Report of the MED-MSP-CoP

II 2025 workshop

Monday, 26 May 2025

European MSP Platform

WESTMED blue economy initiative

1. Introduction: objective and agenda of the workshop

The second MED-MSP-CoP workshop of 2025 was held online on 26 May. It followed the one held in January 2025 in Madrid, where the MED-MSP-CoP met to finalise its 2024 Recommendations and start its new Action Plan (January 2025 – January 2027). This second 2025 workshop aimed to:

- Illustrate the content and objectives of the Action Plan;
- Launch the activities of the newly established MED-MSP-CoP Working Groups (WGs) on four main topics: MSP and Fisheries, MSP and Nature Protection, MSP and Aquaculture, and MSP and Offshore Renewable Energy;
- Initiate a structured dialogue to identify the key thematic challenges to be addressed by the WG.

The workshop also included contributions from the MEDIGREEN project, which will be supporting the MED-MSP-CoP through targeted thematic studies on the four topics of the WGs. MEDIGREEN helped frame the breakout discussions by introducing the study layouts and guiding participants in identifying priority issues and directions for each of the four WGs.

The workshop was structured in three main parts:

- Plenary opening session, during which the Action Plan was presented, alongside the MEDIGREEN project and the Working Groups, with their co-leaders.
- Two breakout sessions, each focusing on two thematic areas of work:
    - Session 1: MSP and Fisheries, and MSP and Nature Protection
    - Session 2: MSP and Aquaculture, and MSP and Offshore Renewable Energy

  Each session included a brief introduction to the topic by the WGs co-leaders, a presentation of the related MEDIGREEN study layout by a project partner, and a facilitated group exercise on MiroBoard to identify and discuss critical issues for ensuring that MSP supports the sustainable transition and development of these three marine sectors and nature protection (the outcomes of this exercise are presented in the sections 2-5 below).
- Final plenary, dedicated to reporting back from the breakout groups and outlining next steps for the MED-MSP-CoP and its Working Groups.

The outcomes of this workshop will feed into two upcoming sessions planned for the remainder of 2025—an online meeting in September/October and a hybrid one in November/December—and will also contribute to the MEDIGREEN studies.

The full agenda of the workshop is annexed to this report.

2. Breakout session: MSP and Fisheries

The Miro-guided exercise and related discussion on MSP and Fisheries led to the identification of several issues to be considered to enhance the MSP support to the sustainable development and transition of the Fisheries sector in a Mediterranean transboundary perspective. The table at the end of this section reports the transcription of the Miro exercise, while key issues are summarised in the following points.

Improving fisheries and ecological data (including stock assessment and socioeconomic aspects) collection and availability, in particular in the southern Mediterranean

To support more inclusive and effective Marine Spatial Planning (MSP), it is crucial to move beyond traditional datasets such as fishing effort. Socio-territorial landscapes at sea are shaped not only by ecological patterns but also by cultural practices and seasonal dynamics, which are often overlooked. Incorporating complementary spatial data—like that from scientific and sector observatories (e.g., the French VALPENA project)—can significantly enrich MSP. Reliable and standardised data are foundational for both MSP and sustainable fisheries management. Therefore, MSP platforms should take an active role in facilitating data integration, addressing temporal gaps, and collaborating with other data initiatives (e.g., GFCM, STECF reports). Ultimately, there's a strong case for standardising data formats to ensure comparability and ease of analysis.

Supporting the sustainability of fisheries and facilitating the implementation of fisheries management policies through ecosystem-based MSP

MSP should be used as a strategic tool to delineate zones based on different fisheries management goals, such as gear-specific areas, seasonal closures, no-take zones, and zones dedicated to habitat protection. Aligning MSP plans with existing fisheries management frameworks (e.g., GFCM recommendations) is vital. Engagement with representative fisheries organisations helps identify and support sustainable fishing techniques, particularly under climate stress. Additionally, maintaining or enhancing ecological connectivity must be a core design principle, and there should be strong collaboration with bodies like the GFCM to raise awareness and improve coordination.

Improving the dialogue between MSP practitioners and fisheries stakeholders at regional, sub-regional and local scales

Effective dialogue depends on both the quality of data and the inclusiveness of stakeholder representation. Integrating diverse data sources helps ensure all relevant fisheries bodies are recognised in the process. Establishing participatory platforms across governance levels promotes continuous dialogue rather than one-off consultations. Transparency in decision-making and clear feedback mechanisms are essential for building trust and securing stakeholder commitment in MSP processes.

MSP-related initiatives supporting small-scale fisheries (dialogue, knowledge exchange, synergies with marine conservation, etc.)

Marine spatial planning can be an avenue to strengthen co-management of small-scale fisheries (SSF), especially by promoting inclusive dialogue and knowledge sharing. Examples where SSF communities co-manage marine protected areas (MPAs) show how MSP can help diversify fishers' income and improve sustainability. However, inclusive participation remains a challenge. There's a need to ensure that all actors—not just the most powerful—are involved. Though industrial fisheries generate higher volume and value, SSFs deserve designated zones or preferential access areas within MSP to avoid conflict and ensure long-term viability.

Extension and management of Fisheries Restricted Areas

MSP offers a framework for designing ecologically coherent networks of Fisheries Restricted Areas (FRAs), which are essential tools for both sustainable fisheries and marine biodiversity conservation. These zones must be adaptable to environmental changes, particularly those linked to climate change, and should be reassessed as frequently as MSP plans. Linking FRAs to broader ecological connectivity research, such as connectivity mapping (e.g., MPA-Europe project), can further enhance their effectiveness.

Co-management of fisheries, in particular within MPAs

The integration of fisheries co-management within MPAs should begin with identifying and mapping essential fish habitats. These zones should align with other ecological areas, such as Ecologically or Biologically Significant Marine Areas (EBSAs). Conflict resolution mechanisms must be embedded in co-management strategies, and successful cases should be documented and widely shared to promote replication. Collaborative design of MPAs and surrounding buffer zones—especially with small-scale fishers—can yield ecological and social benefits.

The way MSP can contribute to combat Illegal, Unreported and Unregulated (IUU) fishing, particularly in sensitive Mediterranean ecosystems

Addressing IUU fishing through MSP is complex, as MSP is a formal, legal process, while IUU operates outside legal frameworks. Nevertheless, spatial tools can help detect and respond to unauthorised activities. By clearly delineating zones and permissible uses, MSP increases transparency, making violations more visible and easier to act upon. Identifying fishing areas during the MSP process may also help locate and address hotspots of IUU activity.

