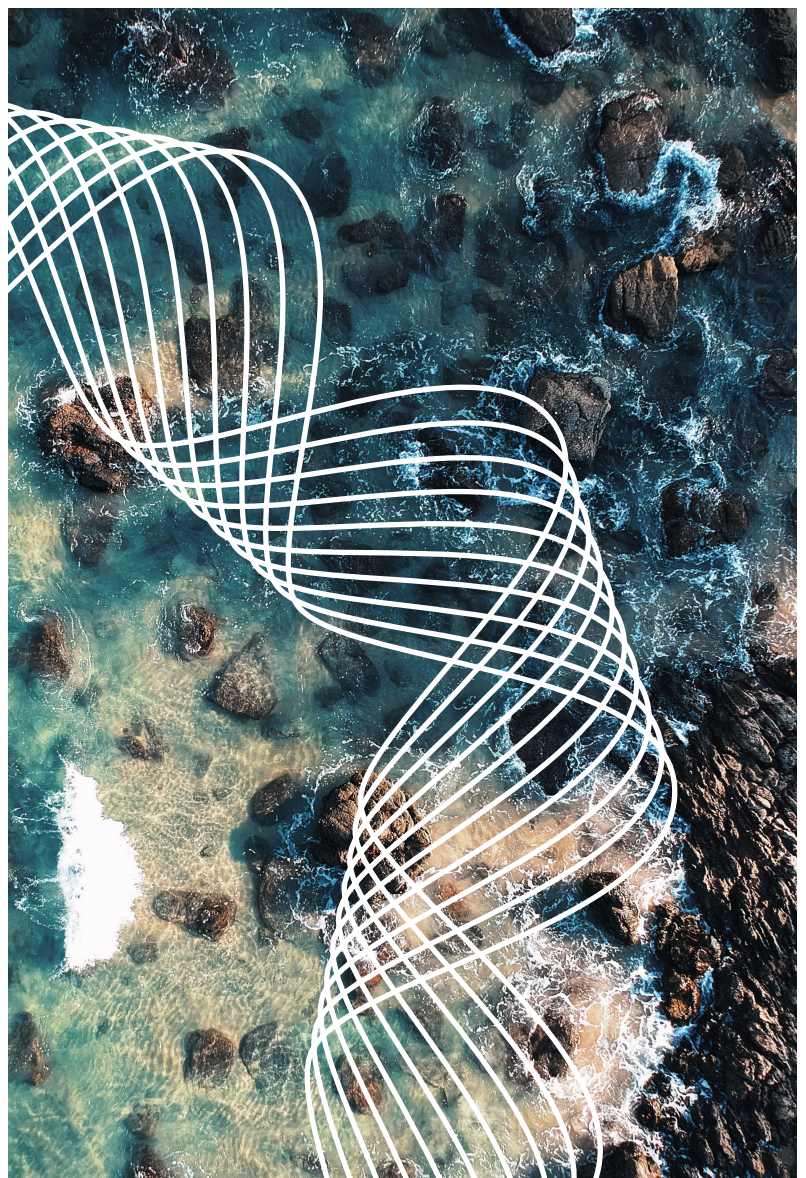
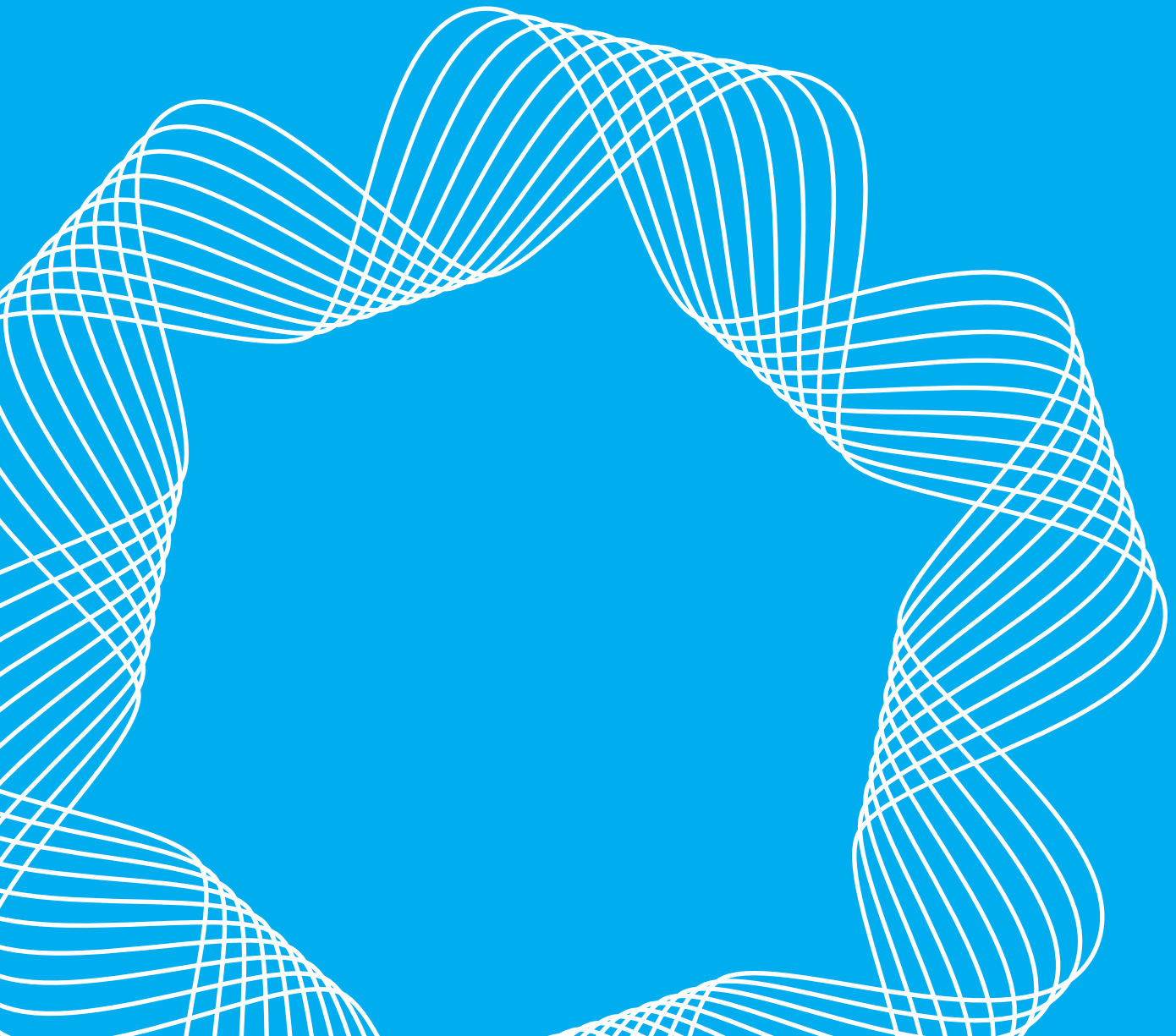


