addressing concerns, and reflecting changes in the final plans. By providing stakeholders with clear communication regarding how their input influences planning, decision-makers ensure transparency and foster collaboration throughout the SEA and MSP processes.
	Identification of Existing and Potential MPAs	The identification of existing and potential MPAs in MSP processes involves mapping and considering areas designated for conservation, such as Natura 2000 sites, and assessing the ecological significance of marine areas. This ensures that conservation areas are prioritized in marine zoning to support the ecological integrity of marine ecosystems. By aligning planning with legal protections and the preservation of biodiversity, this approach not only protects vulnerable habitats but also allows for the proactive identification and expansion of MPAs where needed, promoting the sustainability of marine areas and meeting conservation objectives.

	Mapping and Integration of MPAs in MSP	Existing and potential MPAs, including Natura 2000 (N2K) sites, are mapped and incorporated into the maritime spatial plans (MSP), with layers that visualize spatial overlaps with other sea uses. These maps play a key role in understanding the interactions between designated areas and facilitate planning and management. They are available alongside supporting documentation, offering detailed insights into how marine uses intersect and supporting decision-making for sustainable management.
	MPA Recognition in MSP Policies	Policies within MSP recognize the importance of MPAs, aligning them with EU directives, such as the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive (WFD). These frameworks ensure the conservation of MPAs, while also balancing economic activities through complementary goals. The national legal frameworks reinforce MPA protection, with periodic reviews to adapt and expand the network based on new scientific data and ecological needs.
	Periodic Review of MSP and MPAs	MSP and MPA designations undergo regular reviews, typically every five years, guided by evolving scientific data, changing conservation goals, and emerging threats. These reviews ensure that the spatial plans and MPA designations remain effective and responsive to new ecological, legal, and societal developments, allowing for adjustments that align with sustainable marine management.
	Spatial Tools for MPA Identification	Spatial tools are crucial in identifying suitable locations for MPAs by evaluating ecological criteria, biodiversity hotspots, and habitat connectivity. Tools such as ecological mapping and environmental data layers help avoid conflicts with existing protected sites like Natura 2000 areas. While MSP focuses on spatial integration of marine uses, the designation of new MPAs is managed through other legal processes under nature conservation laws.

	Adherence to Legal Frameworks in SEA	SEA processes are designed to comply with EU and national legal frameworks, ensuring that all required stages—from screenings to consultations—are carried out transparently. In various cases, SEA integrates relevant legal instruments and regulations, addressing overlaps and ensuring that the processes align with the provisions of existing policies and directives. This adherence guarantees that the final plan incorporates environmental considerations and promotes sustainable development objectives.
	Cumulative Impacts in SEA	SEA evaluates both short- and long-term cumulative impacts of various activities, considering factors like biodiversity, human health, and environmental quality. By including tools such as scoring systems and dedicated web applications, SEAs can identify synergistic effects across multiple activities and prioritize minimizing negative outcomes. This is essential for maintaining ecological balance and supporting sustainable development in marine and coastal planning.
	Ecosystem Impact Uncertainties in SEA	SEA processes address uncertainties by integrating flexible mechanisms such as precautionary principles and adaptive management strategies. Through continuous evaluations, SEAs account for knowledge gaps, such as challenges in linking human pressures to ecological impacts, and ensure that plans remain responsive to emerging environmental conditions, including climate change. This dynamic approach ensures that decision-making remains robust as new information becomes available.
	Environmental Performance in SEA	SEA processes focus on aligning environmental assessments with national and international frameworks, ensuring that decision-making incorporates the principles of environmental protection and sustainable development. By

		addressing both the social and ecological impacts, SEAs evaluate the cumulative effects of activities and provide stakeholders with transparency on the plan's potential environmental and social outcomes. This approach ensures that planning documents remain environmentally sound and conducive to sustainable development.
	Long-term Ecological Impacts in SEA	SEA processes assess potential long-term ecological consequences by evaluating different scenarios and considering impacts on biodiversity, ecosystems, and habitats. This evaluation helps identify possible conflicts between various marine uses, such as mineral extraction and tourism, and provides a basis for balancing ecological preservation with economic activities. By incorporating these considerations, SEA ensures that planning supports long-term ecological sustainability.
	Long-term Economic Impacts in SEA	The SEA process evaluates the long-term economic impacts of activities by balancing the benefits of sectors like fishing, tourism, and renewable energy with the potential costs of environmental degradation. By considering economic growth alongside environmental protection, SEA fosters a sustainable blue economy that ensures long-term prosperity without compromising ecological health, supporting balanced development in maritime spatial planning.
	Long-term Social Impacts in SEA	SEA processes address long-term social impacts by incorporating stakeholder engagement, ensuring that the concerns and perspectives of local communities are reflected in the planning process. By considering both the direct and indirect effects of marine activities on local populations, SEA helps ensure that the social and cultural needs of coastal communities are integrated into decision-making, fostering a more inclusive and sustainable approach to marine spatial planning.