MSP support for innovation in low-impact fishing techniques

MSP can serve as a testing ground for innovative, low-impact fishing technologies by allocating specific zones for trials and research. These innovations should be pursued in tandem with social and technological shifts, fostering a transition toward resilient, community-oriented fisheries. Including specific indicators in MSP processes can help quantify and highlight the value of these low-impact approaches. Collaboration between MSP practitioners and fisheries organisations is essential for identifying practical areas to test such techniques in a future-focused framework.

Climate change and fisheries: impacts, adaptation and mitigation

Recognising the dynamic, seasonal nature of fishing zones—especially in relation to climate change—is critical to ensuring long-term sector sustainability, including its cultural and economic dimensions. Tools such as mapping of future climate scenarios or spatial CO_2 indexing can help to identify areas where adaptation strategies may be needed and secure territorial access for fishing communities.

Marine governance and policy coordination to improve the sustainability of the sector

Transboundary MSP initiatives and data-sharing platforms are essential when managing shared fish stocks and ecosystems. Strengthening marine governance also requires identifying sustainable financing mechanisms for implementing and monitoring MSP as it relates to fisheries. Real-world case studies, such as those from CIEM (Spain), can serve as valuable examples of effective policy coordination and integrated marine governance.

Issues	Comments
Improving fisheries and ecological data (including stock assessment and socioeconomic aspects) collection and availability, in particular in the southern Mediterranean	• Taking into account the missing layer of fisheries in MSP plans (St. Martin, 2014) for informing the socio-territorial landscapes produced at sea according to ecological patterns and cultural practices framed by the seasonal dimension. This includes going beyond classic data, as fishing effort = relevant but not sufficient for MSP. • Integration of complementary spatial data produced by scientific/sector observatory (e.g. French VALPENA project https://valpena.univ-nantes.fr/valorisation/projet-zip). • Reliable data is the bedrock of effective MSP and sustainable fisheries management. • MSP platforms should facilitate the integration of diverse datasets. • Data on temporal aspects is still missing (important for co-use examples). • Connect with other fisheries data management initiatives (STECF report, GFCM, etc.) • Maybe standardisation processes of data collection should be put in place, to have the same format of the data to ensure a proper post-analysis. • MSP Platform should be strongly engaged in data management.
Supporting the sustainability of fisheries and facilitating the implementation of fisheries management policies through ecosystem-based MSP	• Use MSP to designate zones for different management objectives: e.g. areas for specific gear types, no-take zones, seasonal closures, areas prioritising habitat protection. • Ensure MSP plans are aligned with and support existing fisheries management policies (e.g. GFCM recommendations). • Through MSP zoning, identify practice areas with representative fisheries organisations to develop/support sustainable techniques, particularly in the context of climate change.

	- Design MSP to maintain or enhance ecological connectivity important for fish stocks. - Strengthen awareness and cooperation on MSP with GFCM.
Improving the dialogue between MSP practitioners and fisheries stakeholders at regional, sub-regional and local scales	- This also depends on the representativeness of the sector's data. Integrating data that complements traditional data can improve the integration of representative fisheries bodies. - Establish and support multi-level participatory platforms for ongoing dialogue throughout the MSP. - Ensure MSP decision-making processes are transparent and include feedback mechanisms.
MSP-related initiatives supporting small-scale fisheries (dialogue, knowledge exchange, synergies with marine conservation, etc.)	- Promote co-management arrangements for SSF within the MSP framework. - Show examples where fisheries have been co-managing MPAs as a way to diversify their economic activities when not fishing. - Support and design better participation processes to ensure that everybody is included. - Why on small-scale fisheries when volume and value come from industrial fishing? - Consider designated areas or preferential access for SSF, protecting them from conflict with industrial fleets.
Extension and management of Fisheries Restricted Areas	- Use MSP to design ecologically coherent networks of FRAs. - These FRAs should be re-evaluated as often as MSP plans, as they may change with climate change or other environmental conditions. - The extension and effective management of Fisheries Restricted Areas (FRAs) are key tools for achieving sustainable fisheries and marine biodiversity conservation in the Mediterranean. - Important to link with other Connectivity research (Connectivity maps, etc, see MPA-Europe project).
Co-management of fisheries, in particular within MPAs	- Identify and map essential fish habitats, and integrate with MPAs and Ecologically or Biologically Significant Marine Areas (EBSAs). - Integrate mechanisms for conflict resolution within co-management frameworks.

	• Show examples where this has worked and how - communicate these. • Design MPAs and buffer zones in consultation with SSF to ensure benefits.
The way MSP can contribute to combat Illegal, Unreported and Unregulated (IUU) fishing, particularly in sensitive Mediterranean ecosystems	• Difficult issue as MSP is a formal process, but IUU fishing is not. Here, efforts should be on how to locate these IUU in spatial terms and see their potential impacts spatially (connect with other initiatives). • MSP can promote transparency by clearly delineating zones and permitted activities, making unauthorised activities easier to spot. • Identification of fishing areas within the MSP process can help identify IUU activities.
MSP support for innovation in low-impact fishing techniques	• Allocate space for research and trials of new low-impact fishing technologies. • Linking spatial management with technological and social innovation, and encouraging a transition toward more resilient, community-driven fisheries. • Include offsetting indicators to put in value low-impact techniques. • Through the MSP zoning area, co-identification of practice areas by MSP practitioners and representative fisheries organisations, for testing low-impact gear in a future-oriented perspective.
Climate change and fisheries: impacts, adaptation and mitigation	• CO_2 index fishing sector in different spatial fishing scenarios (MSP). • Mapping of CC impacts in future-oriented vision for identification of potential practice areas for fisheries = way to secure the territorial area for the fishermen community. • Recognise the seasonal and dynamic fishing zones, in particular linked to CC. • Key element to ensure that this sector is maintained in a long-term perspective (including cultural benefits).
Marine governance and policy coordination to improve the sustainability of the sector	• For shared stocks and ecosystems, we can promote transboundary MSP initiatives and data sharing. • Identify sustainable financing for the ongoing implementation and monitoring of MSP for fisheries. • Different cases to illustrate real coordination (Example CIEM Spain).