# CONCEPTUAL FRAMEWORK FOR **MARINE** SPATIAL PLANNING IN THE MEDITERRANEAN



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## ACRONYMS

BD	Biodiversity
CAMP	Coastal Area Management Programme
CF	Conceptual Framework for MSP
COP	Conference of Parties
CP(s)	Contracting Party (-ies)
EcAp	Ecosystem Approach
EIA	Environmental Impact Assessment
EU	European Union
EUSAIR	European Union Strategy for the Adriatic and Ionian Region
FAO	Food and Agriculture Organisation
GES	Good Environmental Status
ICZM	Integrated Coastal Zone Management
IMAP	Integrated Monitoring and Assessment Programme
IOC	Intergovernmental Oceanographic Commission
LSI	Land Sea Interactions
MAP	Mediterranean Action Plan
MSFD	Marine Strategy Framework Directive
MSP	Marine Spatial Planning or Maritime Spatial Planning
MTS	Mid-Term Strategy
PoW	Programme of Work
SEA	Strategic Environmental Assessment
SPA	Specially Protected Areas
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organisation

# 1. INTRODUCTION

As reported in the UNEP/MAP Mid-Term Strategy 2016-2021 (MTS), the Contracting Parties, at COP 18 recommended to strengthen MAP activities in the field of Marine Spatial Planning (MSP)<sup>1</sup> in order to contribute to GES, investigate in more details connections between land and sea areas and propose coherent and sustainable land and sea-use planning frameworks relating with key economic sectors and activities that may affect the coastal and marine resources. The elaboration of a Conceptual Framework (CF) for MSP as an emerging issue in the entire Mediterranean Region is envisaged by the UNEP/MAP PoW approved for 2016-2017, with the main aim of introducing MSP within the Barcelona Convention.

Although MSP is not expressly mentioned in the Protocol on ICZM in the Mediterranean, spatial planning of the coastal zone is considered an essential instrument of the implementation of the same Protocol. One of the main objectives of ICZM is to *“facilitate, through the rational **planning of activities**, the sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development”* (art. 5). Planning is recalled also in other articles of the Protocol, as in the case articles dealing with the protection of wetlands, estuaries and marine habitats (art. 10) or the protection of coastal landscape (art. 11).

According to art. 3 the area to which the Protocol applies (i.e. the coastal zones) is the area between:

- the seaward limit of the coastal zone, which shall be the external limit of the territorial sea of Parties; and
- the landward limit of the coastal zone, which shall be the limit of the competent coastal units as defined by the Parties.

The geographic scope of the Protocol includes both the land and the sea and it follows that planning should be equally applied to both components of the coastal zones. While MSP is a relatively new term within the Barcelona Convention frame, it is clear that planning of the marine space is a concept already taken on board by the Protocol. In this perspective MSP can be considered the main tool/process for the implementation of ICZM in the marine part of the coastal zone and specifically for its sustainable planning and management. Art. 3 of the ICZM Protocol also defines the geographic scope of the operational application of MSP that shall focus on the marine area following within the territorial sea of a country. Requirement to take land-sea interactions into account is specified in Art. 6.

Also, MSP is considered as one of the tools to implement the EcAp as a strategic approach towards sustainable development in the region that integrates all of its three components, i.e. environmental, social and economic. MSP should guarantee that they are in balance.

Given the definition of the coastal zones in the ICZM Protocol, almost all other Protocols of the Barcelona Convention are related in one or the other way to it. ICZM can and should provide support to the implementation of several of these Protocols, and the relevant objectives and provisions of these Protocols should be taken into account in all ICZM projects, plans and strategies. Given these links, the application of MSP within the framework and the geographic scope of the ICZM Protocol can contribute to the goals defined by other protocols, as in the case of identification, planning and management of protected areas according to the SPA/BD Protocol or the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (so called Offshore Protocol).

1 In this document, Marine Spatial Planning and Maritime Spatial Planning are used interchangeably. In fact, there is no different meaning of the two concepts. Marine Spatial Planning is used all around the world, while Maritime Spatial Planning is the term mainly used within the EU and for the relevant Directive, in particular. Both concepts deal with the sustainable management of marine ecosystems and maritime human activities and related socio-economic benefits.

## 2. OBJECTIVES OF THE CONCEPTUAL FRAMEWORK

The Conceptual Framework on MSP has two main objectives:

- To introduce MSP in the framework of the Barcelona Convention, and in particular link it to ICZM, considering MSP as the main tool/process for the implementation of ICZM in the marine part of the coastal zone and specifically for planning and managing maritime human activities according to EcAp goals (as specifically addressed by section 3 of the CF).
- To provide a common context to CPs for the implementation of MSP in the Mediterranean Region.

