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Planning in the Mediterranean Sea”**

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EXECUTIVE SUMMARY

Introduction

The Mediterranean Sea is a vast area covering twenty-two states from three continents. It is predominantly known for its cultural and historical significance as well as its outstanding beauty. In the past decades the area has faced a rapid economic development, which has exerted pressure on the spatial and environmental limits that the sea area can handle. An increasing number of stakeholders in countries around the the Mediterranean have become aware of the urgency to find the right balance between economic benefits, also in their relation with the environment.

One of the instruments for finding this balance is Maritime Spatial Planning (MSP). Maritime Spatial Planning is a tool for improved decision-making. It provides a framework for arbitrating between competing human activities and managing their impact on the marine environment. Its objective is to balance economic interests and achieve sustainable use of the marine environment in line with the EU Sustainable Development Strategy. MSP is commonly defined as a process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives¹. The process consists of data collection, stakeholder consultation and the participatory development of a plan, and the subsequent stages of implementation, enforcement, evaluation and revision².

Study objectives and approach

This study provides information on the potential for applying MSP in the Mediterranean Sea as a whole and in sub-areas in the Mediterranean where MSP currently has the most potential. To start, an overview is provided of the current situation in the Mediterranean with regard to MSP. In this respect, a review was made of cross-border/international initiatives, EU level initiatives and country initiatives. Then, a methodology was elaborated to identify areas that currently have more potential for the application of MSP. This methodology builds further upon the ten key principles of MSP and focuses on the purpose of MSP in the area, the feasibility of MSP in that area and the conditions for

¹ Communication from the Commission to the European Parliament, the Council, the European Economic And Social Committee and the Committee Of The Regions, 17 December 2010, *Maritime Spatial Planning in the EU - Achievements and Future Development*, COM (2010) 771.

² Communication from the Commission, 25 November 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

cross-border / international cooperation. This methodology was then applied to eight areas in the Mediterranean, resulting in four areas that qualified for further analysis to explore the potential of MSP: the Adriatic Sea, the Alboran Sea, the area surrounding Malta, and the Western Mediterranean.

On the basis of all the available information and the analyses carried out for the Mediterranean areas with more potential for MSP, positive elements have been identified that could facilitate the implementation of MSP, as well as obstacles and difficulties.

In order to tackle these obstacles and difficulties, best practices, studies and programmes from the Mediterranean and other parts of the world on a number of MSP-related topics have been identified. In the study conclusions and recommendations, these lessons learned from other MSP initiatives are used to suggest actions that can be taken to facilitate the further implementation of MSP in the Mediterranean.

The need and feasibility of MSP: status, obstacles and recommendations

The most urgent **need** for MSP in the Mediterranean exists in the coastal areas which are intensively used by a variety of maritime activities that compete with each other and with the environment for space. Also areas further offshore could benefit from MSP, in particular in supporting to finding solutions for the impact of maritime activities on the environment.

The **feasibility** of applying MSP in the Mediterranean depends on a range of factors that vary significantly throughout the Mediterranean between countries/regions. Important elements in this respect are stakeholder involvement, a well-functioning institutional and legal framework, cross-border/international cooperation, the presence of a strong data and knowledge base, coherence of MSP with terrestrial spatial planning and sound management and control of the seas.

Although it is not common practice throughout the Mediterranean, there are several examples of countries that facilitate MSP **stakeholder involvement** at the level of the national government, i.e. by means of inter-ministerial committees or entities responsible for spatial planning issues. When regional authorities in the Mediterranean have responsibilities for maritime issues, they are much more likely to be involved as a stakeholder in the MSP process. In some Mediterranean countries, the involvement of public stakeholders is incorporated in laws, but in practice this does not occur often.

The involvement of stakeholders needs to be further promoted via transparent, open and inclusive information sharing and involvement in the decision-making process. This process should involve interested public and private parties from all maritime sectors and can be set up using lessons learned from a number of best practices identified in this study.

With regard to the **institutional and legal framework**, most countries in the Mediterranean have not yet developed legislation that accommodates MSP. Also, most countries have not (yet) established Exclusive Economic Zones, which would enable them to manage the associated sea space under

national jurisdiction. Moreover, introducing uniform solutions for MSP policy making and coordination is difficult because of significant differences in government structures and the application of sectoral approaches.

In this respect, it is important for countries to adopt a planning process that is cross-sectoral. To support this, it is recommended that the planning at the national level of sea regions is coordinated by a single planning body. If this is complicated, for example because of shared responsibilities between the national and the regional level, measures need to be taken to ensure coordination between these different levels. With regard to the preferred legal status of MSP, studies argue that it is important to introduce MSP as a statutory, legally binding and enforceable process, rather than a non-binding one. In addition, the establishment of additional maritime zones can be considered as a very useful instrument for MSP.

In the Mediterranean Sea several **cross-border initiatives** exist in the forms of platforms, international research projects and management projects. Currently, most cross-border initiatives that may provide a platform for MSP have been set up for the protection of the marine environment, which may be challenging when sector-neutral decisions need to be taken. Nonetheless, such initiatives – and in particular the Barcelona Convention – may provide a useful starting point for MSP. In this respect, lessons can be learned from various MSP projects inside and outside the EU.

With regard to **data collection, knowledge creation and evaluation**, many Mediterranean countries have research institutes that focus on fisheries, while some have a wider maritime scope. In general, most knowledge is available on the sea near the coastlines, whereas information on areas further offshore is very limited. In order to further improve the knowledge on the sea as a basis for MSP, actions are required to develop more uniform research methodologies, further develop networks of knowledge institutes, set international instead of national or local research agendas, further develop knowledge in the framework of EU-initiatives, set up multi-disciplinary working groups and pay more attention to dissemination and interaction with the qualified authorities.

Although a number of countries have started to develop Integrated Coastal Zone Management (ICZM), **coherence between MSP and terrestrial spatial planning** is not yet being achieved in the Mediterranean. In the future, such coherence could be established by formal mandates (cf. UK) or via a more informal collaborative process. In this respect, ICZM remains an important step towards setting up MSP and it is recommended to implement MSP in parallel with ICZM.

In the Mediterranean, **management and control** problems currently exist not only in the areas far offshore, but also in the territorial seas. The establishment of maritime zones (in particular EEZs) could contribute to solve problems on the high seas, although countries are currently often hesitant to do this. Other options for improving management and control in the Mediterranean are increased cooperation (cf. the Bluemassmed project), innovative ways of control (cf. CleanSeaNet) or, if these options do not suffice, increased resources for control and monitoring.

Areas with more potential for MSP

Based on the facts and analyses in this study, the Western Mediterranean³ currently seems to be the area with the most potential for MSP in the Mediterranean. In case progress is made as regards some of the key elements for applying MSP as described above, surely several other areas in the Mediterranean will prove to have significant potential for the application of MSP.

³ In this study the Western Mediterranean was delimited to the waters between the eastern – north-eastern part of Spain, France, Monaco and the western – north-western part of Italy.

I. INTRODUCTION

The sea is home to a large variety of human activities creating social, economic and even strategic value for Europe's inhabitants. Historically, maritime activities are concentrated around fishing, defence and shipping, although with an ever-growing world economy other human activities increasingly take place in marine areas. *Table 1* shows examples of activities currently taking place in sea areas around Europe.

Table 1: Examples of existing and expected maritime activities in the European sea areas

MARITIME ACTIVITIES	
Maritime services	Research and development, classification and inspection, bunkering, ship supply
Maritime works	Dredging and ship wreck dismantling
Nautical cables and pipelines	Oil and gas transportation, telecom
Navy and coastguard	Defence and rescue
Vessel traffic	Track vessel movements and improve navigational safety to and from ports
Dumping zones	Dumping of dredged materials
Offshore supply	Construction of platforms, offshore-related transport
Offshore activities	Oil and gas exploration and production, seismic research, carbon capture and storage (CCS)
Renewable energy	Wind, waves and tide
Shipping	Merchant shipping, short-sea shipping, ferry services, ocean towage
Marine aggregates	Sand and gravel distraction, sand and travel transport
Recreational boating	Boat chartering and renting, marinas
Coastal and Marine tourism	Diving, surfing, sailing, swimming, recreational fishing, cruise tourism
Fisheries	Fisheries and mariculture

Source: Policy Research Corporation

Many of these activities have grown substantially (shipping, tourism, etc), creating significant value for Europe's maritime economy. But human activities come at a price: the environmental quality of its sea areas, as well as its fish stocks, is under considerable pressure. Moreover, because the seas are collective property and because of their vast size, they are extremely difficult to manage, control and/or monitor.

There is an increasing awareness of the need to better and more coherently manage seas and oceans. In the European Union, the overarching Integrated Maritime Policy is an umbrella for this type of

approaches and tools. The Marine Strategy Framework Directive provides a framework for EU Member States to develop coherent environment strategies for sea areas. Maritime Spatial Planning is a supporting tool that aims to organise the way in which maritime space is attributed to uses. Similarly to spatial planning on land, Maritime Spatial Planning concerns creating prerequisites for activities to co-exist (1) alongside other activities and (2) in their environment, based on the principle that co-existence should limit/prevent competition.

The concept of Maritime Spatial Planning has received significant attention in recent years. In November 2008 the European Commission adopted the '*Roadmap for Maritime Spatial Planning: Achieving common principles in the EU*'⁴. This communication provides information on current Maritime Spatial Planning practices in both EU and non-EU Member States and outlines the instruments that have an impact on Maritime Spatial Planning. Besides the development of ten key principles for Maritime Spatial Planning⁵ and a series of dedicated workshops, the Commission also initiated a number of specific studies. Against this background, the current study on '*Exploring the potential for Maritime Spatial Planning in the Mediterranean Sea*' was launched in October 2009.

I.1. OBJECTIVES AND RESULTS OF THIS STUDY

The primary objective of this study has been to examine the feasibility of applying MSP in the Mediterranean as a whole, analyse obstacles to MSP and suggest potential actions forward for its concrete application in the Mediterranean as a whole as well as in its specific sub-regions or sea areas in the Mediterranean. The study results are expected to form the basis for launching a test project in the Mediterranean and to encourage concrete cross-border/international practices as announced in the Commission's Communication '*Towards an Integrated Maritime Policy for better governance in the Mediterranean*'⁶.

In order to reach this objective, the study was subdivided into five key tasks:

- Task 1: Review of previous experiences and initiatives;
- Task 2: Establish the elements that should be taken into consideration for the identification and characterisation of potential areas for the application of MSP;
- Task 3: Description of the areas with potential for the application of MSP in the Mediterranean together with a listing of the relevant stakeholders;
- Task 4: Analysis of the potential obstacles and difficulties for MSP application in the Mediterranean Sea basin;
- Task 5: Identify specific aspects of the application of the ten key principles for MSP as described in the Roadmap.