	Participation in SEA	Stakeholder participation in SEA (Strategic Environmental Assessment) is integral, with formal consultation processes involving local communities, governmental bodies, and scientific communities. The engagement process is designed to be transparent and inclusive, although some areas like diverse stakeholder involvement may be limited. The collaboration extends to transboundary engagement with neighboring countries to address shared marine ecosystems.
	Scoping for Sustainability Baseline	Sustainability baselines are established through scoping, impact assessments, and monitoring, utilizing an ecosystem-based approach. This methodology ensures that key ecological components and their potential impacts are fully integrated into MSP. The process focuses on long-term sustainability, incorporating expert knowledge and public input to shape marine spatial planning decisions with environmental integrity.
	Stakeholder Engagement in SEA	Stakeholder engagement is embedded into SEA processes through consultation mechanisms, where stakeholders, including local communities, NGOs, and governmental bodies, are encouraged to participate. The aim is to ensure transparency, informed decision-making, and the inclusion of diverse interests in environmental assessments. Regular feedback loops and accessible platforms are used to gather and incorporate stakeholder input.
	Sustainability in SEA	Sustainability in SEA is addressed through key principles of environmental integration, participation, and transparency. These principles guide the assessment process, ensuring that MSP considers long-term ecological impacts and promotes the maintenance of good environmental status. The focus on sustainable marine practices includes initiatives like the promotion

		of marine renewable energies and decarbonization, especially in regions like France.

	Country	Partner responsible for screening	Institutions Interviewed
1	Belgium	**VLIZ**	?
2	Bulgaria	**CCMS**	Bulgarian MSP Authority, National Centre for Regional Development
3	Croatia		
4	Cyprus	**CCMS**	?
5	Denmark	**GMU**	?
6	Estonia	**HELCOM**	Ministry of Regional Affairs and Agriculture of Estonia
7	Finland	**SYKE**	Regional Council of Southwest Finland
8	France	**UNANTES**	
9	Germany	**SPRO**	BSH (The Federal Maritime and Hydrographic Agency, an authority in the division of the Federal Ministry for Digital and Transport (BMDV)
10	Greece		
11	Ireland	**UNANTES**	Department of the Environment, Climate and Communications of Ireland (decc.gov.ie)
12	Italy	**CNR**	
13	Latvia	**SPRO**	Ministry of Environmental Protection and Regional Development of Latvia
14	Lithuania	**NIMIRD**	?
15	Malta	**PAP/RAC**	Planning Authority
16	Netherlands	**SPRO**	Dutch ministry of Agriculture, Fisheries, Food Security & Nature and Ministery of Infrastructure and Water management
17	Poland	**GMU**	?
18	Portugal	**UAC**	DRM, DRPM
19	Romania	**NIMRD**	?
20	Slovenia	**CNR**	1. Institute of the Republic of Slovenia for Nature Conservation: ex (retired) director 2. Zavita d.o.o. - (Company working on SEA for the Plan) 3. Univeristy of Ljubljana (coordinating the preparation of the MSP) 4. Ministry of the Natural Resources and Spatial Planning
21	Spain	**UCA**	IEO
22	Sweden	**HELCOM**	Swedish Agency for Marine and Water Management
23	Seichelles	**UAC**	
24	Taiwan	**UAC**	National Sun Yat-sen University

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A Guide to support the integration of Marine Protected Areas into Maritime Spatial Planning

Visit MSP4BIO website

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PURPOSE AND USE OF THIS GUIDE

This guide supports the integration of Marine Protected Areas (MPA) into Maritime Spatial Planning (MSP) process using three key elements: recommendations for Strategic Environmental Assessment, Strategic Recommendations, and a Criteria Checklist.

The Guide is organized according to the three stages of Planning: Pre-Planning, Planning and Implementation. Practitioners may choose the planning stage, or the key elements, that suit better to their needs, as the Guide is flexible and adaptive to different contexts.

Strategic Environmental Assessment (SEA) is intended to be used throughout all the planning stages to identify key environmental risks, goals, and parameters for integrating MPA into MSP process: It helps balance conservation objectives, ecological importance, and stakeholder needs; during implementation, SEA should be adapted to monitor cumulative environmental impacts and adjust activities within the MSP framework.

Strategic Recommendations are practical guidelines for enhancing the integration of MPAs into MSP, focusing on legal frameworks, stakeholder engagement, data sharing, and adaptive management. The recommendations include suggested actions like adopting binding legal frameworks, improving stakeholder integration, enhancing data-sharing mechanisms, and incorporating adaptive management principles.

The Criteria checklist should be used to define key parameters and foundational goals for the integration of MPAs into MSP: it complements strategic recommendations and ensures that early planning decisions reflect ecological, social, and economic objectives; and is intended to be employed dynamically throughout the planning process, guiding the design and integration of all planning phases; It can also be used for ongoing monitoring and management.

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The Strategic Recommendations, can also be used under SEA process or independently according to the planning process phases.
The Criteria checklist is presented in each planning stage, but its use should be cumulative on the three stages of planning instead of isolated.

This Guide is the result of screening MSP across Europe with focus on gaps, barriers, and lessons learned on integrating MPAs into MSP processes. More clarification on Methods and additional materials on the three key elements on this Guide can be found in "Calado H., et al., (2025). Strategic Guidance for the Integration of MPA and MSP Processes on Multiple Governance and Ecosystem Levels - Deliverable – D4.4., under the WP4 of MSP4BIO project (https://msp4bio.eu/ - GA n° 101060707)".