The CF is intended to be a short and easy-to-use document, a sort of guiding reference for the implementation of MSP, based on common principles, contents and steps. Several customized step-by-step methodologies have been developed (e.g. by PlanCoast, SHAPE, ADRIPLAN, THAL-CHOR projects), used together with technical tools in pilot cases to test them in Mediterranean conditions (e.g. "Paving the road to MSP in the Mediterranean") and are available for MSP implementation in the Mediterranean. Other on-going projects (e.g. SUPREME and SIMWESTMED) will provide further methodological input. Moreover, the UNESCO-IOC guidebook on MSP represents an overarching inspiring document and the European wide MSP Platform provides a rich catalogue of MSP practices. The challenge is to capitalize available experiences rather than develop new step-by-step methodologies.

Contents of the CF have been developed building also on experience from the above-mentioned projects. They can be used as a checklist to verify that needed elements of the MSP process are taken in consideration, referring to above mentioned and other methodologies for specific details. However, in no case such guidelines shall be considered prescriptive, as each MSP process needs to be tailored according to specific characteristics of its geographic scope, objectives and expected results.



### 3. ECAP AS A GUIDING PRINCIPLE FOR MSP

The Ecosystem Approach (EcAp) is the guiding principle to MAP Mid-term Strategy and the biennium Programme of Work and all policy implementation and development undertaken under the auspices of UNEP/MAP Barcelona Convention, with the ultimate objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea and Coast. This also applies to the ICZM Protocol and the related planning of land and sea based marine activities, therefore including MSP implementation.

EcAp can be defined as the integrated management of land, water and living resources that provides sustainable delivery of ecosystem services in an equitable way. It goes beyond examining single issues, species, or ecosystem functions in isolation. Instead, it recognizes ecological systems for what they are: rich mixes of elements that interact with each other continuously. This is particularly important for coasts and seas, where the nature of water keeps systems and functions highly connected. Indeed, links between EcAp, MSP and ICZM principles are wide and articulated (Figure 1).

Even the Directive 2014/89/EU establishing a framework for MSP clearly recall the importance of applying the requirement of the ecosystem based approach, both in the preamble and under the article provisions; i.e. art. 5 “When establishing and implementing maritime spatial planning, Member States shall consider economic, social and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses.”

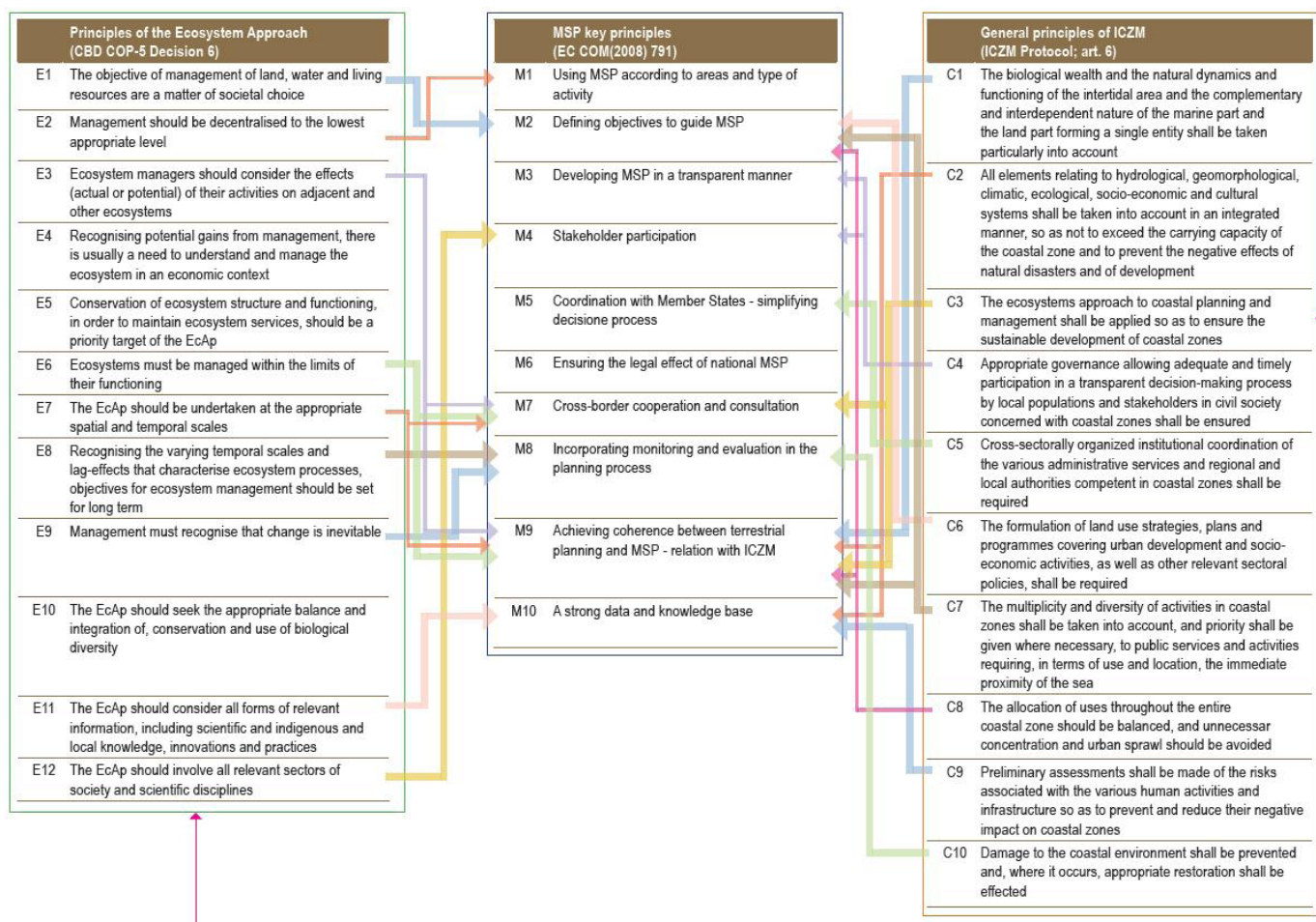


Figure 1 – Link between EcAp, MSP and ICZM principles

Some guidelines can be suggested to apply EcAp within the MSP process, including the following ones:

Establish clear links between MSP objectives and ecological objectives, targets and indicators defined within EcAp.