⁴ Communication from the Commission, 25 November 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

⁵ The MSP key principles are presented in *Paragraph III.2*.

⁶ Communication from the Commission, 11 September 2009, *Towards an Integrated Maritime Policy for better governance in the Mediterranean*, COM (2009) 466.

Beside this final report, country reports were drafted (*see Appendix I*) for each country bordering the Mediterranean Sea⁷. In addition, four case study reports (*see Appendix II*) are provided containing detailed information on the activities in four specific regions within the Mediterranean Sea, the competition between these activities and the circumstances relevant to MSP application.

Objectives of the final report

The objective of this final report is to provide a synthesis of the main findings of the research carried out. *Chapter II* starts with an inventory of the current situation in the Mediterranean regarding Maritime Spatial Planning. *Chapter III* concerns the methodology for identifying the potential for Maritime Spatial Planning. *Chapter IV* focuses on four sub-areas within the Mediterranean Sea that currently have more potential for Maritime Spatial Planning. In *Chapter V* an analysis is provided on the expected obstacles and difficulties for implementing Maritime Spatial Planning in the Mediterranean Sea basin as a whole. In *Chapter VI* best practices are provided on different topics relevant to MSP. Also programmes that are or will be initiated to improve certain aspects of MSP are discussed. The final *Chapter* summarises the findings according to the ten key principles (Task 5), presents conclusions and makes recommendations.

I.2. READER INSTRUCTIONS

In order to identify the potential of MSP in the Mediterranean, a bottom-up approach was followed. First, a country-by-country analysis was made. Subsequently, marine regions within the Mediterranean were analysed and finally the Mediterranean basin as a whole was analysed. Separate reports were drafted for each step. This document is the final report, aggregating all information on a sea-basin level with the aim to draft overall conclusions and recommendations.

For detailed information on analyses and/or assumptions, please consult the addenda to this document. *Appendix I* contains the country reports and *Appendix II* contains case study reports on four sea areas within the Mediterranean, respectively the northern part of the Adriatic, the Alboran, the area around Malta and the Western Mediterranean.

A list of abbreviations is included in *Annex IV*.

I.3. PROCESS OF INFORMATION GATHERING

Information for this study was gathered based on desk and Internet research, telephone and e-mail communication, field visits and feedback from the governments of countries in the Mediterranean and

⁷ In total, 20 country reports have been made. Relevant available information on Monaco is included in the case study of the Western Mediterranean and information on the United Kingdom (Gibraltar) is included in the case study of the Alboran Sea.

other stakeholders.

Policy Research carried out working visits to the following countries (in alphabetical order): Croatia (in combination with Slovenia), France, Italy (twice), Malta (in combination with a visit to Rome, Italy), Morocco, Spain and Tunisia. In order to receive feedback on the collected information, the country reports were sent by the European Commission to governments via participants to the working group on Integrated Maritime Policy in the Mediterranean Sea. In addition, contact persons received the country reports and the case study reports for review purposes. In *Annex III* an overview is provided of the stakeholders involved in this process.

II. CURRENT SITUATION IN THE MEDITERRANEAN WITH REGARD TO MARITIME SPATIAL PLANNING: EXPERIENCES AND INITIATIVES

There is no area in the Mediterranean Sea today where Maritime Spatial Planning is being implemented as a full and comprehensive tool for managing sea areas. However, both (non-)Member States and regional bodies have taken several actions that can be deemed preparatory and/or create anchors for Maritime Spatial Planning. This chapter identifies and details these initiatives, in order to make an assessment of the conditions available in the Mediterranean Sea that would support future Maritime Spatial Planning actions.

II.1. REVIEW OF CROSS-BORDER/INTERNATIONAL INITIATIVES IN THE MEDITERRANEAN

a/ Mediterranean Action Plan (1975) and Barcelona Convention (1976)⁸

In 1975, 16 Mediterranean countries and the European Community adopted the *Mediterranean Action Plan* (MAP), the first regional sea programme under UNEP, the United Nations Environment Programme. In 1976, these parties adopted the Convention for the Protection of the Mediterranean Sea Against Pollution, known as the *Barcelona Convention*.

Although MAP's initial focus was aimed at marine pollution control, over the years its scope and mandate gradually extended to include, among other things, integrated coastal zone planning and management. In 1995, the *Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II)* was adopted by the contracting parties to replace the Mediterranean Action Plan of 1975. At the same time, the contracting parties adopted an amended version of the Barcelona Convention of 1976, the *Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean*.

Today the Barcelona Convention and MAP count twenty-two contracting parties⁹ and strive to protect

⁸ UNEP/MAP, www.unepmap.org/index.php.

⁹ The contracting parties are the twenty-one countries bordering the Mediterranean Sea basin (Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia and Turkey) and the European Union.

the Mediterranean marine and coastal environment while boosting regional and national plans for sustainable development. The Convention's main objectives are:

- To assess and control marine pollution;
- To ensure sustainable management of natural marine and coastal resources;
- To integrate the environment in social and economic development;
- To protect the marine environment and coastal zones through prevention and reduction of pollution, and – as far as possible – elimination of pollution, whether land or sea-based;
- To protect the natural and cultural heritage;
- To strengthen solidarity among Mediterranean Coastal States;
- To contribute to the improvement of the quality of life.

Since 1982, the MAP Coordinating Unit has been based in Athens. The MAP Coordinating Unit is the Secretariat of the Mediterranean Action Plan. It performs diplomatic, political and communication roles, organises major meetings and programmes, and supervises the main MAP components. Six MAP Regional Activity Centres (RACs)¹⁰ offer their own environmental and developmental expertise for the benefit of the Mediterranean community in the implementation of MAP activities. These RACs guide and advise the MAP Secretariat in the interim period between the biannual meetings. Besides these RACs, national focal points review the progress of work under the Barcelona Convention and ensure implementation of recommendations at national level.

Over the years, the Barcelona Convention has given rise to seven Protocols addressing specific aspects of Mediterranean environmental conservation. The two most important ones within the context of this study are the Protocol on Specially Protected Areas of Mediterranean Importance (1995), and the Protocol on Integrated Coastal Zone Management (2008).

The ‘Specially Protected Areas’ RAC (SPA/RAC) is responsible for assessing the situation of natural heritage and assisting the Mediterranean countries in implementing the Protocol on Specially Protected Areas of Mediterranean Importance. The ‘Priority Action Programme’ RAC (PAP/RAC) concentrates on Integrated Coastal Zone management. It offers Mediterranean coastal areas technical assistance and coordinates Coastal Area Management Programmes (CAMP) which can be partly financed by MAP and will be coordinating the implementation of the ICZM Protocol as soon as it comes into force¹¹.

The Barcelona Convention agrees that a cross-border/international maritime spatial plan could contribute to the activities of the different protocols and that therefore, Maritime Spatial Planning could be regarded as a complementary tool to the Barcelona Convention’s activities. Although no concrete MSP initiatives have been set up within the framework of the Barcelona Convention and although its focus is on environmental issues, the Convention – as a well-established platform of

¹⁰ Not to be confused with Regional Advisory Councils under the Common Fisheries Policy.

¹¹ The Protocol will come into force as soon as six countries have ratified it.

cooperation – could be an important actor as regards the further strengthening of bonds between the different countries in the Mediterranean Sea basin and could consequently facilitate a joint action on Maritime Spatial Planning¹². Another possibility is to develop a separate protocol on MSP within the framework of the Barcelona Convention ensuring a Mediterranean-wide approach to MSP. Such options will be elaborated in the recommendations.

One example of how the MAP and the Barcelona Convention could contribute to MSP is the *Strategic Partnership for the Mediterranean Large Marine Ecosystem (LME)*¹³, enabling a coordinated and strategic approach to catalyse the policy, legal and institutional reforms, and the investments necessary to reverse the degradation trends affecting the Mediterranean's large marine ecosystem, including its coastal habitats and biodiversity. In this Strategic Partnership, the countries of the Mediterranean¹⁴ have joined forces with the World Bank, regional and international organisations as well as non-governmental organisations (NGOs).

To achieve the goal of improving the environmental conditions of the Mediterranean Sea, the Strategic Partnership will address the need for financial resources and investments (led by the World Bank) and the assistance in policy, legislation and institutional reforms, as well as the demonstration and transfer of technical knowledge and best practices (led by UNEP/MAP).

Several key principles of MSP are already being applied within the framework of the LME project, making it a good starting point for the future implementation of MSP in the Mediterranean.

b/ Protocol on Specially Protected Areas and Biological diversity in the Mediterranean (1995)

In 1995, the parties to the Barcelona Convention agreed on a Protocol concerning specially protected areas and biological diversity in the Mediterranean¹⁵. The Protocol established common criteria for the choice of protected marine and coastal areas to be considered as Specially Protected Areas of Mediterranean Importance (SPAMI) with the basic aim to conserve the natural heritage by protecting threatened species and their habitats. With the exception of Bosnia and Herzegovina and Lebanon, all Mediterranean countries signed or ratified the Protocol¹⁶. This protocol is relevant to MSP because MSP can support the process of establishing SPAMI.

c/ Protocol on Integrated Coastal Zone Management (2008)

In 2008, the parties to the Barcelona Convention adopted the Protocol on Integrated Coastal Zone

¹² UNEP Mediterranean Action Plan, conference call February 27, 2010.

¹³ Information from UNEP/MAP (www.unepmap.org).

¹⁴ Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, Libya, Morocco, Montenegro, Syria, Tunisia and Turkey. The Palestinian Authority also participates.

¹⁵ This Protocol replaced the Protocol concerning Mediterranean Specially Protected Areas (adopted in 1982) which had been in force since 23 March 1986.

¹⁶ Status 1 March 2010.

Management (ICZM). Under this Protocol, contracting parties are committed to establish a common framework for the integrated management of the Mediterranean coastal zone and to take the necessary measures to strengthen regional cooperation for this purpose.

The *ICZM Protocol* aims to provide a framework under which countries can better plan and manage their coastal zones and deal with emerging coastal challenges. It is based on a series of principles that can contribute to the promotion of the sustainable management and use of coastal zones. Although this process is already initiated, the Protocol provides the legal basis for the development of national or regional strategies on ICZM by the Mediterranean States (i.e. Contracting Parties). These strategies are implemented through plans and programmes for the concrete management of coastal areas and through concrete ICZM-related projects such as the pilot projects called Coastal Area Management Programmes (i.e. CAMP).