3. Breakout session: MSP and Nature Protection

The Miro-guided exercise and related discussion on MSP and Nature Protection led to the identification of several issues to be considered to enhance the MSP support to the sustainable development and transition of Nature Protection in a Mediterranean transboundary perspective. The table at the end of this section reports the transcription of the Miro exercise, while key issues are summarised in the following points.

Data availability and gaps for improving nature protection

The lack of data at local and regional levels is a major obstacle, highlighting the uncertainty of marine planning. The need for harmonised data and data interoperability to support the exchange of knowledge at the Mediterranean and regional levels should be supported. Typologies for habitats and species are needed. Marine planning often relies on uneven and uncertain data distribution, in this sense, detailed data on habitat and species, and related data on human activities (recreational activities, new developments - such as OWF) is needed in other to elaborate sensitivity maps related to the potential impacts of human activities in the biodiversity of the Mediterranean.

Implementing ecosystem-based management strategies that support the EGD objectives

Ecosystem-based management (EBM) is not being operationalised in practice. There is a need for measurable thresholds, indicators and clear targets, in order to include the specificities of the Mediterranean that can reflect the ecosystem health, resilience and functionality of the ecosystems.

Strengthening the integration of MPAs, MPA connectivity and ecological corridors in MSP

Ecological connectivity is often overlooked in MSP, especially related to the long process of MSP and its integrations in the MPA process, and the lack of collaboration at a national level (that maybe can be solved through the MSP WG in the context of the Barcelona Convention). Developing a regional marine connectivity map is essential to support the implementation of the 30% target, guide the selection of new MPAs, and address both current and future climate change impacts.

Better designation of MPAs and other protection measures (including Other Effective Area-based Conservation Measures - OECMs)

There is a need to integrate the OECM concept into MSP. It is essential to provide common guidelines to planners on how to identify what qualifies as an OECM, highlighting key characteristics such as knowledge availability and management as fundamental elements at a regional level.

Working with the maritime sectors on OECM designation and management

Many sectors are still unfamiliar with the concept of OECMs, and in general, only fisheries or aquaculture. In this context, the relationship between human activity and nature conservation is being examined through various potential solutions, such as restorative aquaculture,

aquaculture as a Nature-Based Solution (NBS), and its possible role within OECMs. This requires a deeper understanding of both the differences and the common ground among these approaches.

The role of MSP in meeting the EU objectives on biodiversity protection (including 10% of strict protection) and nature restoration

MSP should actively support the 30% protection and 10% strict protection goals. Better alignment and coherence in policies are needed, as well as the link between different directives (MSP, Marine Strategy Framework Directive - MSFD) and other initiatives (Global Biodiversity Framework - GBF) should be clear, where objectives may be common.

Moving from paper MPAs to implemented protection

Establishing a common standard for levels of protection across different types of MPAs, including the specification of IUCN categories in relation to MSP, is essential. However, this remains a major challenge, often due to limited national resources, and it is uncertain whether MSP alone can address it. Furthermore, it's important to consider not only MPAs but also other sites under varying protection regimes, such as Natura 2000. Beyond designated areas, greater attention should also be given to safeguarding the marine environment and its resources in unprotected zones, both now and in the future.

The role of MSP in supporting the sustainable management of maritime uses outside protected areas and in avoiding the identification of pressures and impacts

Even beyond the boundaries of protected areas, maritime activities can generate significant pressures on marine ecosystems. MSP can play a critical role in anticipating and preventing such impacts by promoting forward-looking, ecosystem-based planning that takes into account cumulative effects. Integrating sustainability principles throughout all maritime zones—not only in officially designated conservation areas—can enhance overall ecological coherence. This issue deserves attention in future analyses.

Integrating the human/social dimension in nature protection

The role of MPAs and other management measures should be fully integrated into the assessment of sectoral demands that can be addressed through MSP. This integration must go hand in hand with environmental education, targeting both local communities and seasonal tourists, to raise awareness about the importance of respecting natural areas and species. Additionally, there is a need for continuous and inclusive participatory mechanisms, moving beyond isolated consultation phases. The use of consultation tools—such as SeaSketch—can support local communities in making informed decisions and actively participating in planning processes.

Developing and implementing social criteria to assess the multiple values, belief systems and perceptions of stakeholders using and benefiting from nature

Marine spaces are not only ecologically and economically valuable, but also socially and culturally meaningful. MSP can serve as a platform to make visible and integrate the diverse values and perceptions that communities associate with the sea, including relational and nonmaterial values. Incorporating social criteria into planning processes could contribute to fairer and more accepted outcomes, particularly when tensions arise between uses or in areas of cultural significance. This dimension frequently remains underexplored and should be further addressed.

Reinforcing the effective role of strategic environmental assessment in MSP

Strategic Environmental Assessments (SEAs) should serve as the platform for comparing alternative scenarios and assessing cumulative impacts within MSP. To ensure consistency and effectiveness, it would be highly beneficial to standardise these processes through clear guidelines/guidance. This is particularly important, as countries currently adopt very different approaches, despite the need for establishing minimum common requirements to ensure a coherent and effective implementation across regions.

Assessing cumulative impacts of multiple sectoral activities in shared marine spaces

Understanding regional sensitivities of Mediterranean ecological features is essential when assessing cumulative impacts. Promoting cross-sectoral dialogue is also crucial to identify synergies among human activities and to minimise potential trade-offs between different uses of marine space. While there are already valuable guidance documents available—such as those developed by HELCOM and JPI Oceans—it is important to adapt and apply these tools to the specific environmental and socio-economic context of the Mediterranean region.

The importance of standardised methods for biodiversity assessment and improved data accessibility across the Mediterranean for MSP

A key challenge in aligning conservation goals with spatial planning lies in the lack of harmonised data and assessment frameworks. MSP processes depend on robust and comparable biodiversity data to inform decisions and monitor impacts. Standardised methodologies would enable more consistent evaluation of ecological status and trends across national boundaries, fostering cross-border cooperation and coherence. Addressing this gap is essential for strengthening the knowledge base that underpins effective and ecologically sensitive marine planning.