- As far as possible, define the planning and management area considering the limits of ecosystem functioning.
- EcAp does not stop at sea, it involves land too. Taking EcAp in consideration in the MSP process also implies a strong focus on land-sea interactions (LSI) and in particular on interactions among terrestrial and marine ecosystems, habitats and species.
- Establish MSP (allocation of maritime activities) on best available scientific knowledge about the ecosystem and its dynamics, and assess major information gaps and related uncertainties.
- Identify the ecosystem services provided by the considered marine area and how they underpin human maritime activities and human well-being in general.
- Evaluate various effects of human activities on the ecosystem, as: direct and indirect, cumulative, short and long-term, permanent and temporary, positive and negative effects, also taking land-sea interaction in consideration.
- Include in MSP the evaluation of cumulative impacts on the sea that may result from the combination of different (current and future) maritime and land-based activities.
- Capitalize and tailor existing methods and tools to operationalize the EcAp concepts within MSP, as: guidelines for implementation of EcAp, indicators, checklist, vulnerability assessment, evaluation of cumulative impacts, ecosystem service mapping and quantification, identification of blue corridors, EcAp based monitoring and evaluation program, etc.

Indeed, the relationship between EcAp and MSP is a two-way relation, as the second can contribute to the overall objective of achieving the GES, also through the identification of related spatial measures. Proper planning of maritime activity can:

- Reduce marine-based source of pressure affecting the marine environment through spatial efficiency and control of temporal distribution of human activities;
- Reduce conflicts between maritime uses and protection of areas with high naturalistic and ecological relevance;
- Identify areas to be protected in order to preserve processes and functions that are essential in achieving the GES;
- Identify environmental hotspot areas at sea where more intense measures are necessary;
- Avoid unsustainable uses in protected areas and identify synergies that can provide win-to-win solutions for socio-economic development and environmental protection;
- Identify connecting elements among relevant habitats through blue corridors.



## 4. COMMON PRINCIPLES AND CONTENTS

Available methodologies and scientific literature propose a wide range of MSP definitions. Ehler and Douvere (2009)<sup>2</sup> includes one of the most quoted one, according to which MSP can be defined as “a practical way to create and establish a more rational organization of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way”. Another definition very often taken on board is the one given by art. 3 of Directive 2014/89/EU establishing a framework for MSP: “a process by which the relevant Member State’s authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives”. Expected benefits of MSP are:

- Increased horizontal and vertical coordination between administrations and among different sectors using a single process (MSP) to balance the development of a range of maritime activities;
- Reduction of conflicts and exploitation of synergies among different uses of the marine space;
- Contribution to the equitable access to marine resources;
- Increased stakeholder involvement, public participation and information sharing;
- Encouragement of investment, by instilling predictability, transparency and clearer rules;
- Improved protection of the environment, through early identification and reduction of impacts as well as promotion of opportunities for multiple use of the same marine space;
- Identification of (spatial) measures that can support the achievement of the Good Environmental Status (see section 3);
- Improve protection of cultural heritage and preservation of intangible values of the sea.

Independently on the considered definition and the specific objectives and expected benefits, a number of common principles and general contents for the implementation of MSP are identified below (some of them totally or partially overlapping with ICZM ones). When dealing with MSP implementation this list should be reviewed and tailored according to the specific scope and goals of the MSP process and the characteristics of its area of application.

2 Ehler C., and F. Douvere, 2009. Marine Spatial Planning: a step-by-step approach towards ecosystem-based management. IOC Manual and Guide n. 53, ICAM Dossier n. 6, Paris, UNESCO.

## 4.1 ADAPTIVE APPROACH

The adaptive approach is an interactive and systematic process for continually improving policies, plans and management practices by learning from the outcome of previous steps and cycles. Through this approach policies, plans and programmes are identified on the basis of the best available knowledge, and are then implemented, monitored, periodically evaluated and improved based on evaluation results. This approach is particularly useful in dealing with complex, dynamic and uncertain issues, including planning of current and future uses of the sea. Indeed, MSP does not lead to a one-time plan; it is a continuing iterative process that adapts over time. The following guidelines can be suggested to shape MSP according to an adaptive approach:

- Design the MSP process including monitoring, evaluation and revision steps since its beginning;
- Possibly, promote active adaptive management, which includes the evaluation and comparison of alternative hypothesis (e.g. scenarios) about the future evolution of the considered marine area;
- Develop MSP indicators linked to clear objectives and targets, including: governance or process, socio-economic and ecological-environmental indicators;
- Adopt a medium/long-term perspective to properly deal with the strategic and anticipatory nature of MSP and allow to plan, implement, adapt and plan again action over a period long enough to get concrete results.