The geographical coverage of the Protocol includes both the terrestrial coastal areas and the territorial sea. According to Article 3 (geographical coverage), the limits of the Protocol's application in the seaward and landward of the coastal zone are, respectively:

- the external limit of the territorial sea;
- the limit of the competent coastal units as defined by the Parties.

According to article 5, the objectives of the ICZM Protocol can be summarised as follows: sustainable management and use of coastal zones, to assure ecosystem conservation, to reduce the effects of natural hazards and in particular climate change and to achieve coordination and coherence among all authorities exercising their powers in the coastal zone. ICZM is based on a set of main principles (article 6) such as the application of an ecosystem approach, integration of disciplines, decision-making transparency, stakeholder involvement and public participation, institutional coordination, integration of sectoral policies, administrative capacity, initial assessment, prevention and restoration principles, etc.

Article 9 of the ICZM Protocol sets out provisions for the sustainable development of economic activities. There are also specific references to those activities carried out near or at sea, including fisheries, mariculture, recreational shipping, energy facilities, ports, etc. As regards maritime activities, the contracting parties should ensure the preservation of coastal ecosystems in conformity with the rules, standards and procedures of the relevant international conventions. Under article 10, the contracting parties have made the commitment to take measures to protect specific coastal ecosystems and marine habitats. Article 13 sets up the commitment to protect the cultural heritage including underwater cultural heritage.

Finally the Protocol commits contracting parties to adopt concrete actions, particularly:

- Strengthening or formulating national strategies for ICZM;

- Preparing coastal plans and programmes which may be independent or integrated in other plans and programmes. These plans or programmes should implement the national strategies at the appropriate territorial level and foresee the allocation and use of the respective marine and terrestrial parts of coastal zones;
- Carrying out environmental impact assessments for public and private projects and strategic environmental assessments of plans and programmes affecting coastal zones.

Although the Protocol does not explicitly refer to Maritime Spatial Planning, the key principles of Integrated Coastal Zone Management as defined under this Protocol are in line with the ten MSP key principles. In addition, MSP's overarching principle of the ecosystem approach is defined as one of the guiding principles.

So far¹⁷, the Protocol has been signed¹⁸ by fourteen Mediterranean countries and the European Union. The Protocol has been ratified by six countries: Slovenia (September 2009), France (September 2009), Albania (February 2010), Spain (July 2010), the European Union (September 2010) and Syria (November 2010). After the ratification of Syria (the required sixth country), the Protocol will enter into force.

d/ Other relevant cross-border/international initiatives in the Mediterranean

In addition to the Barcelona Convention and its protocols, a number of cross-border/international initiatives related to ICZM and MSP in the Mediterranean Sea basin have been identified. These initiatives are believed to contribute to the development of cross-border/international Maritime Spatial Planning and vice versa.

Adriatic Sea

The **Adriatic Ionian Initiative** is a political initiative that links the coastal countries of the Adriatic and Ionian seas for the purpose of cooperation in the development and safety of the whole area. Its activities comprise among others:

- The Adriatic Action Plan, adopted in 2003;
- Contingency plan for the Adriatic, including a Sub-regional Contingency Plan for the Northern Adriatic (Slovenia, Italy and Croatia), to be coordinated by REMPEC (Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea);
- Proposal for the designation of the Adriatic Sea as a PSSA (Particularly Sensitive Sea Area);
- Strategic Environmental Assessment of Maritime Activities including Ballast Water Issue;
- Integrated Coastal Zone Management.

¹⁷ Status November 2010.

¹⁸ The countries that have signed the ICZM Protocol so far are Algeria, Croatia, France, Greece, Israel, Italy, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia and the European Union.

The **Adriatic Euroregion (AE)** was founded on 30 June 2006 in Pula, Region of Istria, Croatia. It represents a model of cooperation that includes transnational and interregional cooperation between regions of the Adriatic coastline. The Adriatic Euroregion is the institutional framework for jointly defining and resolving important issues in the Adriatic area. It consists of 26 members: regional and local governments from Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro, and Slovenia. The aims of the Adriatic Euroregion are the following:

- To form an area of peace, stability and cooperation;
- To protect the cultural heritage;
- To protect the environment;
- To create sustainable economic development in particular of tourism, fishery and agriculture;
- To resolve transport and other infrastructure issues.

In 2008, an Integrated Strategy for the environmental protection of the Adriatic Region was adopted. In this strategy, Coastal Zone Management and Maritime Spatial Planning are defined as strategic objectives.

The **Trilateral Commission**¹⁹ of Italy, Slovenia, Croatia and Montenegro for the protection of the Adriatic discusses the conservation and the sustainable development of the Adriatic Sea and expresses the member countries' willingness to cooperate. In addition, other countries in the Adriatic Sea have joined the Commission's meetings on an ad hoc basis. The tenth meeting in June 2009 discussed:

- The current marine environment protection topics like ballast water management in the Adriatic Sea and the implementation of the Sub-Regional intervention Plan for Cases of Sudden Adriatic Sea Pollution and the EU Marine Strategy Framework Directive;
- The integrated management of coastal areas and safe harbours.

Consequently, as regards the potential competition in the Adriatic Sea basin, both the Trilateral Commission for the protection of the Adriatic and the Adriatic Ionian initiative – given the good relationships between the different member and non-member countries and their fields of action/expertise – could be considered important drivers for the establishment of cross-border/international MSP in the Adriatic region. The Adriatic Euroregion also seems to be an initiative which could contribute to the application of MSP in the Adriatic Sea, because this initiative is sector-neutral and includes both environmental and economic objectives. However, a disadvantage is that only coastal regions are members; there are no participants from national authorities. Since national authorities are also responsible for maritime affairs, they need to be involved in cross-border/international initiatives for the application of MSP.

Potentially relevant projects for MSP are currently being proposed under the first call of the IPA (Instrument for Pre-Accession Assistance) Adriatic Cross-border Cooperation Programme (2007-

¹⁹ Although a fourth country, Montenegro, has joined the commission, it is still called the Trilateral Commission.

2013). The Emilia-Romagna region in Italy has submitted a project proposal called ‘Shape’²⁰ (Shaping a Holistic Approach to Protect the Adriatic Environment) which focuses on ICZM and MSP and offers the opportunity to develop adequate tools for supporting spatial planning in the Adriatic Sea Basin. All Adriatic countries are involved in the project proposal. The proposal has passed the formal assessment and is admitted to the qualitative assessment²¹. Another project proposal in the IPA programme is CAOS. The CAOS project is a cross-border/international initiative between Croatia, Italy (Emilia-Romagna, Veneto, Friuli-Venezia Giulia) and Slovenia. Its aim is the creation of an observatory for the protection of the marine and coastal environments in the Adriatic-Ionic basin, which will support decision makers. The *North Adriatic Coastal Observatory* aims to be a permanent network between public authorities, providing timely and continuous information on the state of the sea to all bordering countries. Another project proposal is called IMaGe and involves 31 parties from the Adriatic, aiming to enhance the sustainability of the activities occurring in the Adriatic coastal and marine areas.

Alboran Sea

Spain, Morocco and Algeria have created a platform to discuss the conservation and sustainable development of the Alboran Sea and to create trust amongst the stakeholders involved. Although Algeria, Morocco and Spain do not yet practice cross-border MSP, their joint declaration and upcoming action plan for the Alboran Sea can be considered a first step. This collaboration is, however, not yet qualified to act as a basis for the application of cross-border/international MSP, because it is still in an early stage of development. This may change, if collaboration becomes more intense and frequent and involves the relevant political authorities.

Western Mediterranean Sea

The **RAMOGE Agreement** between France, Italy and Monaco is an instrument of scientific, technical, legal and administrative cooperation by means of which the three States decide jointly on actions to be undertaken for the integrated management of the coastline, in order to prevent and combat pollution of the marine environment. Numerous activities have been carried out with the aim to harmonise analysis and working methods, to improve knowledge of the maritime and coastal domains, and to increase public awareness of the importance of respect for the environment. Consequently, the RAMOGE agreement could provide a platform for the further introduction of cross-border/international Maritime Spatial Planning, although it focuses on environmental issues and is thus not fully sector-neutral.

The agreement on the protection of the ***Pelagos Sanctuary for Mediterranean Marine Mammals*** – an area with high ecological value, containing important habitats for cetacean species such as whales and

²⁰ The Shape project proposal was approved on December 2nd 2010.

²¹ Adriatic IPA Cross-border Cooperation 2007 – 2013, *List of Admissible projects*, www.adriaticipacbc.org/download/List_of_admissible_projects_Priority_2.pdf.

dolphins – was signed between France, Italy and Monaco. It received the status of Specially Protected Area of Mediterranean Importance (SPAMI) under the Barcelona Convention, thereby becoming the world's first high seas Marine Protected Area. The objectives of the Pelagos Sanctuary are to:

- Create highly protected conservation zones;
- Establish corridors in order to channel/guide the intense maritime traffic in the area;
- Address fishery impacts on cetaceans systematically;
- Ensure compliance through national coast guard and navies;
- Implement a systematic monitoring programme;
- Increase public awareness regarding the need for environmental/biodiversity protection in the area.

The ***Strait of Bonifacio*** constitutes an ecological environment of exceptional wealth due to the diversity of the habitats and species, as well as the quality of the landscapes. Corsica and Sardinia have aimed to regulate the maritime traffic in order to reduce the environmental risk by strictly controlling and monitoring commercial shipping in this area.

The actions carried out in the Pelagos Sanctuary and the Strait of Bonifacio could trigger the application of Maritime Spatial Planning in the region. In return, the application of Maritime Spatial Planning in the region would contribute to the goals of managing and protecting both the Pelagos Sanctuary and the Strait of Bonifacio. Despite the fact that these initiatives currently mainly focus on environmental issues and are thus not sector-neutral, they may provide good starting points for developing MSP.

Other cross-border/international *EU-funded projects* relating to ICZM and MSP are detailed in *Annex II* of this report.

II.2. REVIEW OF RELEVANT INITIATIVES AT EU LEVEL

Many EU-initiatives are relevant to consider when applying Maritime Spatial Planning in the Mediterranean, both in a national and international context. These initiatives may be relevant from a general perspective or for specific MSP key principles. Also, Maritime Spatial Planning, aiming to result in a more coordinated management of maritime space, can serve as one of the tools to achieve the objectives of the EU Integrated Maritime Policy.