A MODEL FOR MPA INTEGRATION INTO MSP

MSP is an important integrative and adaptive process aiming at managing the increasing and often competing demands for maritime space. It contributes to the sustainable use of marine resources while safeguarding ecosystem health. A central component of MSP is its capacity to integrate multiple sectors, governance levels, and ecological considerations into a cohesive planning framework. The implementation of MPAs is an important measure used to guarantee the protection of marine ecosystems. When well-managed, these areas contribute to biodiversity conservation and restoration, the maintenance of ecosystem services (ES), and ecosystem resilience, which are essential for human well-being.

A MODEL FOR MPA INTEGRATION INTO MSP

Integrating MPAs into MSP is a multi-staged process requiring careful consideration of relevant criteria, recommendations, and environmental analysis, fully integrated in a Model organized according to the 3 stages of Planning (Figure below).

PREPLANNING STAGE

INCORPORATING SEA

To enable meaningful integration of MPAs into MSP from the outset, it is essential to initiate SEA at the preplanning stage. This begins with the scoping phase, which should be specifically designed to support the alignment of MPA and MSP processes. At this stage, SEA plays a critical role in identifying key environmental risks, defining conservation goals, and setting parameters that guide subsequent planning decisions.

It ensures that conservation objectives, ecological importance, and stakeholder considered and balanced early on. Promoting the early application of the ecosystem-based approach within SEA helps embed biodiversity priorities into the MSP process and supports the long-term sustainability of marine and coastal ecosystems. This includes applying an integrated framework across environmental, social, and economic dimensions, with tailored sustainability metrics, regular assessment of effectiveness, and adjustments based on monitoring results.

INCORPORATING SEA

Strengthening the legal and policy basis for SEA is also necessary to ensure that the process directly addresses compliance with international and national obligations—such as the MSFD—and explicitly integrates MPAs into MSP objectives. Legal mandates should also require the consideration of cumulative ecological, social, and economic impacts, especially in relation to protected areas. Transparency is a critical element throughout the SEA process, which should be collaborative and ensure that MSP explicitly acknowledges MPAs and incorporates relevant EU directives. While SEA and MSP are distinct processes, their coordinated planning can reinforce shared objectives and ensure that regulatory considerations are fully addressed from the beginning.

STRATEGIC RECOMMENDATIONS

DEVELOP CLEAR AND ROBUST REGULATORY FRAMEWORKS TO SUPPORT THE INTEGRATION OF MPAS INTO MSP PROCESSES, BY:

- Adopting Binding Legal Frameworks for MSP in countries where such frameworks are currently lacking, to ensure enforceability and alignment with MPA goals.

- Enhancing legal mechanisms for the integration of MPAs into MSP or introducing “soft” coordination mechanisms where gaps have been identified. Where necessary, revising the legal framework is advisable to minimise conflicts and enhance synergy. Additionally, strengthening conservation enforcement measures may be required to ensure the effectiveness of MPAs.

ENSURE INCLUSIVE AND WELL-STRUCTURED STAKEHOLDER ENGAGEMENT AND GOVERNANCE MECHANISMS, BY:

- Streamlining governance structures to reduce complexity by clarifying roles and improving coordination between the various agencies responsible for MSP and MPA management. Address fragmented responsibilities and ensure coherence and accountability.

- Developing a structured participation strategy targeting local communities, conservation managers, and sectoral representatives (e.g., fisheries, energy, shipping) to align MSP and MPA objectives. In some countries, collaborative stakeholder forums may be needed. Fostering interactive processes involving stakeholders enhances transparency and buy-in, contributing to effective management.

ESTABLISH ENABLING CONDITIONS THAT PRIORITIZE BIODIVERSITY EFFECTIVELY WITHIN MSP, BY:

- Incorporating biodiversity goals into MSP through the explicit integration of relevant EU directives, such as the MSFD and the Habitats Directive, to ensure the protection and restoration of biodiversity are central to planning processes.

STRATEGIC RECOMMENDATIONS

ENSURE INCLUSIVE AND WELL-STRUCTURED STAKEHOLDER ENGAGEMENT AND GOVERNANCE MECHANISMS, BY:

- Developing comprehensive public engagement strategies that incorporate various forms of outreach, including education campaigns on marine conservation, to increase participation rates. Invest in technology platforms for virtual consultations to accommodate diverse stakeholders, ensuring inclusivity and accessibility.
- Establishing multi-stakeholder governance structures that include representatives from both MSP and MPA sectors, and facilitating regular dialogue to address regulatory conflicts, streamline roles, and improve coordination.
- Increasing public awareness by educating communities on the ecological, social, and economic importance of MPAs within MSP processes, to foster public support and compliance.

PROMOTE EFFECTIVE CROSS-BORDER COOPERATION IN MSP PLANNING AND IMPLEMENTATION, BY:

- Encouraging transboundary cooperation where neighbouring countries align MSP objectives to jointly manage transboundary MPAs and address cumulative impacts effectively.
- Streamlining regional and national objectives by standardising practices and harmonising MSP implementation to align with broader EU biodiversity and conservation goals.
- Addressing inconsistencies in national regulations that hinder efficient cross-border collaboration in MPA management, by building on existing frameworks such as Regional Seas Conventions and further strengthening the alignment of MSP strategies with transboundary goals.