Integrated climate change in nature protection in terms of expected impact (on habitats and species) and protection needs. Using climate change impact modelling in MSP

As the Mediterranean undergoes rapid changes, analysing trade-offs becomes increasingly important. Bridging the scales between MSP and MPA is essential—MSP must account for climate-induced shifts in species and habitats, while MPAs can serve as living laboratories to monitor these ongoing changes. Climate change is already driving the spatial redistribution of marine biodiversity and fisheries, with direct implications for environmental protection measures. These dynamics must be integrated into the regional MSP process. Given its iterative nature, MSP offers a valuable opportunity to regularly reassess the effectiveness of the MPA network in light of climate-driven shifts, addressing the challenge posed by static MPA designations that are rarely revisited after initial establishment.

Cross-border and transboundary MSP for nature protection

Mobile sensitive species, such as marine top predators—including coastal birds, seabirds, and marine mammals—are vital components of the marine ecosystem and require meaningful cross-border and transboundary consideration within MSP. Cross-border cooperation should be a fundamental pillar of MSP, particularly at the regional and Mediterranean-wide scale. To advance this approach, it is important to begin developing case studies at the project level, with the aim of integrating their findings into national MSP processes.

Issues	Comments
Data availability and data gaps for improving nature protection	• Lack of data regarding recreational fishing (including spatial information) and its impact on biodiversity and fishery resources. • Support interoperability of data at the Med/regional level. Support the exchange of knowledge/know-how/and information in this regard (N-S, regional). • Marine planning is always in large uncertainty. • Need for protocols for sharing data between countries and sectors. • Lack of data (regional level). • MSP actions and projects should dedicate funding to help scientists collect data, or at least guide policies to encourage national and regional Governments to fund research to fill data gaps. • Defining areas where offshore renewable energy should be developed. • Sensitivity maps of protected species (e.g. habitat and bird directives).
Implementing ecosystem-based management strategies that support the EGD objectives	• Identify indicators, thresholds, and measurable targets that reflect ecosystem health, resilience, and functionality. • "Guidelines for implementing an Ecosystem-based Approach in Maritime Spatial Planning - September 2021" could be adapted to Med specificities.
Strengthening the integration of MPAs, MPA connectivity and ecological corridors in MSP	• Creating a regional marine connectivity map would be critical both to support the implementation of the 30% and thus guide the selection of new MPAs to be established, and as a function of current and future climatic changes. • Long process. It is important to make MSP at the beginning of MPA establishment. • This requires collaboration beyond the national level, which is currently missing. Perhaps the MSP WG can help here.

Better designation of MPAs and other protection measures (including OECM)	• Additional guidance and a common approach to OECMs at the regional level would help. • Improving understanding of complementarities and synergies between MSP and MPA planning is essential, but it is not usually well understood. See https://www.nature.com/articles/s44183-025-00119-4 • Providing guidelines for planners to identify what can be regarded as an OECM is essential - key characteristics: knowledge availability and management as basic facts for OECMs.
Working with the maritime sectors on OECM designation and management	• Sectoral experts are not always familiar with the OECM concept, e.g. aquaculture. • Relationships between aquaculture and nature conservation are taking into account multiple possible solutions (restorative aquaculture, aquaculture as NBS, OECMs, etc). Understanding differences and commonalities. • In general, OECM are taken into consideration only by the fishing and aquaculture sector.
The role of MSP in meeting the EU objectives on biodiversity protection (including 10% of strict protection) and nature restoration	• The 10% protection is an international target, Agenda 2030, Kunming - Montreal GBF. These are relevant for all MED countries. • And supporting the approximation of non-EU countries to EU objectives (regional/med-wide dimension). • This is also a matter of policy coherence; the link between MSPD/MSFD/GBF should be very clear, and they should all have the same objectives.
Moving from paper MPAs to implemented protection	• Establish a common standard on the level of protection in different kinds of MPAs = specify IUCN categories with regard to MSP contents. • This is a crucial problem, linked to a lack of resources at the national level. Not sure if it is in the power of MSP to improve this. • Not only MPAs but also sites that are protected in various capacities (Natura 2000). In addition, it would be important to consider respecting the marine environment and its resources outside protected areas (current and future).
The role of MSP in supporting the sustainable	• This is an important aspect with less consideration.

management of maritime uses outside protected areas and avoiding the identification of pressures and impacts	
Integrating the human/social dimension in nature protection	● Integrate the role of MPAs and other management measures in the assessment of different sectors' demands (that could be tackled by MSP). ● This point should consider environmental education to the local communities, but also seasonal tourism to raise awareness on the importance of respecting natural areas and species. ● The need for continuous and inclusive participatory mechanisms, not just consultation phases. ● Use consultation tools to help local communities make informed decisions (e.g. SeaSketch).
Developing/implementing social criteria to assess the multiple values (e.g. relational values), belief systems and perceptions of stakeholders using and benefiting from nature	
Reinforcing the effective role of strategic environmental assessment in MSP	● Strategic Environmental Reports (SER) should be the place in which alternative scenarios are compared and cumulative impacts assessed. Standardising the approach to these steps in SERs through guidelines would be beneficial. ● Improving guidance for SEAs in MSP is key; countries adopt very different approaches to SEAs, while there should be minimum requirements.
Assessing cumulative impacts of multiple sectoral activities in shared marine spaces	● Understanding regional sensitivities of Mediterranean features when assessing CI is essential. ● This should be involved in sectoral reports. ● Promoting cross-sectoral dialogues to identify synergies between economic sectors and minimise trade-offs between uses. ● There are already good guidance documents on this (HELCOM, JPI-Oceans, etc.). Need to look at the Med specificities.

The importance of standardised methods for biodiversity assessment and improved data accessibility across the Mediterranean for MSP.	
Integrated climate change in nature protection in terms of expected impact (on habitats and species) and protection needs. Using climate change impact modelling in MSP.	• As the Mediterranean is changing, this aspect is important to analyse the trade-offs. • Bridging scales between the MSP and the MPA is essential: understanding climate-induced changes and shifting species and habitats at the scale of MSP, with MPAs as living labs for monitoring ongoing changes. • Climate change has and will play a role in the spatial displacement of species and habitats in the Mediterranean. This will also result in a displacement of fisheries activities, and thus also on associated environmental protection. These displacements should be considered in the regional MSP process. • MSP is an iterative process and could be the opportunity to regularly challenge the MPA network effectiveness with regard to evolutions due to CC. This could solve the issue that the MPA designation is not a dynamic process (MPAs are designated once time "forever").
Cross-border and transboundary MSP for nature protection	• Consider sensible mobile species (marine top predators, coastal birds, seabirds, marine mammals) as an important element of the marine ecosystem that needs real cross-border and transboundary MSP. • Essential pillar/component that could/should act as key overarching approach = cross-border/transboundary cooperation on MSP (at regional/Med-wide level). • It would be important to start working on case studies at the project level, to bring the results into the context of national MSP processes.