The following paragraphs provide an overview of EU-level initiatives which are relevant to consider within the framework of exploring the potential of Maritime Spatial Planning in the Mediterranean. The links between the different initiatives and MSP are also highlighted.

Green paper on the future maritime policy

In 2006 the European Commission published the green paper on the future maritime policy. The green paper identified the gaps between sea-related sectoral policy areas and attempted to adopt best practices and learn from obstacles and challenges²².

Integrated Maritime Policy

Based on the green paper, the Integrated Maritime Policy was launched in 2007. The Integrated Maritime Policy has the objective to incorporate interactions and synergies between maritime-related policies to avoid competition, as well as delivering a programme of work. It encompasses all aspects of the oceans and seas in a holistic, integrated approach and all stakeholders have endorsed it.

Maritime Spatial Planning and Integrated Coastal Zone Management are tools put forward for integrated policy making. Spatial planning is seen as a potential aid to overcome the potential conflicts as a result of the increase in often competing coastal and sea activities. Specific actions in this respect are the Roadmap for Maritime Spatial Planning²³, establishing a system for exchange of best practices, and the examination of options needed to make the uses of different maritime activities more compatible²⁴.

IMP-related instruments

*Communication Marine Knowledge 2020*²⁵

Knowledge is an engine for sustainable growth in the interconnected global economy and therefore a key element to achieve smart growth in the European Union in line with the “Europe 2020” strategy²⁶. Improving knowledge of the seas and oceans that constitute 71% of our planet's surface is one of the three cross-cutting tools of the EU's integrated maritime policy²⁷. Marine knowledge can also help achieve the other two tools – better maritime spatial planning and integrated maritime surveillance.

In line with the Marine Strategy Framework Directive²⁸, the environmental pillar of the integrated maritime policy, knowledge is a key element to achieve good environmental status of marine waters. Knowledge is also a key component of the EU's plan to integrate marine and maritime research²⁹ and

²² Communication from the Commission, 7 June 2006, *Towards a future Maritime Policy for the Union: A European Vision for the Oceans and Seas*, COM (2006) 275 final.

²³ The European Commission adopted the latest progress report on MSP on 17 December 2010 (COM (2010) 771 Final).

²⁴ Communication from the Commission, 2007, 10 October 2007, *An Integrated Maritime Policy for the European Union*, COM (2007) 575 final and SEC (2007) 1278.

²⁵ Communication from the Commission, 9 September 2010, *Marine knowledge 2020: Marine data observation for smart and sustainable growth*, COM (2010) 461 final.

²⁶ Communication from the Commission, 3 March 2010, *Europe 2020: A European Strategy for smart, sustainable and inclusive growth*, COM (2010) 2020.

²⁷ Communication from the Commission, 10 October 2007, *An Integrated Maritime Policy for the European Union*, COM (2007) 575 final.

²⁸ European Parliament and Council, 17 June 2008, *Marine Strategy Framework Directive*, 2008/56/EC.

²⁹ Communication from the Commission, 3 September 2008, *A European Strategy for Marine and Maritime Research – A coherent European Research Area framework in support of a sustainable use of oceans and seas*, COM (2008) 534 final.

contributes to the Digital Agenda³⁰.

The creation of marine knowledge begins with the observation of the sea and oceans. Data from these observations are assembled, then analysed to create information and knowledge. Subsequently the accumulated knowledge can be applied to deliver smart sustainable growth, to assess the health of the marine ecosystem or to protect coastal communities. The Communication Marine Knowledge 2020 is largely concerned with the first two stages of the process chain, i.e. data collection and assembly.

The Council conclusions on integrated maritime policy of 16 November 2009³¹ have encouraged the Commission to make proposals on improving the use of scientific knowledge. The Communication responds to this request by outlining a more coordinated approach to marine data collection and assembly and by describing an action plan to which different EU policy measures contribute.

ICZM Recommendation

As detailed in the EU Roadmap for Maritime Spatial Planning (i.e. key principle 9 '*Achieving coherence between terrestrial and maritime spatial planning – relation with ICZM*'), coastal zones are the 'hinge' between maritime and terrestrial development. For that reason, MSP and ICZM plans and measures should be linked or coordinated wherever possible. The country reports that are available in *Appendix I* detail the status with regard to both ICZM as well as MSP for each Mediterranean Sea basin country.

In 2002, The European Union adopted a Recommendation on the implementation of *Integrated Coastal Zone Management* (ICZM) in Europe³². The objective of ICZM is to establish sustainable development of economic and social activities in coastal areas and inland/territorial waters while protecting the coastal environment (integrated approach). This can be achieved by establishing a comprehensive management framework for the whole coastal zone. The Recommendation outlines the different steps Member States have to take to develop national strategies for ICZM.

Experience gained within the framework of the implementation of the ICZM recommendation in terrestrial zones and/or coastal waters (possibly up to the territorial waters) could trigger/facilitate the application of MSP in a region. Furthermore a number of elements of the ICZM recommendation (e.g. ecosystem approach and integrated approach) are also key in the application of Maritime Spatial Planning.

³⁰ Communication from the Commission, 19 May 2010, *A Digital Agenda for Europe*, COM (2010) 245.

³¹ Council of the European Union, 16 November 2009, *Council conclusions on integrated maritime policy* 2973rd General Affairs Council meeting Brussels.

³² European Council, 2002, *Recommendation of the European Parliament and of the Council of 30 May 2002 concerning the implementation of Integrated Coastal Zone Management in Europe*.

Motorways of the Sea

In its White Paper entitled *European transport policy for 2010: time to decide*³³ the European Commission proposes the development of trans-European shipping networks called “Motorways of the Sea” (MoS) as part of the Trans-European Transport network (TEN-T). The network should ensure that sea transport is no longer just a means of carrying goods from one continent to another, but that it becomes a real competitive alternative to land transport. The development of MoS was expected to provide a framework for the deployment of high level standards for efficient, safe and environmentally friendly maritime transport operations which can be fully integrated in a door-to-door transport chain. Using TEN-T funding, the European Commission currently supports the development of the Motorways of the Sea across four sea areas. Relevant to the Mediterranean Sea basin are:

- Motorway of the Sea of southeast Europe (connecting the Adriatic Sea to the Ionian Sea and the Eastern Mediterranean, including Cyprus);
- Motorway of the Sea of southwest Europe (Western Mediterranean, connecting Spain, France, Italy and including Malta and linking with the Motorway of the Sea of south-east Europe and including links to the Black Sea).

The European coordinator of the Motorways of the Sea initiative reported in 2009³⁴ that large MoS projects have not succeeded so far. As concerns the Mediterranean Sea basin, the coordinator has fostered a first articulation initiative in the Adriatic in April 2009, promoted by the Port of Venice and integrating the ports of the Northern Adriatic. The initiative would cover the development of a common information network, connecting different North Adriatic ports³⁵, the sea river canal, the calling vessels, railways and logistics platforms activities.

The Motorways of the Sea initiative stimulates the development of maritime traffic. Applying the principles of Maritime Spatial Planning within the context of this initiative could help to organise the most optimal transport routes in coordination with other sectors/activities, whilst ensuring optimal use of maritime space within the context of safeguarding the marine environment.

*Communication on offshore wind energy*³⁶

The European Commission’s Communication on *Offshore Wind Energy: Action needed to deliver on the Energy Policy Objectives for 2020 and beyond*, published in November 2008, aims at promoting the development of maritime and offshore wind energy in the European Union. The Communication highlights the importance of integrated spatial planning of the marine environment, in order to reconcile the sectoral interests of environmental and species protection with the production of clean energy. In this context the Communication emphasises that the European Commission will also seek

³³ European Commission, 2001, *European transport policy for 2010: time to decide*; COM (2001) 370.

³⁴ Valente De Oliveira, L., 2009, *Priority Project 21, Motorways of the Sea, A sustainable maritime vision for Europe*.

³⁵ The ports of Ravenna, Venezia, Monfalcone, Trieste, Koper and Rijeka.

³⁶ Communication from the Commission, 13 November 2008, *Offshore Wind Energy: Action needed to deliver on the Energy Policy Objectives for 2020 and beyond*, COM (2008) 768.

to facilitate regional cooperation in the planning of the electricity grid and offshore wind farm sites.

*Renewable Energy Directive*³⁷

This Directive establishes a common framework for the promotion of energy from renewable sources. It sets mandatory national targets for the overall share of energy from renewable sources in gross final consumption of energy and for the share of energy from renewable sources in transport. It lays down rules relating to statistical transfers between Member States, joint projects between Member States and with third countries, guarantees of origin, administrative procedures, information and training, and access to the electricity grid for energy from renewable sources. MSP is important for guiding offshore renewable activities. For instance, MSP can be useful in the decision-making process for the installation of offshore wind farms. As a result, MSP can help to achieve the objectives of this Directive.

*The Common Fisheries Policy*³⁸

The Common Fisheries Policy was created in 1983 when Member States decided that the European Union was best placed to manage fisheries in the waters under their jurisdiction. In 2002, the Common Fisheries Policy was reformed to ensure sustainable exploitation of living aquatic resources. In September 2008, the European Commission started a reform of the Common Fisheries Policy to make it more efficient in ensuring the economic viability of the European fleets, in conserving fish stocks and in providing good quality food to consumers. This resulted in the publication of a Green Paper on the *Reform of the Common Fisheries Policy* in April 2009³⁹. Fisheries and mariculture compete increasingly with other maritime sectors for marine space. As a result, the Green Paper calls for a continued integration of the Common Fisheries Policy with the Integrated Maritime Policy and Maritime Spatial Planning. With respect to this ‘integrated approach’ the future Common Fisheries Policy is also expected to provide the right instruments to support the ecosystem approach.

*Communication on a sustainable future for European Aquaculture*⁴⁰

In 2002, the EU strategy for sustainable aquaculture set out policy directions to promote the growth of aquaculture in Europe. By 2009, significant progress had been made in ensuring environmental sustainability, safety and quality of EU aquaculture, but, at the same time, the aquaculture production had stagnated. Increasing competition for space represents a major challenge for further developing the aquaculture sector. Because the area choice is crucial, the 2009 *Communication on a sustainable future for European Aquaculture* considers spatial planning to be a key instrument to provide guidance and reliable data for the location of economic activities, including aquaculture, to avoid

³⁷ European Parliament and Council, 23 April 2009, *Directive on the promotion of the use of energy from renewable sources*, 2009/28/EC.

³⁸ European Commission, *Common Fisheries Policy*, http://ec.europa.eu/fisheries/cfp_en.htm.

³⁹ Communication from the Commission, 22 April 2009, *Green Paper: Reform of the Common Fisheries Policy*, COM (2009) 163 final.