CHECKLIST CRITERIA

DEVELOP CLEAR AND ROBUST REGULATORY FRAMEWORKS TO SUPPORT THE INTEGRATION OF MPAS INTO MSP PROCESSES

POLICY CRITERIA:

- Legally binding status of the plan
- Consider and integrate environmental provisions and objectives of interconnected policies such as Birds and Habitats Directives, MSFD, CFP and Biodiversity Strategy.
- Identify and clearly articulate relevant international, EU, regional and national policies, including their targets and timelines
- Entire sea area covered

ENSURE INCLUSIVE AND WELL-STRUCTURED STAKEHOLDER ENGAGEMENT AND GOVERNANCE MECHANISMS

PLANNING PROCESS CRITERIA:

- Required funding and appropriately skilled staff are provided
- A science advisory committee is established
- MSP team is established

GOVERNANCE CRITERIA:

- Community, multi-stakeholder, and public participation is ensured.
- Comprehensive public consultation involving all relevant stakeholders (including minority groups) is conducted, and their input is incorporated into the next phase of the plan.
- Effective authority for MSP is established, with balanced representation of government powers.
- Competent authority for delivering EBA-MSP is in place.

ESTABLISH ENABLING CONDITIONS THAT PRIORITIZE BIODIVERSITY EFFECTIVELY WITHIN MSP

PLANNING PROCESS CRITERIA:

- Preferred vision is selected
- MSP goals are identified and Biodiversity/Conservation objectives specified.

ENVIRONMENTAL CRITERIA:

- Land–sea interactions are identified and analysed, including coastal activity impacts and measures to address them through MSP.
- Precautionary principle and preventive action principle are applied.
- Sensitivity mapping and analysis of sensitive areas are included in plan drafting.
- Environmental baseline studies and identification of ecosystem services and functionality are carried out.

SOCIO-ECONOMIC CRITERIA:

- Economic baseline studies and economic impact assessments are carried out.
- Clear economic objectives are defined, focusing on sustainable development and aligned with blue economy and finance principles.
- Ocean uses are identified and analysed; measures are proposed to reduce conflicts, social tensions, accidents, and pollution.
- Social, political, and cultural baseline studies and impact assessments for local communities are conducted.

PROMOTE EFFECTIVE CROSS-BORDER COOPERATION IN MSP PLANNING AND IMPLEMENTATION

POLICY AND GOVERNANCE CRITERIA:

- **Cross-border cooperation mechanisms are established for planning, monitoring, and enforcement.**

TIPS

Clear Guidance and Protocols: Establishing robust regulatory frameworks to guide the integration of MPAs into MSP. The legal backing ensures that sustainable use and conservation are balanced in regional planning efforts.

Expand Knowledge Sharing Platforms: Foster regional collaboration for sharing best practices on MPA integration into MSP. Platforms like the GeoSea Portal should be enhanced to support data visualisation, ecological mapping, and stakeholder coordination.

PLANNING STAGE

INCORPORATING SEA

SEA should be expanded and refined during the planning stage to support informed and adaptive MSP development. It should build on insights from the pre-planning phase, incorporating biodiversity data, ecosystem functions, transboundary concerns, and human pressures. SEA should be tailored to address context-specific governance levels—local, national, and regional—and ensure early integration of ecological and socio-economic baselines for MPAs and surrounding areas.

Cumulative impacts must be assessed systematically, using shared tools and cross-border frameworks to analyse how multiple sea uses interact over time. These assessments should guide the alignment of MSP objectives with long-term conservation outcomes. Where data or ecological knowledge is limited, the precautionary principle should apply, especially in areas with emerging activities like aquaculture or offshore renewables. Research efforts should be increased to fill knowledge gaps related to connectivity, biodiversity, and ecosystem services. SEA should also strengthen transparency and participation by embedding multi-stage stakeholder engagement, particularly involving MPA managers, scientists, and local communities. Findings and decisions must be communicated through accessible platforms and formats to foster public trust. SEA processes should also help identify and mitigate socio-economic risks, especially for vulnerable groups such as small-scale fisheries. Where appropriate, sustainable and transparent compensation measures should be proposed to address trade-offs between conservation and development.

By linking SEA closely with MSP planning, it becomes a forward-looking instrument to support adaptive management, guide spatial decisions, and align ecological, social, and governance priorities across marine and coastal systems.

STRATEGIC RECOMMENDATIONS

STRENGTHEN KNOWLEDGE, DATA INTEGRATION AND FOUNDATIONS FOR MONITORING SYSTEMS BY:

- Collaborating with research institutions and establishing open data initiatives to provide stakeholders with real-time access to MSP information at all stages of the planning process.
- Investing in comprehensive ecological and socio-economic monitoring to support data-driven decision-making, [similar to approaches integrating SEA].
- Utilizing emerging technologies, such as drones and remote sensing, to enable real-time data collection and support adaptive management processes.
-
- Enhancing the use of GIS and dynamic mapping tools for multi-layered spatial analysis to anticipate ecological needs, with regular updates supported through community science.
- Developing standardised protocols for cumulative impact assessments to ensure consistent evaluations across sectors.
- Applying advanced tools—such as simulation models, ecosystem service valuation frameworks, and pressure-impact matrices—to improve understanding of cumulative impacts.
- Supporting joint monitoring and transboundary data sharing to ensure coherent management of shared MPAs.