4. Breakout session: MSP and Aquaculture

The Miro-guided exercise and related discussion on MSP and Aquaculture led to the identification of several issues to be considered to enhance the MSP support to the sustainable development and transition of the Aquaculture sector in a Mediterranean transboundary perspective. The table at the end of this section reports the transcription of the Miro exercise, while key issues are summarised in the following points.

Proper allocation of space for aquaculture through MSP

The proper allocation of space for aquaculture is essential for fostering sustainable development and minimising conflicts in MSP. The designation of Allocated Zones for Aquaculture (AZAs) should include comprehensive approaches, with integrated environmental, social, and economic assessments. Additionally, robust licensing and clearly defined monitoring frameworks within these zones are crucial to effectively manage aquaculture activities over time. Land-sea interactions (LSI), including the availability and development of land-based facilities and the coherence of the aquaculture value chain, should be more fully addressed in planning processes. Furthermore, early and meaningful stakeholder engagement is key for fostering social acceptance and ensuring the long-term viability of aquaculture operations.

Interactions between aquaculture and marine conservation

Aligning aquaculture spatial planning with habitat and species conservation goals represents a task of high complexity and urgent priority, which ongoing MSP processes can support. For instance, aquaculture space allocation should more effectively consider the integration of the selected zones into the broader MPA network. In sensitive areas, establishing buffers and adapting aquaculture practices to the specific sensitivities of the area can help minimise ecological pressures. Developing Environmental Management Plans (EMPs) alongside Allocated Zones for Aquaculture (AZAs) can further enhance monitoring and mitigation efforts. Implementing multi-trophic systems can reduce environmental impacts. In addition, regenerative and restorative aquaculture approaches, including nature-based solutions (NbS) and ecosystem service provision, could be promoted. Existing experiences with these approaches, along with Other Effective Conservation Measures (OECMs), could offer valuable opportunities for advancing these practices in the Mediterranean.

Sustainable site selection to minimise ecological disruption

For a sustainable aquaculture site selection, the availability of robust baseline data is essential to accurately define the initial state and characterise changes over time. Along these lines, the cumulative impacts of multiple farms within the same area should be carefully assessed and considered. Indeed, areas with high biodiversity and/or critical habitats should be avoided to protect sensitive ecosystems, and appropriate buffers established around them. Furthermore, defining a common set of indicators for the Environmental Monitoring Program is crucial for consistent and effective monitoring.

Multi-use

Multi-use approaches in MSP offer valuable opportunities for enhancing the efficiency and sustainability of maritime activities. Identifying and promoting opportunities for the co-location of aquaculture with other compatible maritime uses can help optimise space and resources. Developing clear guidelines for safe and efficient multi-use operations is essential to ensure that all activities can coexist harmoniously. The European MSP Platform's new Multi-Use Compendium can serve as a valuable tool to share successful examples and best practices, particularly in the Mediterranean region. Providing successful case studies of multi-use involving aquaculture can inspire further innovation and collaboration in MSP.

Energy transition in aquaculture

Facilitating the integration of renewable energy sources into aquaculture operations is crucial for reducing the carbon footprint of the sector. MSP can play a key role by identifying suitable areas for co-locating renewable energy infrastructure with aquaculture activities, optimising the use of marine space. Adapting the "Communication from the Commission: On the Energy Transition of the EU Fisheries and Aquaculture sector" to the Mediterranean specificities can help provide effective solutions for the region's unique conditions. To this end, it seems important to consider the work of the Energy Transition Partnership in Fisheries and Aquaculture. Additionally, it is essential to monitor the progress of decarbonization efforts within the aquaculture sector to ensure that these initiatives are effectively reducing carbon emissions over time.

Improving adaptation to climate change

Space allocation for aquaculture should consider climate change impacts, such as refined mapping of water temperature and dissolved oxygen for selecting areas with higher potential for mitigating the effects of marine heatwaves. Dedicated monitoring for assessing the effects of ocean acidification and rising temperatures on the physiology of farmed species will also be relevant. Dynamic and adaptive management strategies, including relocation plans for vulnerable sites and the development of climate-resilient infrastructure, are crucial for promoting flexibility and long-term sustainability of the sector. Additionally, diversifying cultured species and farming systems enhances resilience and adaptability to future uncertainties associated with a changing climate. In this context, exploring the potential for exploitation of invasive and alien species may also contribute to increasing the resilience of the aquaculture sector.

Strengthening the engagement of aquaculture stakeholders in MSP

Ensuring the early and continuous participation of all relevant aquaculture stakeholders in the MSP process is essential for effective decision-making. A robust stakeholder engagement plan should be developed, outlining when and how to involve aquaculture stakeholders at various stages of MSP, and specifying the type of input required. Additionally, it is crucial to reflect on the appropriate spatial scale for stakeholder involvement, ensuring it aligns with the practical realities of aquaculture operations and local contexts. To support this, better socio-economic data is needed, particularly to understand the weight of the aquaculture sector in comparison to other maritime uses.

Issues	Comments
Proper allocation of space for aquaculture through MSP	• Designate specific Allocated Zones for Aquaculture (AZAs) based on comprehensive environmental, social, and economic assessments. • Implement robust licensing and monitoring frameworks within these zones. • Consider land-based facilities availability or development perspectives (kind of LSI). • Engage stakeholders early in the planning. • Define a clear monitoring framework. • Include LSI perspective in aquaculture planning - value chain considerations.
Interactions between aquaculture and marine conservation	• Proper allocation of space for aquaculture through MSP. • Integrate aquaculture planning with the MPA network. • Establish buffer zones around sensitive habitats. • Importance of EMP establishment in parallel with AZA. • Adapt aquaculture type to area sensitivity (example of multi-trophic aquaculture that can lower activity impacts in some cases). • Promote regenerative/restorative aquaculture (NbS & ecosystem services provision to be valorised). • Med-specific examples for OECMs, NBS, and restorative aquaculture implementation.
Sustainable site selection to minimise ecological disruption	• Consider the cumulative impacts of multiple farms. • Avoid areas with high biodiversity or critical habitats. • Information and data for the initial state (state zero) are very important. • Importance of defining a common set of indicators for the EMP (Environmental Monitoring Program).
Multi-use	• Identify and promote opportunities for co-location of aquaculture with other compatible marine uses. • Develop guidelines for safe and efficient multi-use operations. • Use the European MSP platform's multi-use compendium to share good examples in the Med. • Provide successful case studies of multi-use, involving aquaculture.