⁴⁰ Communication from the Commission, 8 April 2009, *Building a sustainable future for aquaculture, A new impetus for the Strategy for the Sustainable Development of European Aquaculture*, COM (2009) 162 final.

competition and to find synergies between economic activities and the environment.

INSPIRE Directive⁴¹

The purpose of this Directive is to lay down general rules aimed at the establishment of the Infrastructure for Spatial Information in the European Union for the purposes of environmental policies and policies or activities which may have an impact on the environment.

To ensure that the spatial data infrastructures of the Member States are compatible and usable in a union and transboundary context, the Directive requires that common Implementing Rules (IR) are adopted in a number of specific areas (Metadata, Data Specifications, Network Services, Data and Service Sharing and Monitoring and Reporting). These IRs are adopted as Commission Decisions or Regulations, and are binding in their entirety.

The **EU Directives⁴²** related to the protection of the marine environment are:

- The **Birds Directive** (1979/409/EEC) provides a framework for the conservation and management of wild birds in Europe;
- The **Habitats Directive** (1992/43/EEC) aims to safeguard biodiversity through the conservation of natural habitats and of wild fauna and flora;
- The **Marine Strategy Framework Directive** (2008/56/EC) aims to promote the sustainable use of the seas and to conserve marine ecosystems;
- The **Water Framework Directive** (2000/60/EC) specifies the EU requests for the protection of inland surface waters, transitional waters, coastal waters and groundwater;
- The **Environmental Impact Assessment Directive** (85/33/EEC as amended by 97/11/EC) stipulates that Member States shall adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue inter alia, of their nature, size or location are made subject to an assessment with regard to their effects;
- The **Strategic Environment Assessment Directive** (2001/42/EC) aims to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.

The Birds and Habitats Directive

The **Birds Directive**, which was adopted in 1979, requires the establishment of *Special Protection Areas for Birds*. The **Habitats Directive**, adopted in 1992 to complement the Birds Directive, requires *Special Areas of Conservation* to be designated for threatened habitats and species. Together, these areas make up the *NATURA 2000 network* of protected areas.

⁴¹ European Parliament and Council, 14 March 2007, *Establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)*, Directive 2007/2/EC.

⁴² Article 288 of the Treaty on the Functioning of the European Union: Directives shall be binding, as to the result to be achieved, upon each Member State to which they are addressed to, but shall leave to the national authorities the choice of form and methods.

The initial position of a number of Member States was to see their obligations under the Birds and Habitats Directive restricted to the territorial sea (up to 12 nautical miles from the baselines). In 2001, the European Council recognised the need for implementing these nature Directives in the Exclusive Economic Zone as a key element for the protection of the marine environment. Consequently, Member States are also expected to propose the necessary sites to complete the marine component of Natura 2000, by applying both Directives to their internal waters, territorial sea, Exclusive Economic Zone⁴³ and to their continental shelf⁴⁴.

Maritime Spatial Planning is a tool that can support the establishment of Natura 2000 areas. The establishment of *Special Protection Areas for birds* and *Special Areas of Conservation* could be part of a larger Maritime Spatial Plan, in order to ensure the sustainable development of maritime activities based on the ecosystem approach.

The Marine Strategy Framework Directive

The 6th Environmental Action Plan (2002-2012) identified ‘nature and biodiversity’ as one of the priority themes for action. Priority areas for action include the further promotion of protecting marine areas, in particular with NATURA 2000 areas as well as with other feasible EU means. In line with the objectives of the 6th Environmental Action Plan, the ***Marine Strategy Framework Directive*** was adopted in 2008. The main purpose of this Directive is to achieve good environmental status in European waters by 2020.

The Directive also calls for the *establishment of Marine Protected Areas*, including areas already designated under the Habitats and Birds Directives. The establishment of Marine Protected Areas is also expected to support the position taken by the European Union, within the context of the Convention on Biological Diversity, on halting biodiversity loss, ensuring the conservation and sustainable use of marine biodiversity, and on the creation of a global network of Marine Protected Areas by 2012.

Under this Directive each Member State should develop a *marine strategy* for its marine waters which, while being specific to its own waters, reflects the overall perspective of the marine region or sub-region concerned. For the Mediterranean Sea basin the following sub-regions have been defined⁴⁵:

- The Western Mediterranean Sea (Spain, France and Italy);
- The Adriatic Sea (Italy and Slovenia);
- The Ionian and the Central Mediterranean Sea (Greece, Italy and Malta);
- The Aegean-Levantine Sea (Greece and Cyprus).

⁴³ Or in similar declared zones such as Ecological Protection or Exclusive Fishing Zones.

⁴⁴ European Commission - DG Environment, 23 May 2007, *Guidelines for the establishment of the Natura 2000 network in the marine environment: Application of the Habitats and Birds Directives*.

⁴⁵ European Parliament and Council, 17 June 2008, *Marine Strategy Framework Directive*, 2008/56/EC, Article 4.1.

The Marine Strategy Framework Directive stipulates that marine strategies shall apply an *ecosystem-based approach* to the management of human activities and be developed and implemented⁴⁶ in order to:

- Protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems in areas where they have been adversely affected;
- Prevent and reduce inputs in the marine environment with a view to phasing out pollution.

The Marine Strategy Framework Directive aims to stimulate the development of marine strategies based on an ecosystem approach, which is the overarching MSP key principle. The Directive is considered as an instrument which relies on spatial and temporal distribution measures and should thus stimulate the application of Maritime Spatial Planning. In cases where maritime uses compete in the Mediterranean sub-regions (or elsewhere), Maritime Spatial Planning is the tool that can be applied to manage the distribution of uses in time and in maritime space, and can consequently contribute to the implementation of the Marine Strategy Framework Directive.

Box 1: Ecosystem approach

The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Application of the ecosystem approach will help to reach a balance of the three objectives (conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the utilisation of genetic resources) of the Convention on Biological Diversity. It is based on the application of appropriate scientific methodologies focused on levels of biological organisation which encompass the essential processes, functions and interactions among organisms and their environment. It recognises that humans, with their cultural diversity, are an integral component of ecosystems.

The ecosystem approach does not preclude other management and conservation approaches, such as biosphere reserves, protected areas, and single-species conservation programmes, as well as other approaches carried out under existing national policy and legislative frameworks, but could, rather, integrate all these approaches and other methodologies to deal with complex situations. There is no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions.

Source: Convention on Biological Diversity, 1992

The Directive also indirectly refers to the importance of Maritime Spatial Planning in order to achieve its objectives. As regards the development of marine strategies, the Directive refers to the following principles, which are in line with the key principles of MSP as defined in the EU Roadmap for Maritime Spatial Planning:

- Member States shall, in respect of each marine region or sub-region concerned, identify the measures which need to be taken in order to achieve or maintain good environmental status; such programmes of measures shall include among others *spatial protection measures*, contributing to coherent and representative networks of MPAs; *spatial and temporal distribution controls*, management measures that influence where and when an activity is allowed to occur and *input controls*, measures that influence the amount of human activity that is permitted⁴⁷;

⁴⁶ The Commission shall report by 2014 on the progress in the establishment of Marine Protected Areas, on the basis of the information Member States are expected to provide by 2013.

⁴⁷ This statement can be linked to the overarching MSP key principle which is the ecosystem approach, to key principle (1) using MSP according to area and type of activity and to MSP key principle (2) defining objectives to guide MSP; Marine Strategy Framework Directive (2008/56/EC), Article 13.1.

- Member States shall consider the implications of their programmes of measures on waters beyond their marine waters in order to minimise the risk of damage to, and if possible have a positive impact on, those waters⁴⁸;
- In order to achieve a good environmental status in the European Union's marine environment, a transparent and coherent legislative framework is required; the legislative framework should provide an overall framework for action and enable the actions taken to be coordinated, consistent and properly integrated with actions under other European Union legislation and international agreements⁴⁹;
- Member States shall ensure that all interested parties are given early and effective opportunities to participate in the implementation of the Directive and shall make sufficient information on their marine strategies publicly available; in this respect, programmes of measures shall be characterised by communication, stakeholder involvement and raising public awareness⁵⁰.

The Water Framework Directive

Adopted in 2000, the **Water Framework Directive** aims to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. To this end, the Directive required Member States to publish River Basin Management Plans by December 2009. Member States have three years (until 2012) to put in place the related measures.

One of the key principles of Maritime Spatial Planning (key principle 9) is to achieve coherence between terrestrial and maritime spatial planning. In this respect, the development of River Basin Management Plans in continuity with coastal and maritime spatial plans is necessary. As a result, the involvement of competent authorities for the Water Framework Directive Basin Management Plans could be relevant stakeholders when applying MSP and vice versa in order to achieve coordination between spatial planning of the land and sea area.

The Environmental Impact Assessment and Strategic Environment Assessment Directives

The **Environmental Impact Assessment (EIA) Directive**, adopted in 1983 and amended in 1997, aims to protect the environment and the quality of life. The Directive states that before development consent is given, certain public and private projects likely to have significant environmental effects – due to their nature, size or location – are made subject to a requirement for development consent and an EIA. The Directive harmonises the principles of environmental assessments by introducing minimum requirements, in particular with regard to the type of projects that should be subject to assessment, the main obligations of the developers, the content of the assessment and the participation of the competent authorities and the public. In principle, an environmental assessment can be undertaken for individual projects such as a dam, motorway, airport or factory (*Environmental Impact*

⁴⁸ This statement can be linked to MSP key principle (7) cross-border cooperation and consultation; Marine Strategy Framework Directive (2008/56/EC), Article 13.8.

⁴⁹ This statement can be linked to MSP key principle (5) coordination within Member States – simplifying decision processes and to MSP key principle (6) ensuring the legal effect of national MSP; Marine Strategy Framework Directive (2008/56/EC), (9).

⁵⁰ This statement can be linked to MSP key principle (3) developing MSP in a transparent manner and to MSP key principle (4) stakeholder participation; Marine Strategy Framework Directive (2008/56/EC), Article 19.1 and 19.2.

Assessment) or for plans, programmes and policies (*Strategic Environmental Assessment*⁵¹).

At present, all Member States have established comprehensive regulatory frameworks and implemented environmental assessments in a manner largely in line with the requirements of both Directives. In many cases, Member States have built on the minimum requirements of the Directives and have gone beyond them⁵².

The Directives build on an ecosystem approach, which is the overarching principle of Maritime Spatial Planning as defined in the Roadmap. Their contribution to Maritime Spatial Planning lies primarily in the assessment of a project's or programme's impact on the ecology.