## 4.2 MULTI-SCALE APPROACH

The operational application of MSP within the frame of the Barcelona Convention shall focus on the marine area following within the territorial sea of a country, according to the geographic scope of the Protocol on ICZM in the Mediterranean (art. 3). This operational application can be embedded into a multi-scale approach, combining top-down and bottom-up perspectives. The multi-scale approach includes the following different scales:

- Mediterranean scale addressing the whole sea basin through cooperation among CPs in the frame of the Barcelona Convention to approach the strategic level of MSP, as for example: (i) definition of elements for a common vision and related objectives, (ii) identification of priority areas and issues to be approached at a transboundary level, (iii) identification of initiatives (e.g. projects) to address transboundary areas and issues;
- Sub-regional scale – where relevant and possible – approaching transboundary MSP issues (elements for a common vision, objectives, priorities and initiatives) in sub-Mediterranean regions, also linking to sub-regional strategies and plans (e.g. EUSAIR and the West Med maritime initiative) for coordinated implementation;
- National scale, fully implementing the MSP process – according to common principles and coherently with the Mediterranean and sub-regional approaches – in marine areas falling within national jurisdiction, with particular reference to the territorial sea according to the geographic scope of the ICZM Protocol;

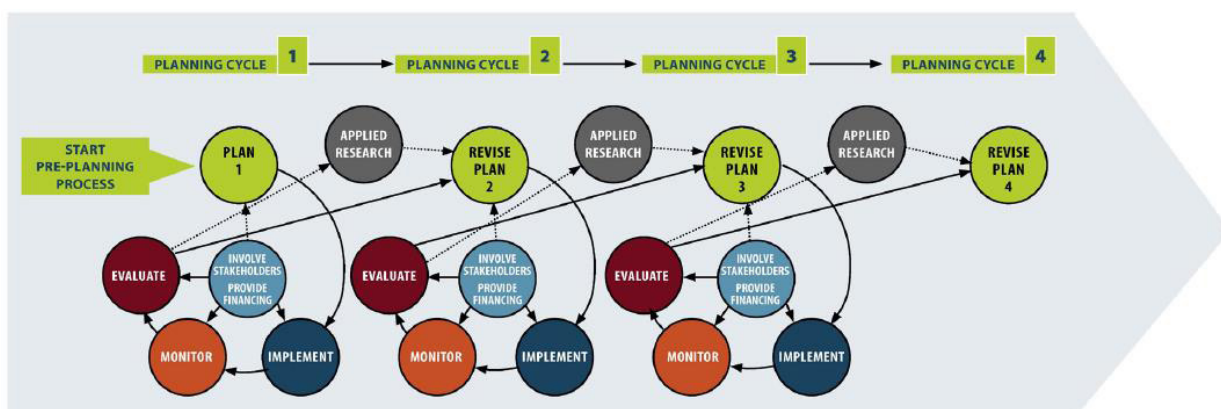


Figure 2 – The iterative MSP cycle (source: Ehler and Douvere, 2009)<sup>3</sup>

<sup>3</sup> GESAMP – Joint Group of Experts on the Scientific Aspects of Environmental Protection, 1996. The contributions of sciences to integrated coastal zone management. Report and studies n. 61. Rome: Food and Agriculture Organisation (FAO) of the United Nations.

- Sub-national and local scales, fostering MSP applications aiming to provide evidence of concrete and visible environmental, social and economic benefits of MSP. Pilot activities at the sub-national and/or local scale could focus on priority areas, such as: highly vulnerable areas, areas with major conflicts among uses, areas with high potential for synergies among uses and multi-use opportunities. Pilot activities could be also useful to develop and test new overarching or item-specific methodologies, including through next generation of CAMP projects better integrating marine areas through MSP.

### 4.3 INTEGRATION

Integration is an essential feature of MSP; it can assume different meanings:

- MSP is not only dealing with blue economy. Environmental, social, economic and governance aspects have to be all taken into consideration to pursue sustainability goals;
- Integration among sectors is needed to go beyond sector policies, plans and regulations;
- Vertical and horizontal cooperation among administrations and technical agencies is required to proceed towards coordination and integration of sector policies and plans;
- Integration between land-based and marine planning is essential to harmonize and ensure coherence among parts of the same coastal system, interacting each other in different ways.

### 4.4 LAND-SEA INTERACTIONS

Understanding and addressing land-sea interactions (LSI) is crucial to ensure sustainable management and development of coastal areas and coherent planning of land and sea-based activities. Although there is not a single and recognized definition of LSI, land-sea interactions can be defined as “interactions in which land-based natural phenomena or human activities have an influence or an impact on the marine environment, resources and activities and vice versa interactions in which marine natural phenomena or human activities have an influence or an impact on the terrestrial environment, resources and activities”. As a consequence of the above definition, three main levels of LSI should be taken on board when dealing with MSP:

- Interactions related to land-sea natural processes. Implication of such processes on coastal management and planning of alternatives for land and marine activities have to be identified and assessed, considering their dynamic nature. At the same time, human activities can interfere with natural processes, impacting on the coastal and marine environment. The analysis of expected impacts of land and marine activities – within the SEA framework – should include the evaluation of their effects on LSI natural processes and the potential consequent impacts on natural resources and ecosystem services.
- Interactions among land and sea uses and activities. Almost all maritime uses need support installations on land, while several uses existing mostly on the land part expand their activities to the sea as well. These interactions have to be identified and mapped, assessing their cumulative impacts, benefits and potential conflicts and synergies. Interactions between land and sea activities can extend further beyond the coastal zones, for example in terms of long-distance connections related to transport and energy distribution or fish migration up-stream and stemming need for blue corridors. Although the primary focus is on costs, identification and mapping of those wider connections and assessment of their environmental, social and economic implications is also important. It is important to note that the Art.9 of the Protocol requires that CPs shall accord specific attention to economic activities that require immediate proximity to the sea. This is also one of the general principles of ICZM (Art.6 para g).
- Interactions of planning processes and plans for land and sea areas. It is important to ensure that legal, administrative, consultation and technical processes are coordinated (and hopefully linked) to avoid unnecessary duplications, incoherence, conflicts, waste of resources and/or excessive demand of stakeholders’ efforts. The challenge is to plan and manage inshore and offshore activities in harmonized manner considering the functional integrity of the land-sea continuum. This also implies allocation of land space (and related infrastructure and services) to some maritime activities (and/or the allocation of maritime space to some land-based activities. Finally, the achievement of this coherence also requires alignment/integration of the different approaches, methodologies and tools applied respectively on land and at sea.