PROMOTE INTER-SECTORAL DIALOGUE AND COORDINATION BY:

- Empowering stakeholders from key marine sectors—such as energy, fisheries, shipping, and tourism—to actively participate in planning and negotiation processes, ensuring balanced solutions that integrate conservation and development goals.
- Supporting multi-use spatial planning approaches that harmonise diverse sectoral needs while maintaining policy coherence, through clear zoning and prioritisation of uses.
- Develop resolution strategies for conflicts between MPAs and other marine activities by using stakeholder mapping to anticipate competing interests and support negotiated trade-offs and stakeholder-driven compromises.

STRATEGIC RECOMMENDATIONS

ENSURE ECOLOGICAL CONNECTIVITY AND RESILIENCE TO CLIMATE CHANGE BY:

- Identifying priority areas for MPA enhancement, expansion, or designation of potential MPAs through comprehensive ecological assessments, using biodiversity indices, ecosystem health indicators, and resilience metrics, supported by active stakeholder engagement.
- Incorporating ecological corridors and connectivity between MPAs into MSP by establishing clear management regimes that include concepts such as blue corridors and functional linkages, with a focus on reducing habitat fragmentation, including across transboundary areas.
- Addressing environmental pressures from coastal and offshore development to enhance the resilience of MPAs and ensure their effectiveness in protecting critical habitats.
- Expanding protection of offshore and deep-sea ecosystems, using spatial tools to assess and enhance connectivity and ecological representativity.
- Integrating climate change resilience measures into MSP and MPA frameworks, addressing sea-level rise, ocean acidification, and ecosystem shifts.

PROMOTE INTER-SECTORAL DIALOGUE AND COORDINATION BY:

- Empowering stakeholders from key marine sectors—such as energy, fisheries, shipping, and tourism—to actively participate in planning and negotiation processes, ensuring balanced solutions that integrate conservation and development goals.
- Supporting multi-use spatial planning approaches that harmonise diverse sectoral needs while maintaining policy coherence, through clear zoning and prioritisation of uses.
- Develop resolution strategies for conflicts between MPAs and other marine activities by using stakeholder mapping to anticipate competing interests and support negotiated trade-offs and stakeholder-driven compromises.

STRATEGIC RECOMMENDATIONS

STRENGTHEN ADAPTIVE MANAGEMENT PRINCIPLES AND FRAMEWORKS BY:

- Expanding adaptive and ecosystem-based approaches that respond to changing environmental conditions and align offshore activities with coastal conservation goals, while incorporating long-term ecological, social, and economic considerations into planning.
- Ensuring mechanisms for continuous adaptation, supported by regular assessments and the integration of scientific findings and stakeholder feedback.
- Introducing preconditions for mandatory review cycles in MSP processes, using clear indicators of environmental health and governance effectiveness to guide timely adjustments.

CHECKLIST CRITERIA

STRENGTHEN KNOWLEDGE, DATA INTEGRATION AND FOUNDATIONS FOR MONITORING FRAMEWORK

ENVIRONMENTAL CRITERIA:

- Cumulative impact assessment of all activities at sea is used.
- Planning is based on best-available scientific evidence. Interdisciplinary science-supported decisions.
- Planning is based on data and assessments of the functionality of natural processes, ecosystem structure, functioning and services to prevent their losses. Marine ecosystem services are assessed and included.

ENSURE INCLUSIVE AND WELL-STRUCTURED STAKEHOLDER ENGAGEMENT AND GOVERNANCE MECHANISMS

PLANNING PROCESS CRITERIA:

- Forecasts of future human activities documented and mapped.

POLICY AND GOVERNANCE CRITERIA:

- Spatial and temporal utilisation of maritime space for different sea uses and activities is identified
- Transparent decision-making process is ensured, including the public sharing of relevant documents

SOCIO-ECONOMIC CRITERIA:

- Results from cross-sectoral public consultation incorporated. Outcomes from the public participation process are made publicly available.

ENSURE ECOLOGICAL CONNECTIVITY AND RESILIENCE TO CLIMATE CHANGE

ENVIRONMENTAL CRITERIA:

- Areas suitable to restoration activities followed by restoration plans are identified, including ecosystem functions.
- Blue Carbon ecosystems protected.
- Planned activities fall within environmentally sustainable limits, not exceeding the carrying capacity or limit achievement of Good Environmental Status.
- Across borders coherency with major ecosystem boundaries and ecological features is considered.

POLICY AND GOVERNANCE CRITERIA:

- Temporal and spatial uncertainties in the era of climate change are addressed, including adaptation measures.
- Future expansion of marine protected areas / 30% area protection, of which 10% strictly protected is well defined.
- Zoning schemes and Plan Strategy consider potential important areas for conservation considering climate or other environmental changes.