Energy transition in aquaculture	● Facilitate the integration of renewable energy sources. ● MSP can identify suitable areas for co-locating renewable energy infrastructure with aquaculture. ● Make use of and adapt the "Communication from the Commission: On the Energy Transition of the EU Fisheries and Aquaculture sector" to the Mediterranean specificities. ● We need to monitor the decarbonization efforts for the aquaculture sector.
Improving adaptation to climate change	● Promote diversification of cultured species and farming systems. ● Develop adaptive management strategies, including potential relocation plans for vulnerable sites and support for climate-resilient infrastructure. ● Allocation of space for aquaculture should also be considered in terms of CC adaptation (for example, map the underwater springs of colder water that could mitigate the effects of marine heat waves). ● Impact of ocean acidification and rising temperature on farmed species. ● Consider the potential of dynamic approaches to aquaculture planning for CC adaptation. ● Need to consider invasive and alien species and how to valorise them through aquaculture.
Strengthening the engagement of aquaculture stakeholders in MSP	● Ensure early and continuous participation of all relevant stakeholders in the MSP process. ● Need for better socio-economic data (weight of sector in comparison to other uses). ● Develop a proper stakeholder engagement plan, when and how to include aquaculture stakeholders, at which stage of MSP and with what kind of input. ● Reflect on the relevant spatial scale for stakeholders' involvement (need to fit the practice).

5. Breakout session: MSP and ORE

The Miro-guided exercise and related discussion on MSP and ORE led to the identification of several issues to be considered to enhance the MSP support to the sustainable development and transition of the ORE sector in a Mediterranean transboundary perspective. The table at the end of this section reports the transcription of the Miro exercise, while key issues are summarised in the following points.

Suitability mapping for offshore renewable energy

The identification of suitable areas for ORE is a foundational step to improve its integration in MSP. However, current practices often operate at scales too broad to address site-specific challenges effectively. Moreover, existing suitability maps frequently focus on wind, neglecting critical factors such as other local weather conditions, ecological sensitivities, and socio-economic considerations. Data fragmentation and the lack of standardised methodologies further complicate the creation of comprehensive suitability assessments. Therefore, it is essential to consider dynamic environmental changes, including climate change projections, to ensure that designated areas remain viable over time. Analyses could explore methodologies that incorporate multi-criteria assessments, integrating ecological, technical, and socio-economic data to enhance the precision and relevance of suitability mapping for ORE.

Knowledge on ORE impacts on the marine environment and conflict with other uses, and its uptake in policy formulation and implementation

ORE installations can have significant impacts on marine ecosystems and generate conflicts with other maritime activities. Issues such as underwater noise affecting marine mammals, bird collisions, and habitat disturbances/destruction are critical environmental concerns. Additionally, the socio-economic implications for sectors like fisheries or maritime transport, due to potential displacement or changes in fishing patterns, call for a deeper understanding. Current policy frameworks often lack comprehensive mechanisms to assess and mitigate these cumulative impacts effectively. Strategic Environmental Assessments (SEAs) at the MSP level could be more effective in addressing these concerns than project-specific Environmental Impact Assessments (EIAs), which may come too late in the planning process. Analyses could potentially evaluate existing assessment tools and propose integrated approaches that encompass both environmental and socio-economic dimensions, facilitating informed policy-making for sustainable ORE development.

The role of MSP in advancing ORE and meeting EU objectives

MSP can serve as a critical instrument in balancing the expansion of ORE with other maritime interests, contributing to the achievement of EU energy and climate goals. Its effectiveness depends on its ability to resolve conflicts (with other uses and the environment), promote cross-border and transboundary cooperation, and align with broader energy policies. In some regions, MSP is the sole legally binding framework governing marine activities, underscoring its significance in orchestrating ORE deployment. Analyses could examine how MSP can be optimised to support ORE initiatives, ensuring that planning processes are inclusive, adaptive, and aligned with EU objectives for renewable energy expansion.

Coexistence, regulatory, and governance challenges

Concerning ORE at sea, challenges exist about coexistence with other uses, regulatory frameworks, and governance structures. Conflicts may arise with military operations, navigation routes, and traditional fishing areas. Moreover, discrepancies in regulatory approaches and governance capacities across different jurisdictions can hinder cohesive planning and implementation. For instance, concerning grid and network capacity for ORE, it is important to coordinate energy policies at land and sea in a coherent framework with other uses as well. MSP could serve as a process for identifying these problems (e.g. with the use of Strategic Environmental Assessment to assess coherence with sustainability goals). Analyses could identify best practices and propose governance models of MSP that facilitate the harmonious coexistence of ORE with other maritime activities, ensuring equitable and sustainable use of marine resources.

Co-location, co-existence, and multi-use, particularly regarding nature protection

Exploring the potential for co-location and multi-use of marine spaces can enhance the efficiency of spatial planning and reduce conflicts among different maritime sectors and uses at sea. However, such approaches must carefully consider (cumulative) environmental impacts, especially in ecologically sensitive areas. Legal and institutional frameworks for implementing multi-use strategies vary across regions, posing additional challenges. Analyses could assess the feasibility of multi-use scenarios, evaluate their environmental and socio-economic implications, and develop guidelines for integrating nature protection into co-location strategies within MSP.

Synergy opportunities between navigation and ORE sectors

Identifying synergies between the navigation (including shipping, fishing navigation, etc.) and ORE sectors can help optimise the use of marine space and infrastructure. However, considerations such as navigational safety, insurance liabilities for fishing vessels operating near ORE installations, and the harmonisation of maritime traffic regulations are crucial. Analyses could explore opportunities for collaborative planning and shared use of maritime corridors, ensuring that the expansion of ORE does not impede shipping activities and vice versa, or even providing opportunities for joint use of infrastructure (e.g. to be used to provide green fuel to vessels).