#### 4.5 FOUR DIMENSION OF MSP

MSP operates in three spatial dimensions, taking in consideration maritime uses and related conflicts operating on the: ocean surface, water column and seabed. Time can be taken into account as a fourth dimension. In terms of MSP implementation, this may imply:

- For each maritime use identification of the most relevant spatial dimensions and assessment of the compatibility with other uses that mainly occur in other dimensions (e.g. shipping and sand extraction from the sea-bed);
- Synergies and compatibilities among different uses can also be enabled through temporal zoning and regulation, as for example enabling access to military restricted areas to shipping or recreational activities, if there are not military operations and safety is ensured;
- Proper assessment of the 4 dynamic needs of each maritime use to evaluate whether compatibilities are really possible and conflicts are minimized.

#### 4.6 KNOWLEDGE BASED PROJECT

MSP must rely on high-quality data, focusing on key relevant information, as also stressed by EcAp and the adaptive management approach. To this regard the following guidelines are suggested:

- Use best available knowledge to promote the definition of the most appropriate geographic scale and scope for MSP strategies and/or plans, also taking EcAp/IMAP into consideration (i.e. ecosystem limits) and considering LSI an essential element of MSP;
- Focus on the collection of data and information which are really essential for MSP;
- Identify the specific gaps that might hamper the MSP and that require specific actions;
- Take in consideration any form of “good quality” knowledge. This comes primarily from scientific sources and institutionalized monitoring activities and datasets, but should also capitalize private sources of information, including knowledge generated by people living and working at the sea;
- Improve transparent access to accurate and complete information;
- Go from data and knowledge to information really useful for the planning and decision-making process required by MSP. Spatial-based tools are particularly useful to this regard.

#### 4.7 SUITABILITY AND SPATIAL EFFICIENCY

Suitability of maritime activities and spatial efficiency in distributing these activities are key guiding concepts for MSP, aiming at improving the sustainability of the use of marine resources (including the marine space), minimize conflicts among uses (including nature protection) and exploit possible synergies. To this regard the following guidelines are suggested:

- Use the sea space for those uses which really depend on marine resources or that can be more efficiently operated at sea (i.e. it is worth transferring a land-based use to the sea if this generates higher benefits and lower impacts and conflicts);
- When dealing with planning, start identifying immovable and not-renounceable uses and functions that normally have priority in space allocation;
- Encourage co-use or multi-use of the same marine area as much as possible, provided that this implies higher benefits, lower impacts and reduced conflicts;
- Spatial efficiency should also imply a fair distribution of MSP-related socio-economic benefits in the whole planned marine area.

#### 4.8 CONNECTIVITY

MSP does not only focus on proper and efficient spatial allocation of maritime uses, but also deals with connectivity. Improved connections aim to generate social, economic, environmental and governance benefits; the following guidelines are suggested:

- Consider in the MSP plan connections between linear elements as for example shipping lanes to develop an integrated maritime transport system, energy grid to improve energy distribution efficiency or blue corridors to connect natural habitats;
- Consider in the MSP plan connections of patches, areas with similar or interrelated uses or functions as in the case of networking of marine protected areas or the preservation of connected habitats which are vital for marine species;
- Beyond planning of maritime uses, do not forget to create connections among MSP operators in terms of knowledge sharing, cooperation and coordination.

Assessment and planning of connectivity elements is particularly relevant for LSI aspects.

## 4.9 CROSS-BORDER COOPERATION

Although MSP can be seen primarily as a country-based process, cross-border cooperation is essential to ensure the MSP plans are coherent and coordinated across the coastal zones and the marine regions. This implies cooperation at the methodological (common methods, data and information sharing, tools sharing, MSP practice exchange, capacity building), strategic (common vision, shared principles and possible common objectives) and implementation (e.g. planning of marine bordering areas, etc.) levels.

Moreover, it is well-known that a relevant number of problems and challenges (e.g. maritime transport operation and safety, fish stock conservation and sustainable management, biodiversity protection and ecosystem preservation, future development of off-shore renewable energy production and distribution, etc.) have a transboundary dimension and might require the adoption of a common regional or sub-regional approach.



## 5. MSP STEPS

MSP has several definitions. The variety of definitions is reflected by the variety of available methodologies; i.e. there is not a single approach fitting to all marine contexts and responding to all strategic objectives. MSP should be shaped and based on the specificities of individual marine areas that are concretely approached in its implementation. However, there are common steps that are considered in most of MSP initiatives and guiding documents, as: data collection and analysis, stakeholder consultation and the participatory development of a plan, the subsequent phases of implementation, enforcement, evaluation and revision. The MSP steps correspond to a great extent with the steps of ICZM process implemented by PAP/RAC for coastal strategies and plans.

Several customized step-by-step methodologies have been developed for the Mediterranean regions and sub-regions. Based on the analysis of these methodologies, the following steps and sub-steps are suggested. In no case these steps shall be considered obligatory, as each MSP process needs to be tailored according to specific characteristics of its geographic scope, objectives and expected results. They can be considered a sort of checklist to select those elements which are considered relevant for the specific MSP process.