SOCIO-ECONOMIC CRITERIA:

- Offshore renewable energy development is foreseen, which is sufficient for just energy transition and climate goals and is in areas compatible with biodiversity recovery and resilience. CO_2 neutrality respects biodiversity objectives.

PROMOTE INTER-SECTORAL DIALOGUE AND COORDINATION

POLICY AND GOVERNANCE CRITERIA:

- Sustainable multi-purpose uses through time and space are identified.
- Stakeholders are satisfied with the participation process.

SOCIO-ECONOMIC CRITERIA:

- Sustainable blue economy objectives and finance principles that are transparent, science-led, compliant and inclusive, are applied.
- Adverse effects on traditional practices and relationships or social systems avoided or minimized.
- Industry employment and income generation are forecasted.
- Possible side-effects and distribution of positive and detrimental impacts across sectors and groups (including regional differences) are identified, fostering social justice.
- Risk in conflicts among users addressed
- Clear political, social and cultural objectives/values, associated with measures and obtained through an open and participative consultation process, are defined.
- Sea use by fisheries assessed and included.
- Respect for and/or understanding of local knowledge enhanced.

STRENGTHEN ADAPTIVE MANAGEMENT PRINCIPLES AND FRAMEWORKS

ENVIRONMENTAL CRITERIA:

- Long-term perspective is adopted, including identification of how MSP can support adaptive conservation strategies to cater for spatial changes in ecosystems (e.g. migration of species, change of critical conditions for habitats).
- Planning is based on spatial-temporal analysis and protection of species and habitats sensitivity in the long run and considering climate change impacts.

PLANNING PROCESS CRITERIA:

- Alternative management actions to achieve preferred vision identified.

POLICY AND GOVERNANCE CRITERIA:

- Based on SMART objectives associated with management measures and indicators to allow for proactive, iterative, and adaptive management.
- Various scenarios of sustainable sea uses are considered.

STRENGTHEN ADAPTIVE MANAGEMENT PRINCIPLES AND FRAMEWORKS

TIPS

Grant MPAs Stronger Regulatory Power: Regulatory frameworks should explicitly strengthen the authority of MPAs over conflicting maritime activities, ensuring their conservation objectives are not overridden by economic sectors like fisheries or wind energy development.

Joint Strategic Environmental Assessment: Conduct joint SEAs for both MSP and MPA initiatives to comprehensively assess environmental impacts.

This assessment would clarify the relationships and complementary objectives between the two frameworks.
Knowledge Sharing and Collaboration:
Cross-Sectoral Task Forces: Form cross-sectoral task forces to facilitate the continuous sharing of knowledge between maritime stakeholders, ensuring that best practices are highlighted and lessons learned are documented thoroughly;
Collaborative Educational Programs: Initiate joint educational programs or workshops that involve academia, government, and non-profits to build knowledge on MPA conservation approaches and integrated marine management practices;
Strengthen Regional Collaboration: Harmonise national SEA processes with transboundary environmental assessments to improve regulatory coherence and regional consistency.

This includes enhancing ecological connectivity through measures like transboundary MPAs; supporting cross-border alignment via regional initiatives such as PHAROS4MPAs and the recently created MSP Mediterranean Community of Practice; and advancing knowledge exchange and coordination in the design and implementation of MPAs.

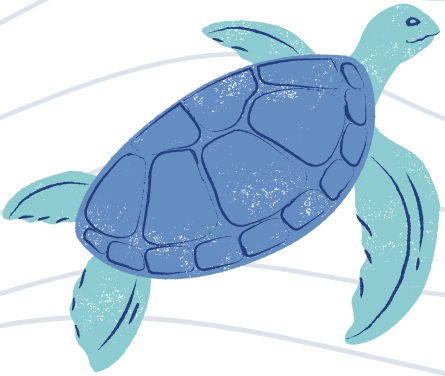
IMPLEMENTATION STAGE

INCORPORATING SEA

During the implementation stage, SEA should be used as a dynamic tool to support adaptive management, inform review cycles, and ensure MSP frameworks remain responsive to evolving MPA needs, scientific findings, and environmental performance. SEA can help measure how MPAs contribute to broader MSP objectives, particularly in achieving ecological and social outcomes.

SEA should also enhance stakeholder engagement by ensuring transparent communication and structured dialogue between MSP planners and MPA managers. Publishing SEA findings in accessible formats supports accountability, while feedback mechanisms help align implementation with local priorities. Particular attention should be given to assessing socio-economic impacts—especially for vulnerable groups such as small-scale fisheries—by identifying losses and applying fair, transparent compensation or trade-off mechanisms where appropriate.

Finally, SEA should be integrated into operational monitoring frameworks to track cumulative environmental impacts, assess ecosystem services, and support adjustments to spatial planning. Its application reinforces ecosystem-based approaches and ensures that MPAs continue to contribute meaningfully to ecological integrity and sustainable resource use throughout the implementation process.