It should be noted that the aforementioned Directives are applicable to EU Member States, not to third countries.

II.3. REVIEW OF RELEVANT INITIATIVES AT THE NATIONAL LEVEL (COUNTRY-BY-COUNTRY ANALYSIS)

The Mediterranean Sea is almost completely enclosed by land. Twenty-two states in three different continents have a Mediterranean Sea coastline. *Figure 1* provides an overview of the countries concerned: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey, UK (Gibraltar).

Information on the Mediterranean countries is presented in the form of twenty country reports, which are enclosed in *Appendix F*⁵³. Each country report concludes with main findings with respect to the potential for the application of Maritime Spatial Planning. EU-funded projects related to ICZM and MSP are bundled in *Annex II*.

⁵¹ *Strategic Environment Assessment Directives, 2001/42/EC, 27 June 2001.*

⁵² Report from the European Commission, 23 June 2009, *Report on the application and effectiveness of the EIA Directive*, COM (2009) 378 final.

⁵³ No country reports were developed for Monaco and UK (Gibraltar).

Figure 1: The Mediterranean Sea basin



Source: Policy Research Corporation based on Worldatlas.com

The country reports are intended to be reference material and an important source of information notably regarding the potential for the application of Maritime Spatial Planning. They are not intended to make either political statements or recommendations, but only to constitute a source of information on the current state of play in areas relevant to maritime spatial planning. They include important information with regard to:

- Country characteristics and maritime zones;
- Maritime activities;
- State-of-play regarding ICZM and MSP.

a/ Country characteristics and maritime jurisdiction⁵⁴

A first indication of the national maritime jurisdictions of the different countries around the Mediterranean Sea basin is provided in this section. At present, almost all countries have established a territorial sea of 12 nautical miles⁵⁵, six countries have established an Exclusive Economic Zone⁵⁶ and

⁵⁴ This information is based on Expert Group on Governance of the Mediterranean Sea, 2009, *The role of maritime zones in promoting effective governance for the protection of the Mediterranean marine environment* and on EuropeAid Cooperation office, 2009, *Study of the current status of ratification, implementation and compliance with maritime agreements and conventions applicable to the Mediterranean Sea Basin*.

⁵⁵ Countries with a territorial sea of 12 nm are Albania, Algeria, Croatia, Cyprus, Egypt, France, Italy, Israel, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria and Tunisia. Greece and Turkey both have a territorial sea of 6 nm; the breadth of the territorial sea of Bosnia and Herzegovina is unclear as its territorial sea is located in the internal waters of Croatia. The United Kingdom (Gibraltar) has a territorial sea of 3 nm.

⁵⁶ Cyprus, Egypt, Libya, Morocco, Tunisia and Syria have established an Exclusive Economic Zone by adopting laws. In case a law is adopted for the establishment of an EEZ (or any other zone), the zone is considered to be 'established'. If a country is intending to declare an EEZ, but does not have such legislation in place, the EEZ is considered to be 'claimed'.

eight countries have established a Fishery Protection or an Ecological Protection Zone⁵⁷. The following information is included in the country reports:

- Location;
- Coastal regions and islands;
- Coastline length, water depth and continental shelf;
- Maritime zones and boundaries.

b/ Maritime activities

Economic data per country were collected for the following sectors:

- Shipping: merchant shipping, short-sea shipping, ferry services, ocean towage and cruise tourism;
- Fisheries;
- Aquaculture (mariculture);
- Oil and gas: existing/planned offshore infrastructure and areas with potential for the exploitation of oil and gas;
- Wind farms: installed and/or planned offshore infrastructure and areas with potential for the installation of offshore wind farms.

Furthermore, information was collected on the number and size of MPAs, marine nature conservation areas and areas potentially in need of environmental protection.

c/ State-of-play regarding ICZM and MSP

The country reports provide an overview of the state-of-play with regard to national ICZM and MSP in the Mediterranean Sea basin;

- Legal aspects and key players;
- National and sub-national plans, projects and studies related to Integrated Coastal Zone Management (ICZM);
- National and sub-national plans, projects and studies related to Maritime Spatial Planning (MSP);
- References to cross-border and international initiatives as well as platforms for cooperation related to or relevant for the application of MSP.

In addition, in order to have a more standardised reference frame to indicate the degree to which MSP can effectively be applied, a checklist based on the ten MSP key principles was used⁵⁸. This checklist is presented in *Figure 2*.

⁵⁷ Algeria, Libya, Malta, Spain and Tunisia have established a Fishery Protection Zone; France and Slovenia established an Ecological Protection Zone; Croatia has established an Ecological and Fishery Protection Zone.

⁵⁸ This checklist was sent to the main stakeholders in the countries involved in order to obtain up-to-date information.

Figure 2: Checklist to identify the state-of-play regarding MSP

- | |
|---|
| <ul style="list-style-type: none">• An ecosystem approach is used when dealing with the maritime space (<i>overarching MSP principle</i>)• The maritime area is intensively used and competing human activities (with ecological impact) occur or will occur in the future (<i>MSP key principle 1</i>)• Sufficient scientific data are available or the knowledge and tools exist to generate these data (e.g. GIS – Geographic Information System – capabilities) (<i>MSP key principle 10</i>)• A national or regional institutional framework exists for marine policy or coastal planning (<i>MSP key principles 3 and 5</i>)• The country/regions concerned possess a supportive legal framework (<i>MSP key principle 6</i>)• The country/regions concerned strive to integrate coastal and marine planning (<i>MSP key principle 9</i>)• Specific platforms are available through which MSP could be introduced with different stakeholders (national and/or international) (<i>MSP key principle 4</i>)• The countries concerned are open to international cooperation (<i>MSP key principle 7</i>)• There is sufficient understanding (transparency) of and support for Maritime Spatial Planning in the country/regions concerned (<i>MSP key principle 2</i>)• A transparent regular monitoring and evaluation mechanism has been established to monitor changes that should be reflected in the MSP plan (<i>MSP key principle 8</i>) |
|---|

Source: Policy Research Corporation

II.4. CHAPTER SUMMARY

Chapter II provided an overview of the current situation in the Mediterranean with regard to MSP. A review was made of the following relevant initiatives:

- Cross-border / international:
 - The Mediterranean Action Plan and the Barcelona Convention;
 - The Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean;
 - The Protocol on Integrated Coastal Zone Management;
 - Sea basin initiatives, such as the Adriatic Ionian Initiative, the Adriatic Euregion, the Trilateral Commission, the platform to discuss the conservation and sustainable development of the Alboran Sea, the RAMOGE Agreement (Western Mediterranean), and the Pelagos Sanctuary for Mediterranean Marine Mammals;
- EU level:
 - Green paper on the future maritime policy;
 - Integrated Maritime Policy;
 - Other IMP-related instruments, such as the Communication Marine Knowledge 2020, the ICZM Recommendation, Motorways of the Sea, the Communication on offshore wind energy, the Renewable Energy Directive, the Common Fisheries Policy, the Communication on a sustainable future for European Aquaculture, and directives such as the Marine Strategy Framework Directive;
- National level: for twenty countries bordering the Mediterranean, country reports have been drawn up providing overviews of the state-of-play of MSP; these country reports are available in *Appendix I*.

III. METHODOLOGY FOR DEFINING THE POTENTIAL FOR MSP IN THE MEDITERRANEAN SEA

The objective of *Task 2* of this study was to identify the elements that should be taken into consideration for the identification and characterisation of potential areas for the application of Maritime Spatial Planning.

In this section, the methodology to identify marine areas with more potential for the application of Maritime Spatial Planning is presented.

III.1. DEFINING THE ‘POTENTIAL’ FOR MARITIME SPATIAL PLANNING

Maritime Spatial Planning (MSP) is a process of analysing and allocating parts of the three-dimensional marine space (ecosystems) to specific uses, to achieve ecological, economic and social objectives that are usually specified through a political process. MSP is a tool for improved decision-making and provides a framework for arbitrating between competing human activities and managing their impact on the marine environment. Its objective is to balance sectoral interests and achieve sustainable use of marine resources in line with the EU Sustainable Development Strategy⁵⁹.

For the purpose of this study and in the light of the definition of MSP and its ten key principles, the *potential* of Maritime Spatial Planning was analysed on the basis of three aspects:

- *Purpose of MSP in the area*: type and intensity of uses as well as the ecological value of the marine area;
- *Feasibility of MSP in the area*: scientific data/knowledge base, institutional capacity, legal and administrative supportive framework and stakeholders involvement;
- *Conditions for cross-border/international cooperation*: in case the marine area falls beyond national jurisdiction – which is mostly the case for marine areas in the Mediterranean Sea basin.

In a marine area that currently falls beyond national jurisdiction, the establishment of an Exclusive Economic Zone significantly strengthens the possibility of applying MSP in this area, since this

⁵⁹ Communication from the Commission, 25 November 2008, *Communication from the Commission on a Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2009) 791 final; UNESCO, 2009, *Marine Spatial Planning Initiative: Defining Marine Spatial Planning*.

enables countries to individually apply jurisdiction to this extended area. In this context, it deserves to be noted that in the Mediterranean, the delimitation of Exclusive Economic Zones is a sensitive and difficult issue. The United Nations Convention on the Law of the Sea (UNCLOS) provides the general framework governing the establishment and delimitation of maritime zones, but not all Mediterranean countries have established maritime zones beyond the territorial sea⁶⁰.

Although maritime zones are per definition established through the adoption of a legislative act under national law⁶¹, the establishment⁶² of such zones does not necessarily imply that they are acknowledged by neighbouring states. Since the issue of maritime zones is not the subject of detailed analysis in this study⁶³, constraints with respect to jurisdiction have not explicitly been taken into account to identify areas with more potential for the application of Maritime Spatial Planning.

III.2. METHODOLOGICAL FRAMEWORK

The methodology to identify areas with more potential for the application of MSP is based on the ten key principles⁶⁴ for Maritime Spatial Planning as included in the European Commission's *Roadmap for MSP: Achieving common principles in the EU*. The methodology consists of seven main criteria – categorised under *purpose*, *feasibility* and *cross-border/international cooperation* – which should be taken into consideration to identify areas with more potential for MSP:

- **Purpose:**
 1. The area is intensively used and is (or will be) subject to competing human activities (and/or human activities that compete with ecology).
- **Feasibility:**
 2. There are sufficient scientific data available or the knowledge and tools are available to generate these data;
 3. There is a national or regional institutional framework available for marine policy or coastal planning;
 4. The countries/regions concerned possess a supportive legal framework;
 5. The countries/regions concerned strive to integrate coastal and marine planning;
 6. Specific platforms are available through which MSP could be introduced.
- **Cross-border/international cooperation:**

⁶⁰ IUCN, Centre for Mediterranean Cooperation, 2009, *Governance of the Mediterranean Sea, Outlook for the legal regime*.