### STEP 1 – STARTING THE PROCESS AND GETTING ORGANISED

- Assessment of MSP needs and identification of objectives and expected results, including links to ICZM;
- Organization of all aspects which are needed for the MSP process (setting the ground for MSP);
- Organization of data collection and management, coherently and possibly in synergy with data and information organisation needed for ICZ.

### STEP 2 – ASSESSING THE CONTEXT AND DEFINING A VISION

- Analysis and evaluation of existing legal documents, policies, strategies and plans which are relevant for and can orientate MSP, including ICZM and LSI aspects;
- Definition of a strategic vision (high-level objectives) about how the marine area shall look like in the future, also thanks to the MSP process. The strategic vision should guide towards sustainable development of the planned marine area, considering all the relevant mechanisms already in place in the Barcelona Convention context and making synergies with them. It is deemed fundamental to develop a cross-dimensions (including environmental, social, economic and governance aspects) and cross-sectors vision, capturing the integrate nature of the MSP process. It is also highly important that the marine vision is coherent with vision/s on future development of the land component of the coastal system (towards a unique land-sea vision);

- Linking the strategic vision to the sustainable development of marine areas and the sustainable use of marine resources. The overall aim is ensuring that the collective pressure of all activities is kept within levels compatible with the achievement of good environmental status and that the capacity of marine ecosystems to respond to human-induced changes is not compromised, while contributing to the sustainable use of marine goods and services by present and future generations;
- Linking the defined strategic vision with the upper scale (e.g. whole Mediterranean) and lower scale (i.e. input to sub-national and local MSP-related projects, including new CAMP projects).

### STEP 3 – ANALYSING EXISTING CONDITIONS

- Identification of relevant information, selecting only those really needed for the analysis (focused approach);
- Analysis and mapping of current oceanographic and environment characteristics, focusing on those that have a real MSP implication (e.g. wind or wave regime for planning offshore renewable energy);
- Stocktaking and mapping of current maritime activities;
- Mapping of interactions between land and sea-based activities;
- Evaluation of interactions between land and sea-based activities in terms of intensity, economic relevance, fluxes, (cumulative) impacts on land, (cumulative) impacts on sea of both land-based and maritime activities;
- Analysis of conflicts and compatibilities among uses (matrix of compatibilities) as well as of coexistence and multi-use opportunities;
- Identification of hot-spot areas, i.e. highly impacted or vulnerable areas, areas with high number of conflicting activities, areas with high multi-use potential.

## STEP 4 – ANALYSIS OF FUTURE CONDITIONS

- Link to the vision: identification of main elements of the vision that might orientate the future evolution of the MSP planning area;
- Analysis of current trends and available projections and development options, in particular of maritime economic activities;
- Elaboration of possible alternative quantitative, semi-quantitative or qualitative scenarios on future maritime uses, coherent with the overarching vision;
- Analysis of developed scenarios in terms of coexistence, compatibility and conflicts among uses as well as cumulative impacts on the environment (link to SEA process – see step 6b);
- Identification of hot-spot areas (in future conditions), i.e. highly impacted or vulnerable areas, areas with high number of conflicting activities;
- Evaluation of interactions between land and sea-based activities in the future conditions (scenarios).

## STEP 5 – IDENTIFICATION OF KEY ISSUES

Sum-up of the outcome of the analytical phase (steps 3 and 4) and identification of key issues to be addressed in the design phase (6). This step aims to wrap-up key outcome of the analytical steps to be taken in the design phase of the MSP process.

## STEP 6A – DESIGN PHASE: ELABORATING THE MSP PLAN

- Identification of planning objectives linked to strategic goals (i.e. the vision) and to the preferable scenario (if any and if scenarios have been developed);
- Identification and design of planning measures;
- Localization of the measures and zoning of the marine area (also including e.g.: priority areas, reserved areas, no go areas for all uses, no goes areas for a specific use, etc.). This phase should include an accurate analysis of LSI interactions with allocation of marine space for some land-based activities and allocation of land space for some maritime uses;
- Definition of regulation elements for the management and monitoring of the maritime activities aiming to maximize compatibilities in the 4D. At general level, three more aspects should be stressed:

## STEP 6B – STRATEGIC ENVIRONMENTAL ASSESSMENT

Strategic Environmental Assessment is an important integral part of the preparation of the MSP plan, providing a mechanism for the strategic consideration of environmental effects of the plan, assessment of different planning alternatives and identification and evaluation of mitigation measures. It follows that SEA is a process to be implemented in close connection and in parallel to the plan elaboration, as it should be used to ensure the plan environmental sustainability. To this end, the SEA process should start at the very beginning of the MSP process (within the Step 2) and be done in an interactive manner. Espoo Convention and the related Protocol on Strategic Environmental Assessment (so called Kiev Protocol) provide a common frame for SEA implementation.

The environmental report is a fundamental aspect of the SEA, in which likely significant effects of implementing the plan on the environment are identified, described and evaluated together with alternatives taking into account the objectives and geographical scope of the plan. Alternatives could hereby be addressed with different scenarios within the plan (linking to step 4). The following elements should be considered when implementing the SEA process and elaborating the environmental report in particular:

- Actual availability of knowledge and methods of assessment, focusing on really needed information and highlighting critical gaps;
- Content and level of detail in the MSP, that should orientate the level of environmental assessment required;
- Stage in the decision-making process related to the MSP plan;
- Interest of the public;
- Related to previous points, the extent to which certain matters are more appropriately assessed within a more detailed Environmental Impact Assessment (EIA), which is often required for the licensing of specific projects and activities after a Marine Spatial Plan has entered into force. An SEA has an important role in guiding EIAs because the challenges in reconciling issues at the EIA scale require a more strategic approach.
- A transboundary SEA process, including transboundary consultation, should be activated when the implementation of a MSP plan is expected to have significant transboundary environmental effects;
- SEA should not only assess impact on the sea, but consider also impacts of maritime activities on land, based on most relevant LSI identified;
- SEA forms an important part of the EcAp implementation.