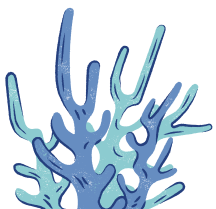
STRATEGIC RECOMMENDATIONS

STRENGTHEN LEGAL AND ADAPTIVE GOVERNANCE MECHANISMS BY:

- Establishing or improving adaptive governance models through the development of management strategies and review cycles that regularly update MSP frameworks based on scientific knowledge, climate resilience needs, MPA requirements, conservation challenges, and regional priorities.
- Implementing unified monitoring and enforcement programs that legally anchor MSP and MPA obligations within institutional frameworks.

STRENGTHEN STAKEHOLDER CAPACITY FOR LONG-TERM COLLABORATION AND CROSS-SECTORAL BENEFITS BY:

- Investing in capacity building for local authorities, planners, and conservation managers to support MPA monitoring, enforcement, and active stakeholder participation in MSP processes—ensuring adaptive, inclusive, and transparent decision-making.
- Fostering participatory processes for MPA designation and MSP development by establishing clear communication channels and participatory governance mechanisms that ensure stakeholder input is consistently considered.
- Expanding regional knowledge-sharing platforms to promote the exchange of best practices on integrating MPAs into MSP.
- Strengthening feedback systems that engage local communities, industries, and authorities in shaping and adjusting maritime planning frameworks.
- Enhancing inter-sectoral coordination among key stakeholders—such as fisheries, shipping, energy, and nature conservation sectors—to reduce conflicts and embed MPA objectives into cross-sectoral implementation.



STRATEGIC RECOMMENDATIONS

ENHANCE ECOLOGICAL INTEGRITY AND RESOURCE SUSTAINABILITY THOUGH OPERATIONAL MONITORING SYSTEMS BY:

- Investing in data availability and monitoring to ensure robust ecological data collection and monitoring systems that support adaptive management and effective enforcement. Address gaps in monitoring frameworks through cumulative impact studies and long-term assessments of ecological connectivity to minimise disruptions and support sustainable Blue Economy development.

- ·Enhancing monitoring and enforcement capacity by allocating resources to track long-term ecological and environmental impacts, conservation progress, and MSP compliance using advanced tools like remote sensing or cross-border cumulative impact frameworks (e.g., SYMPHONY) to address emerging environmental and societal challenges dynamically.

- Establishing unified monitoring and enforcement programs for MSPs and MPAs.

CHECKLIST CRITERIA

STRENGTHEN LEGAL AND ADAPTIVE GOVERNANCE MECHANISMS

PLANNING PROCESS CRITERIA:

- Adaptive management framework applied with feedback mechanism from monitoring and surveillance are in place, assuring the continuous integration of variability and changes
- Management Plan completed
- Tools for monitoring progress and aligning with key policies included
- Management Plan approved and implemented
- Management Plan enforced
- Work plan completed
- Zoning plan and regulations completed, approved and implemented

POLICY AND GOVERNANCE CRITERIA:

- All maritime sectors are integrated with their objectives aligned with MSP objectives, targets and timelines already set by relevant other policies and legislations
- Regulatory and enforceability set up
- “Coordination of authorisation, certification and planning procedures” are established
- Transparency, confidence and certainty for investors is provided

STRENGTHEN STAKEHOLDER CAPACITY FOR LONG-TERM COLLABORATION AND CROSS-SECTORAL BENEFITS

SOCIO-ECONOMIC CRITERIA:

- Economic status and relative wealth of coastal residents and/or resource users improved
- Equity within social structures and between social groups improved and fair
- Existence value enhanced or maintained
- Health of coastal residents and/or resource users improved
- Household occupational and income structure stabilized or diversified through reduced marine resource dependency
- Improved availability of locally caught seafood for public consumption
- Local access to markets and capital improved
- Monetary benefits distributed to and through coastal communities and marginalised groups
- Non-monetary benefits distributed equitably to and through coastal communities and marginalised groups
- Public's understanding of environmental and social 'sustainability' improved
- Recreation opportunities enhanced or maintained

POLITICS AND GOVERNANCE CRITERIA:

- Multi-use of marine space is promoted

ENHANCE ECOLOGICAL INTEGRITY AND RESOURCE SUSTAINABILITY THROUGH OPERATIONAL MONITORING

ENVIRONMENTAL CRITERIA:

- Alien and invasive species and genotypes removed or prevented from becoming established
- Coherent, well-connected and representative network of MPAs and areas of ecological importance are integrated, ensuring connectivity through respective provisions outside MPAs, in line with the biodiversity spatial targets, and associated with management plans
- Essential marine habitats connected via blue corridors/green infrastructure
- Protection of migratory routes for birds
- Over-exploitation of living and/or non-living marine resources is minimized, prevented or prohibited entirely
- Catch yields are improved or sustained in fishing within the marine area
- Focal species abundance increased or maintained
- Mitigation hierarchy is applied
- Populations of target species for extractive or non-extractive use are restored to or maintained at desired reference points

POLITICS AND GOVERNANCE CRITERIA:

- Harmonised monitoring set up
- High quality spatial data is shared publicly and utilized across administrative and sectoral borders
- Tools are devised to translate spatial data into actionable information fit for planning purposes, and end users can evaluate the usability and quality of spatial data and maps