Regulatory framework for facilitating a just, sustainable, and effective deployment of ORE

A robust regulatory framework is essential to ensure that ORE development is equitable, environmentally sustainable, and economically viable. This includes establishing compensatory measures for affected sectors, such as fisheries, and integrating ORE planning into broader marine conservation and management strategies. Analyses could examine existing regulatory mechanisms, identify gaps, and propose policy recommendations that support the fair and effective deployment of ORE, aligning with the principles of the EU Green Deal.

Transboundary planning, cooperation, and mutual learning for ORE

Given the interconnected nature of marine ecosystems and maritime activities, transboundary cooperation is vital for the successful implementation of ORE projects, which minimise impacts on the Mediterranean environment and its biodiversity. Challenges include coordinating cumulative impact assessments, aligning planning processes across different jurisdictions, and sharing best practices. These challenges can not only affect the impacts of ORE (e.g. bottleneck for migratory corridors), but also the grid stability. Analyses could investigate existing transboundary initiatives, assess their effectiveness, and develop strategies to enhance cross-border collaboration, ensuring cohesive and sustainable ORE development across the Mediterranean region.

Cost-benefit analysis throughout the life cycle of renewable energy devices

Conducting comprehensive cost-benefit analyses throughout the life cycle of ORE installations is crucial for informed decision-making. This encompasses not only economic considerations but also environmental and social impacts. Analyses could also focus on methodologies for evaluating the long-term benefits and costs associated with ORE projects, facilitating balanced assessments that inform policy and investment decisions.

Innovation

Innovation plays a pivotal role in advancing ORE technologies and enhancing their application in marine environments. This includes the development of nature-inclusive designs, novel co-location strategies, and adaptive management approaches. The Mediterranean region, with its unique ecological and socio-economic context, offers opportunities for proposing innovative solutions tailored to its specific needs (e.g. related to its depth and the necessity to use mostly floating devices). Analysis could identify emerging technologies and practices, also coming from other sea basins (e.g. Baltic and North Seas), assess their applicability in the Mediterranean context, and propose pathways for fostering innovation in ORE development.

Issues	**Comments**
Suitability maps for ORE	• The identification of suitable areas is certainly essential, but not sufficient. In my experience, the identification of such areas in the maritime space takes place on too large a scale. In the absence of rules governing ORE installations, suitable areas do not solve the problem. • Suitability maps for Offshore Wind farms often consider just winds. But local weather conditions need to be taken into account to avoid future impacts. For example, areas with a high number of days with fog can dumper visibility and thus contribute to increasing collisions with birds. • Appropriate spatial scales and linked to regulatory mechanisms to ensure effective site selection. • Suitability maps for ORE are highly dependent on the quality of the data and therefore on the information we are seeking to obtain (ecological impact,

	navigation safety risk). And at the moment, the key data is fragmented, and the linked information is partial. ● Suitability of areas for ORE: interesting to think about when suitability mapping is done, what are the methods used? Sometimes this is not clear, and instead, it is important to ensure that conflicts are mapped correctly. ● Suitable areas for ORE will not be the same in the future as they are now. Projections available? It's important to keep this in mind in terms of scenarios. Climate change can impact the sector.
Knowledge on ORE impacts on the marine environment and conflict with other uses, and its uptake in policy formulation and implementation	● Grid connection, land-sea interactions, underwater cables. Important for these aspects to be taken into account ● The construction of a specific policy on ORE must be based on scientific knowledge of the impacts on the environment and other uses; technical knowledge of the problems must be accompanied by a great deal of attention to the socio-economic problems of the areas affected by the installations, which will have to guide decision-makers in identifying the sacrifices that can be borne by the community about the benefits that ORE can produce. ● Sea basin: impacts on marine mammals. Impact of noise. We should highlight this. ● Strategic Environmental Assessment of MSP is the crucial moment where addressing cumulative impacts and ORE scenario analysis. When running an EIA of individual projects, it is already too late. ● An important aspect of the impact on birds' collision and their migration. It is expensive and complicated to gather data. Maybe we can suggest to the policy how to do it and research gaps to be covered. ● Underwater noise should be considered as a potential impact for marine mammals and other organisms, even for the Offshore Floating wind mills. ● Important to research impacts in general, but also specifically depending on the type of energy. ● Proposals for offshore wind are often corresponding to areas where various trawling and drift longline fishing for large pelagic takes place. Activities that, by their intrinsic characteristics, are incompatible with the presence of industrial ORE facilities. It is therefore essential to assess the socioeconomic impacts on the

	sector due to the diversion of fishing areas and the environmental and socioeconomic impacts of the potential spatial dislocation of fishing activities. ● Relocation of fisheries to areas adjacent to ORE facilities with associated increased impacts must be carefully evaluated. ● The cumulative impacts assessment is missing, and we know that this is going to be a major issue in an increasingly crowded marine space. ● Now there is emphasis on EIAs. But what is strategic is to focus on SEAs. Not on the individual sectors but within MSP. Useful to reduce the impacts of OWE. It is important to anticipate and not miss the point. ● ORE development should be integrated with other EU policies and should be aligned with a coherent and accelerated action plan for marine conservation and restoration ● Should SEA go in parallel or instead of EIA? If complementary, it could speed up the permitting process. In addition, there could be an overlap. ● Scientific campaigns on impacts. ● UCH: No real incompatibility with ORE. The problem is with nm, jurisdictional areas, e.g. in Greece, we cannot allocate, nor are we permitted to go to 12nm. ● RSEA project: socio-cultural significant areas and dimensions of integrating MSP and UCH. Stella will share the link to the project.
The role of MSP in advancing ORE and meeting the EU objectives (GW)	● MSP must act as a conflict-resolution tool, balancing ORE expansion with other maritime sectors (fisheries, aquaculture, tourism, defence). ● MSP must be a tool to promote joint projects between member states. ● As for spatial planning on land, MSP is the main driver for industrial projects, and it is important for ORE planning targeting EGD objectives. In the meantime, MSP is "just" a technical and political mechanism, not the European energy policy. The MSP must be careful not to over-plan projects by freezing potential areas. ● MSP is the key tool for governing ORE and enabling the achievement of EU energy targets. In Italy, for example, it is the only legally binding instrument that can regulate human activities at sea and the only one that can balance the various existing public and private interests.