⁶¹ Ideally, they are also deposited to the UN Law of the Sea secretariat if the countries involved have ratified UNCLOS.

⁶² For consistency reasons the term 'established' is being used in this report when coastal states adopted a legislative act under national law, regardless of the acknowledgement of neighbouring states.

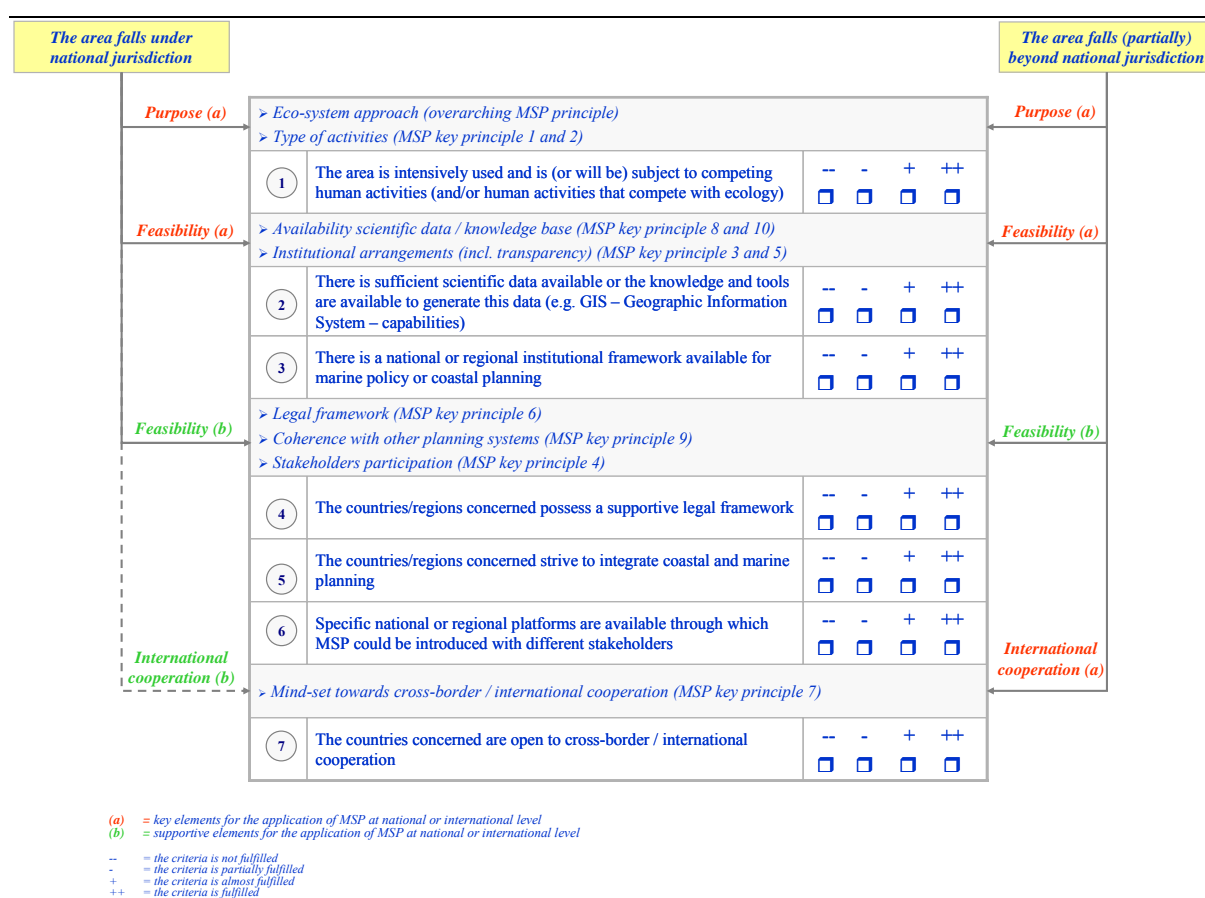
⁶³ The costs and benefits arising from the establishment of maritime zones in the Mediterranean Sea are being examined in a separate study on behalf of DG Mare. The contract for the study was awarded in the last trimester of 2011 and runs for twelve months.

⁶⁴ Next to the overarching MSP principle, the ecosystem approach, the ten key principles of MSP are: (1) Using MSP according to area and type of activity, (2) Defining objectives to guide MSP, (3) Developing MSP in a transparent manner, (4) Stakeholder participation, (5) Coordination within Member States – Simplifying decision processes, (6) Ensuring the legal effect of national MSP, (7) Cross-border cooperation and consultation, (8) Incorporating monitoring and evaluation in the planning process, (9) Achieving coherence between terrestrial and maritime spatial planning, and (10) A strong data and knowledge base.

7. The countries concerned are open to cross-border/international cooperation.

The methodology to identify areas with more potential for the application of Maritime Spatial Planning is built as a checklist of seven criteria which can be scored on a scale representing the degree to which the criterion is being fulfilled. If each criterion is fulfilled, the basis for MSP application is present. Each criterion either defines the potential or facilitates the implementation of Maritime Spatial Planning at national or international level. Nevertheless, a distinction can be made between key and supportive criteria. A summary of the methodology is presented in *Figure 3*.

Figure 3: Methodology to identify areas with more potential for the application of MSP



Source: Policy Research Corporation

The *criteria one, two and three* are considered as key elements to characterise an **area that falls under national jurisdiction** as an area with more potential for the application of Maritime Spatial Planning. Therefore, these three criteria should be weighted more heavily when analysing and judging the potential for applying Maritime Spatial Planning in a specific area. Scoring better on the *criteria four, five and six* reinforces the *feasibility* of applying MSP in the particular marine area.

For an **area (partially) situated outside national jurisdiction**, next to the *criteria one, two and three*,

it is also recommended to consider *criterion seven* – openness towards cross-border/international cooperation – as a key criterion in order for the area to be identified as an area that might have more potential for the application of MSP.

The following paragraphs address in detail each of the seven criteria that should be taken into consideration for the identification and characterisation of areas with more potential for Maritime Spatial Planning.

III.2.1. PURPOSE (CRITERION 1)

The ultimate objective of Maritime Spatial Planning is to organise the use of space by human activities and to guide further development in a sea area, taking into account the ecosystem approach. The intensity and diversity of the use of the area define the extent to which MSP is applicable⁶⁵.

The need for MSP is determined by (1) the degree to which an area is intensively used and is (or will be) subject to competing human activities and (2) the environmental importance of the area.

III.2.1.1. Competition between maritime activities

Competition between maritime activities exists when a maritime activity has an impact on another activity. In general, competition comes in two forms: (1) spatial competition (competition with regard to the same location) and (2) competition experienced by the effects caused by another activity (the activities are not necessarily carried out on the same location). Competition between maritime activities is mostly of a spatial character. Effects of competition can be expressed in different ways, such as increased costs, time loss and decrease in income⁶⁶. *Table 2* provides an overview of the competition that may take place, now and in the future, between maritime activities in the Mediterranean Sea.

The table shows the activities that may (theoretically) conflict if no zones are designated for specific uses. The colours show whether the two activities are mobile (not bound to a location) or stationary. If a conflict is present, it can be strong or weak. The strength of the conflict is determined by the specific characteristics of a specific area (i.e. whether alternative areas are available for performing one or both of the activities). If alternative areas are strongly suboptimal, a strong conflict is present. The table provides a general overview of potential conflicts and is based on desk research and input from stakeholders. Hence, specific situations can always involve lower or stronger conflicts and therefore this table should only be considered as an indication of potential conflicts.

⁶⁵ MSP overarching principle as well as key principle 1 and 2 based on the Communication from the Commission, 25 November 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM(2008) 791 final.

⁶⁶ DG MARE, 2010, *Study on the economic effects of Maritime Spatial Planning*.
http://ec.europa.eu/maritimeaffairs/study_msp_en.html

Table 2: Likely conflicts if maritime activities occur at the same time at the same place

Both activities mobile			One of the activities is stationary					Both activities are stationary			
No conflict (○)			Conflict, but alternative location available against low costs (-)					Conflict, alternative location not available or against high costs (x)			
	Shipping	Naval activities	Dredging	Oil & gas	CCS	Renewable energy	Fishing	Mariculture	Marine tourism	Coastal tourism	Cables & pipelines
Shipping											
Naval activities	x										
Dredging	-/x	x									
Oil & gas	-	x	-								
CCS	○	?	○	○							
Renewable energy	-	x	-	x	○						
Fishing	○/-	x	-	-/x	○	-/x					
Mariculture	-	x	-	-	○	-	-/x				
Marine tourism	○/-	x	-	x	○	-	○/-	-			
Coastal tourism	n.a.	x	-	x	○	-	-/x	-	-		
Cables & pipelines	○	x	-	x	○	-/x	-/x	-	-	-	

Disclaimer:

The table provides a general overview of potential conflicts and is based on desk research and input from stakeholders. Hence, specific situations and/or different definitions may result in weaker or stronger conflicts. Therefore, this table should only be considered as an indication of potential conflicts.

Notes:

- Shipping – dredging: if dredging is carried out in a fairway in or near a port, shipping is not possible at the same time; if sand extraction takes place elsewhere, alternative locations are available or ships can alter their course a little;
- If naval activities take place, no other activities are allowed in an extensive area. Naval activities – CCS: constraints are unknown;
- Fishing – stationary activities: depending on the level of available fish stocks in the area occupied by stationary activities and fish stocks in alternative fishing areas, the impact on fisheries can be low or high. Coastal tourism (defined here as marine activities on or close to the beach, such as recreational bathing) is defined as a stationary activity since this activity is carried out mostly (especially in the Mediterranean) on specific popular beaches;
- Marine tourism includes those touristic activities not carried out near the beach, such as yachting, recreational fishing (on a boat) and diving;
- Activities involving navigation (shipping, fishing, marine tourism) do conflict if they take place at the same time, but conflict is limited because these activities can move quickly;
- Shipping cannot take place in the shallow waters near beaches; spatial competition is therefore considered to be ‘not applicable’;
- Competition of oil & gas platforms with coastal and marine tourism is, besides a spatial element, also experienced at larger distance due to visual amenity; mostly, renewable energy (wind farms) can be shifted to an alternative location, which mitigates the conflict;
- CCS – oil&gas: activities can be complementary (e.g. Sleipner project Norway);
- Activities near cables and pipelines, except shipping, are forbidden (safety zones of 500 metres on each side). Depending on the size of the renewable energy location, the conflict can be moderate or strong.