ENHANCE ECOLOGICAL INTEGRITY AND RESOURCE SUSTAINABILITY THROUGH OPERATIONAL MONITORING

SOCIO-ECONOMIC CRITERIA:

- Scientific understanding expanded through research and monitoring
- Aesthetic value enhanced or maintained
- Cultural value enhanced or maintained
- Wilderness value enhanced or maintained

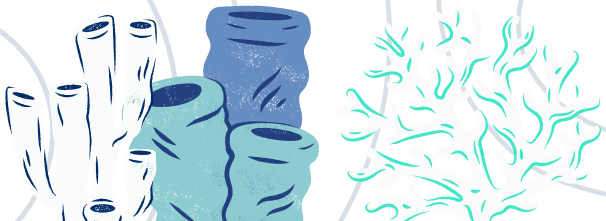
TIPS

- Provide Financial and Technical Resources:

Allocate specific funding and technical support to integrate MPA management goals directly into MSP processes. This includes investments in mapping, ecological assessments, and conflict resolution tools that can be shared between sectors and accounting for income loss especially in the case of vulnerable communities.

- Outcome Evaluation and Adjustments:

Measure implementation results and adjust the management framework to ensure MPAs are effectively contributing to sustainability and conservation goals.



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PROCESS OF SELECTION OF THE MOST RELEVANT CRITERIA

(across countries, different sea basins, and different MPA/MSP relationships)

CALCULATION OF FREQUENCY OF USE

CALCULATION OF MEAN IMPORTANCE

				Importance for MPA/MSP integration			
Country	Criteria	Satisfied covered?	Frequency of use	Coastal	Offshore	High Seas (ABNJ)	Mean of importance
A	Criterion 1	Y	2	3	2	1	2
B	Criterion 1	P		3	3	3	
C	Criterion 1	Y		1	1	1	
A	Criterion 2	P	1	2	2	1	1.78
B	Criterion 2	Y		3	1	1	
C	Criterion 2	N		3	2	1	
A	Criterion 3	Y	2	3	3	3	2.56
B	Criterion 3	Y		2	3	3	
C	Criterion 3	P		1	2	3	

COMBINATION: OVERALL RANKING

Criteria	Frequency of use	Mean of importance	Raking
Criterion 3	2	2.56	Most relevante
Criterion 1	2	2	Second most relevant
Criterion 2	1	1.78	Least relevant

PROCESS OF SELECTION OF THE MOST RELEVANT CRITERIA PER AREAS

Country	Criteria	Coastal	Offshore	High Seas
A	Criterion 1	3	2	1
B	Criterion 1	3	3	3
C	Criterion 1	1	1	1
A	Criterion 2	2	2	1
B	Criterion 2	3	1	1
C	Criterion 2	3	2	1
A	Criterion 3	3	3	3
B	Criterion 3	2	3	3
C	Criterion 3	1	2	3

CALCULATION OF MEAN IMPORTANCE OF EACH CRITERION PER AREA

Criteria	Coastal	Offshore	High Seas
Criterion 1	2.33	2	1.67
Criterion 2	2.67	1.67	1
Criterion 3	2	2.67	3
Criterion 4	2.4	1	2.9
Criterion 5	2.7	1.4	1.4
Criterion 6	1.4	1.6	2
Criterion 7	1.9	1.6	2.2
Criterion 8	1.3	1.6	1.7
Criterion 9	1.9	2.6	1.4
Criterion 10	2	2.2	1.1
Criterion 11	2.2	1.3	1.1
Criterion 12	2.9	2.9	2.6
Criterion 13	1.6	1.2	2.4
Criterion 14	1.9	1.2	2
Criterion 15	1.1	2.7	1.5
Criterion 16	2.3	1.6	2
Criterion 17	2.1	1.4	2.9
Criterion 18	2.6	2.9	2.8
Criterion 19	2.2	2.5	1.2
Criterion 20	1.4	1.1	1.7
Criterion 21	1.8	1.5	2.7
Criterion 22	1.7	1.6	2.1
Criterion 23	1.3	2.6	1.1
Criterion 24	3	2.5	1.4
Criterion 25	1	2.6	2.4
Criterion 26	2.5	2.5	1.1
Criterion 27	1.7	1.2	2.7
Criterion 28	2.2	1.7	1.1
Criterion 29	1.6	1.7	2.5
Criterion 30	2.3	2.8	1.9

SELECTION OF TOP 10% (colored)/ TOP 25% BY AREA

Criteria	Coastal
Criterion 24	3
Criterion 12	2.9
Criterion 5	2.7
Criterion 2	2.67
Criterion 18	2.6
Criterion 26	2.5
Criterion 4	2.4
Criterion 1	2.33

Criteria	Offshore
Criterion 12	2.9
Criterion 18	2.9
Criterion 30	2.8
Criterion 15	2.7
Criterion 3	2.67
Criterion 9	2.6
Criterion 23	2.6
Criterion 25	2.6

Criteria	High Seas
Criterion 3	3
Criterion 4	2.9
Criterion 17	2.9
Criterion 18	2.8
Criterion 21	2.7
Criterion 27	2.7
Criterion 12	2.6
Criterion 29	2.5