## STEP 7 – IMPLEMENTING, MONITORING AND EVALUATING THE PLAN

In general plan implementation is not responsibility of spatial planners. However, the implementation is a critical step to give concreteness and credibility to the whole process and reach the expected benefits.

The design of an implementation plan and dissemination of the MSP plan can support and facilitate the implementation phase. This step should clearly specify responsibilities for the implementation, i.e. which is the lead/main institution responsible for coordination of implementation and, which are other institutions and administrative levels involved. Existing mechanisms for coordination should be used. It is also very important that implementation is coupled with monitoring and evaluation according to the adaptive approach:

- Monitoring and evaluation of the ecological and environmental state of the marine area;
- Monitoring and evaluation of (socio-economic) benefits of the MSP process, including reduction of conflicts and development of synergies among uses;
- Monitoring and evaluation of the MSP process itself.

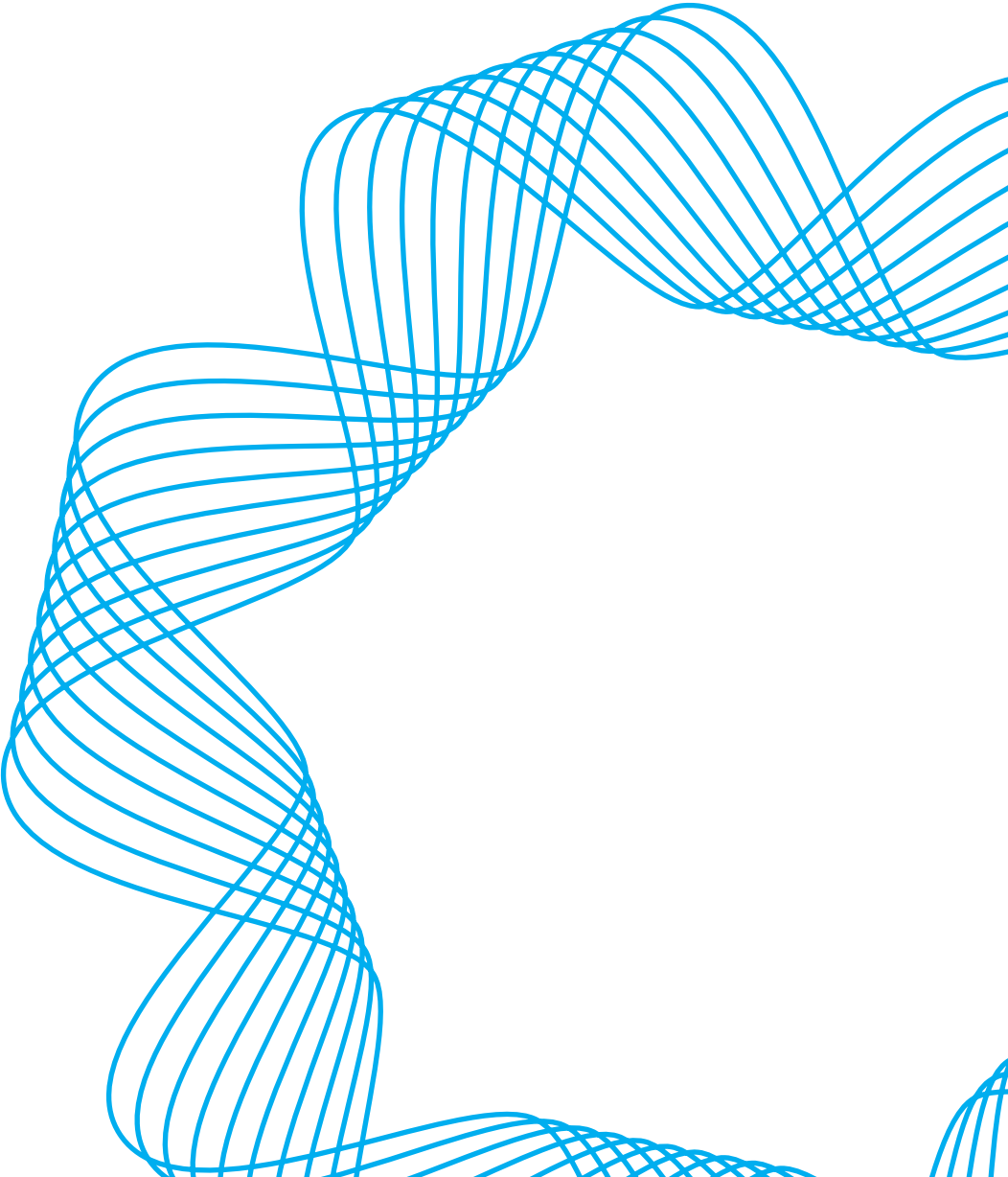
For all the three sub-steps proper indicators can be developed, making synergies with mechanisms in place within the Barcelona Convention system: EcAp indicator can be used for the first sub-step, while specific socio-economic and governance or process indicators can be used for sub-step 2 and 3 respectively<sup>4</sup>.

## CROSS-STEP ACTIVITY – STAKEHOLDER CONSULTATION

Stakeholder identification, engagement and participation are cross-cutting activities affecting most of the MSP steps. Stakeholder consultation must be carefully planned and organized, including:

- Identification of stakeholders, ensuring involvement of all parties;
- Definition of engagement modalities and tools;
- Clear identification of expected stakeholders' contribution;
- Methods to keep stakeholders interest and engaged in the whole process;
- Awareness raising, training and education, if needed;
- Identification of synergy with other stakeholder involvement processes, including in particular ICZM.





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