Coexistence, regulatory and governance challenges	● Potentially colliding with or close to military areas or areas used for military training. ● Grid and network capacity about ORE: again, it is important to coordinate energy policies at land and sea in a coherent framework with other uses as well. MSP is the ideal process for identifying these problems. And Strategic Environmental Assessment is the place where assessing the coherence with sustainability goals (social, environmental, economic). ● These are, in my opinion, the most relevant challenges that MSP has to face. I don't see a single way to solve them, but certainly everything depends on appropriate governance in terms of both technical knowledge and representativeness. Imposing decision-makers who are too distant from the communities that will suffer the consequences of the choices made is certainly a mistake to be avoided. Knowledge, subsidiarity, participation and balance are for me the key words.
Co-location, co-existence and multi-use, in particular regarding nature protection	● It is certainly important to consider the possible benefits brought by the implementation of OWFs. These benefits, however, should also be weighed against the external impacts that such facilities might have (e.g., displacement of fisheries in areas where they were not previously present and subsequent degradation of new areas in the sea). ● Visual impact could hamper potential nature-based ecotourism in marine protected areas, even if the mild wind eventually doesn't have an impact on seabirds. ● Consider perturbation by everyday maintenance operations on wildlife, not just the impact of the OR Infrastructure. ● Assess the "legal lock" per country about MU implementation (whatever the final form) and, in parallel, provide MU scenarios in terms of potential combinations of activities and environmental conditions (integrating CC long-term impacts). ● Explore different types of MU (from the most technological to the simplest) and different combinations (ORE + Tourism; Conservation/monitoring + ORE, etc.). ● I am all for encouraging solutions that incentivise co-use, multi-use and co-location of different human activities, both to safeguard environmental needs and to reduce the consumption of maritime space in order not to fall into the mistakes made in spatial planning

	on land. The sea is synonymous with freedom, and we must not forget that. ● Important issue in the Eastern Mediterranean: we should emphasise the relationship between the allocation of OWF with defence installations and security. There is no compatibility! In Sweden, among 14 investments, only 1 was approved due to reasons related to conflicts with defence, in particular the conflict between radars and OWE installations. Due to these conflicts, ORE installations can be more expensive.
Synergy opportunities between shipping and ORE sectors	● Synergies with shipping: take into account the different rules on maritime traffic in ORF. Some rules may differ from country to country. Maybe in some cases we have synergies, in some others we have conflicts. ● Cultural and social impacts. ● Insurance issues for the fishing boats to operate within the ORE areas.
Regulatory framework for facilitating a just, sustainable and effective deployment of ORE	● A compensatory measures framework for different activities. ● Areas designated for OWFs can be considered as indirect measures to reduce fishing pressure if and only if there is no displacement of fishing effort to other areas not traditionally impacted by the fishery (or to other areas of high biological/ecological value); any compensation provided for fishery operators affected by the removal of fishing area does not lead to an increase in overall fishing capacity or fishing effort in other areas. On the contrary, it should be quantified and managed within the multi-year fishery management plans and ensure compliance with management expectations regarding fishing capacity contained in these plans.
Transboundary planning, cooperation and mutual learning for ORE	● Cumulative impacts for activities at sea considering cross-border issues. ● Particular focus on bottleneck migratory corridors, which affect mobile species and populations from all countries in the MED basin, although the bottleneck may be located in waters of two or three countries. ● Transboundary level: example of an energy station in the Baltic Sea. One station to process energy to improve the grid in the area, to reduce infrastructure at sea.

	• Stability of the network: How can we develop the grid, and how can stability be ensured? The interconnection in the eastern Mediterranean is a problem. • Importance of cross-border cooperation, e.g. concerning impacts but also the grid. • Interesting to focus on the different planning stages that different countries are at now. In France, things are moving quicker, for example. In other countries, things are slower, and the process is not top-down. Interesting to see where we are now and learn from more developed experiences. e.g. cumulative impact assessments, suitability mapping. It would be good to learn from those who are more developed in these crucial aspects. • Marine renewable projects in the Mediterranean are not going very fast. Complex and large projects. Maybe we should concentrate on where things are more developed (e.g. France). This gives more in terms of monitoring, and we can focus on concrete cases.
Cost-benefit analysis throughout the life cycle of renewable energy devices	
Innovation	• Important to include the innovation aspect, progressing very rapidly (start apps, experimentations, but almost none of them are in the Mediterranean). What innovation in ORE needs to be developed in the Mediterranean? • Innovation: enhancing nature within ORE, with mitigation measures or nature-inclusive designs. It would be great to have some in the med. Some are available in the Baltic and North Seas.

ANNEX - WORKSHOP AGENDA

MED-MSP-CoP

II 2025 workshop

Monday, 26 May 2025

10 – 13 CET

On-line

Based on the outcome of the MED-MSP-CoP workshop held in Madrid on January 29, 2025, the MED-MSP-CoP finalised its 2024 Recommendations document and the Action Plan for future activities. This second workshop of the MED-MSP-CoP in 2025 is based on both documents and aims to:

- Illustrate the MED-MSP-CoP Action Plan covering the period from January 2025 to January 2027.
- Initiate the work of the MED-MSP-CoP Working Groups.
- Engage the MED-MSP-CoP experts in identifying and discussing key issues to be addressed in each working group.

The results from this workshop will inform the two other workshops scheduled for 2025: an online session in September/October and a hybrid session in November/December. They will also contribute to the ongoing MEDIGREEN study.

AGENDA	
10:00 – 10:40	**Setting the scene** The MED-MSP-CoP Action Plan, *10'* Presentation of the WGs and their co-leaders, *15'* The MEDIGREEN project and its contribution to the MED-MSP- CoP, *10'* Q/A session – *5'*
10:40 – 11:30	**Breakout session 1** Participants will be divided into two rooms to discuss key issues for the following working groups: (i) MSP and fisheries, (ii) MSP and nature protection. Introduction to the topic – 10' Presentation of the MEDIGREEN study layout on the topic – 10' Facilitated exercise to identify and discuss key issues for MSP to enhance its support for the sustainable transition and extension of the marine use under consideration – *30'*
11:30 – 11:50	**Coffee break**
11:50 – 12:40	**Breakout session 2** Participants will be divided into two rooms to discuss key issues for the following working groups: (i) MSP and aquaculture, (ii) MSP and offshore renewable energy. Introduction to the topic – 10' Presentation of the MEDIGREEN study layout on the topic – 10' Facilitated exercise to identify and discuss key issues for MSP to enhance its support for the sustainable transition and extension of the marine use under consideration – *30'*
12:40 – 13:00	**Concluding session** Report for the breakout sessions: Next steps