Source: Policy Research Corporation

Although competition between activities strongly differs throughout the Mediterranean Sea, several

competing activities take place in the whole area. Fishing, for instance, competes with other activities in several ways. Small scale artisanal fishing in the Mediterranean mostly takes place in relatively shallow waters near the shore, sometimes in competition with, for example, sand extraction.

Because extraction leads to changes in the composition of the soil, fishing gear may be damaged when fishermen are not able to determine the new composition of the soil. As a result, fishermen may decide to avoid such areas. During the extraction process itself, spatial competition exists as well, since fishing cannot be carried out in that area.

Besides (artisanal) fishing and sand extraction, mariculture and marine and coastal tourism (recreational bathing and boating) also take place in shallow waters, leading to competition among these activities. Mariculture and tourism compete in high-quality waters: on the one hand, mariculture needs high quality water which is also a determinant of the attractiveness of beaches (bathing water), while, on the other hand, mariculture may negatively impact the water quality. Maritime activities around offshore terminals/platforms (e.g. fishing, sand extraction) are prohibited in a delimited area. Also, pipelines and cables are protected by imposing restrictions on activities in safety zones (mostly 500 metres breadth). In case offshore wind turbines (projects in the Mediterranean are currently in a planning phase) are to be installed, competition with several maritime activities may be experienced. In some cases, current plans for offshore wind energy are being opposed by local fishermen: installation could lead to a smaller fishing area and may have effects on local fish stocks⁶⁷.

The abovementioned examples show that most competition between activities is experienced along the coast and in areas with shallow waters. It is the area most densely exploited by maritime activities, which increases the probability of competition. In *Chapter IV* the different types of competition in the Mediterranean will be elaborated on.

III.2.1.2. Competition between maritime activities and the marine environment

Competition between maritime activities and the environment may arise because of maritime activities affecting the environment⁶⁸ or because of spatial competition, for example when an MPA competes for space with coastal tourism. As an illustration, *Table 3* and *Table 4* provide overviews of the human activities presently regarded as the most urgent pressures in the SPICOSA study sites and the pressures and their impacts on the marine environment⁶⁹.

⁶⁷ Based on stakeholder inputs; the effects of wind turbines on marine life have not been proven by scientific studies.

⁶⁸ An activity and its impact do not necessarily occur at the same place. An oil spill, for example, can occur at one place and impact another place due to currents.

⁶⁹ For more information see www.coastalwiki.org/spicosa.

Table 3: Pressures of maritime activities on the marine environment

Pressure =>	urban devt.	tourism, recreation	shipping	urban effluents	industrial effluents	agricult. effluents	fishery	shellfish	aquacult.	river dams	sea level rise / climate change
Gulf of Riga											
Gulf of Gdansk											
Oder Estuary											
Himmerfjärden											
Limfjord											
Sondeled											
Clyde Sea											
Cork Harbour											
Scheidt Delta											
Pertuis Charentais											
Guadiana Estuary											
Barcelona Coast											
Thau Lagoon											
Taranto Mare Piccolo											
Venice Lagoon											
Thermaikos Gulf											
Izmit Bay											
Danube Delta											

Source: Spicosa project

Table 4: Impacts of pressures on the marine environment

Impact =>	habitat loss, degradation	biodiv. change, loss	nutrient loading	harmful algae	trophic web change	invasive species	turbidity	anoxia	biochem. pollution	erosion	flooding	fresh water resource
Gulf of Riga												
Gulf of Gdansk												
Oder Estuary												
Himmerfjärden												
Limfjord												
Sondeled												
Clyde Sea												
Cork Harbour												
Scheidt Delta												
Pertuis Charentais												
Guadiana Estuary												
Barcelona Coast												
Thau Lagoon												
Taranto Mare Piccolo												
Venice Lagoon												
Thermaikos Gulf												
Izmit Bay												
Danube Delta												

Source: Spicosa project

Some examples

Maritime transport has a direct impact on the marine environment through noise, waste and oil discharges. The noise produced by ships is especially harmful to marine mammals since they depend on sound in their functioning. Also *military exercises* by the navy produce noise. Shipping also implicates risks of collisions and accidental oil spills.

Like ships, *offshore platforms* involve a risk of accidents with an environmental impact. Events like the oil spill in the Mexican Gulf have led to increased attention for this subject.

If *sand extraction* takes place in a marine area where the soil is of ecological importance, there will be an impact on the marine environment because the vegetation will be damaged, and fish stocks affected⁷⁰. Hence, food supply for fish may decrease and if extraction takes place in spawning areas, the eggs will be destroyed⁷¹. On a positive note, studies are carried out in most countries to select areas for sand extraction with a low impact on the marine environment.

Fishing may lead to environmental pressures in different ways, its primary influence being overfishing. A substantial number of fish species are endangered and fish stocks have decreased considerably due to overfishing. Another negative effect of fishing is the bycatch of non-target species such as cetaceans, turtles, sharks and seabirds; especially driftnet fishing⁷² leads to bycatch. Also demersal trawling affects the marine environment by damaging the bottom of the sea in various ways⁷³.

Potential effects of *mariculture* on the ecosystem often include⁷⁴: (i) increasing fishing activities for the production of fish meal/oil, (ii) nutrient and organic enrichment of recipient waters⁷⁵ (iii) eutrophication of lakes or coastal zones, (iv) restructuring of biological and/or social environments, (v) release of chemicals used to control water conditions and diseases (vi) competition for, and in some cases depletion of, resources (e.g. water) and (vii) negative effects from escaped farmed organisms, often more relevant when they are exotic species.

Land-based activities may also significantly impact the marine environment. Agricultural and industrial waste water discharges lead to an increase of the concentration of nutrients in the water, causing the production of algae (algal blooms). As a result, water quality decreases and biodiversity is affected (due to loss of oxygen in the water). Also untreated wastewater from urbanised areas affects the water quality. In certain regions along the Mediterranean Sea, especially in touristic hotspots, the wastewater treatment facilities do not have the capacity to treat all wastewater, leading to untreated discharges directly into the sea. The decrease in water quality not only affects the marine environment, but also maritime activities such as mariculture, tourism (bathing water) and fishing⁷⁶.

⁷⁰ Maes, F. et al., *GAUFRE: Towards a spatial structure plan for the Belgian part of the North Sea*, Chapter 3: Users of the BPNS.

⁷¹ The effects will spread across a larger area than the extraction site itself as a result of the deposition of fine materials.

⁷² Although this technique has been banned in the Mediterranean by the General Fisheries Committee for the Mediterranean (GFCM) and the European Union (for EU Member States), the use of driftnets still takes place (illegally) in several countries bordering the Mediterranean Sea.

⁷³ Gianni, M., 2004, *High seas bottom trawl fisheries and their impacts on the biodiversity of vulnerable deep-sea ecosystems*.

⁷⁴ FAO, 2007, *Building an ecosystem approach to aquaculture*.

⁷⁵ This results in the build-up of anoxic sediments and the modification of benthic communities.

⁷⁶ IUCN, 2008, *Maritime traffic effects on biodiversity in the Mediterranean Sea – Volume 1&2*.

III.2.1.3. Economic effects of Maritime Spatial Planning

In a study that was conducted on behalf of the European Commission on the economic effects of Maritime Spatial Planning⁷⁷, it was found that if the process is managed properly, the economic effects are fourfold: (1) enhanced coordination and simplified decision processes, (2) enhanced legal certainty for all stakeholders in the maritime arena, (3) enhanced cross-border/international cooperation and (4) enhanced coherence with other planning systems. Furthermore, several additional non-economic effects are likely to result from MSP, such as support for management approaches aiming at realising a good environmental status in the coasts and seas⁷⁸. The economic effects were subsequently studied in relation to dominant economic paradigms. This resulted in a clear and non-ambiguous set of three main economic effects of Maritime Spatial Planning.

Coordination efficiency for governments is likely to result from improved and integrated decision-making. MSP can enhance coordination systems by integrating and aligning governmental procedures. Currently, only few Mediterranean countries have established institutional frameworks that facilitate horizontal and vertical coordination between governmental stakeholders for issues related to the sea. Instead, countries often apply sectoral approaches to the sea and in many cases the coordination between national and regional government levels shows to be suboptimal. Hence, significant potential benefits of MSP are available in case coordination is improved, despite initial investments to make changes in the legal and institutional framework. For governments, better coordination will lead to lower administrative costs. In the longer term these benefits will only rise: competition between activities will increase, requiring an even stronger coordination between the authorities involved. Improved coordination can also lead to benefits for companies. Currently, the process of developing an activity at sea may take considerable time in terms of licensing and permitting procedures. If a government improves this process through better coordination, overlapping procedures or other inefficiencies may disappear, leading to less time-consuming procedures and hence lower costs for companies. Although considerable improvements in the institutional and legal framework need to be made to improve coordination in countries surrounding the Mediterranean Sea, positive examples are present. France for example, has taken measures to improve coordination, such as creating the position of a ‘SGMer’ (secretary general for the sea) and establishing the ‘CIMer’, an inter-ministerial committee. Thus, the current shortage of coordination present in most of the countries surrounding the Mediterranean Sea implies that MSP can lead to a strong economic effect through improvements in coordination efficiency.

The second main economic effect resulting from Maritime Spatial Planning includes the *reduced transaction costs* for maritime activities (economic terminology for search, legal, administrative and opportunity costs) operating in the maritime arena. Search costs, i.e. the costs made to search for the

⁷⁷ DG MARE, 2010, *Study on the economic effects of Maritime Spatial Planning*.
http://ec.europa.eu/maritimeaffairs/study_msp_en.html

⁷⁸ Required by the Water Framework Directive and the Marine Strategy Framework Directive.

right business process input elements (e.g. location), can be reduced through MSP by introducing a common knowledge base. This knowledge base can, among others, incorporate information on characteristics of the sea and its soil and the maritime activities taking place. This would enable a government to, among others, identify suitable areas for specific activities. Consequently, search costs for companies can be reduced because they do not need to carry out separate studies anymore to identify suitable areas for activities such as mariculture. In the Mediterranean several initiatives to integrate knowledge have been and are being set up, but these efforts are still limited and could therefore be improved significantly. Positive examples are the GIS-system currently being developed by ISPRA in Chioggia, Italy and the maps for the Alboran Sea, developed by Prof. Suarez de Vivero from the University of Seville.

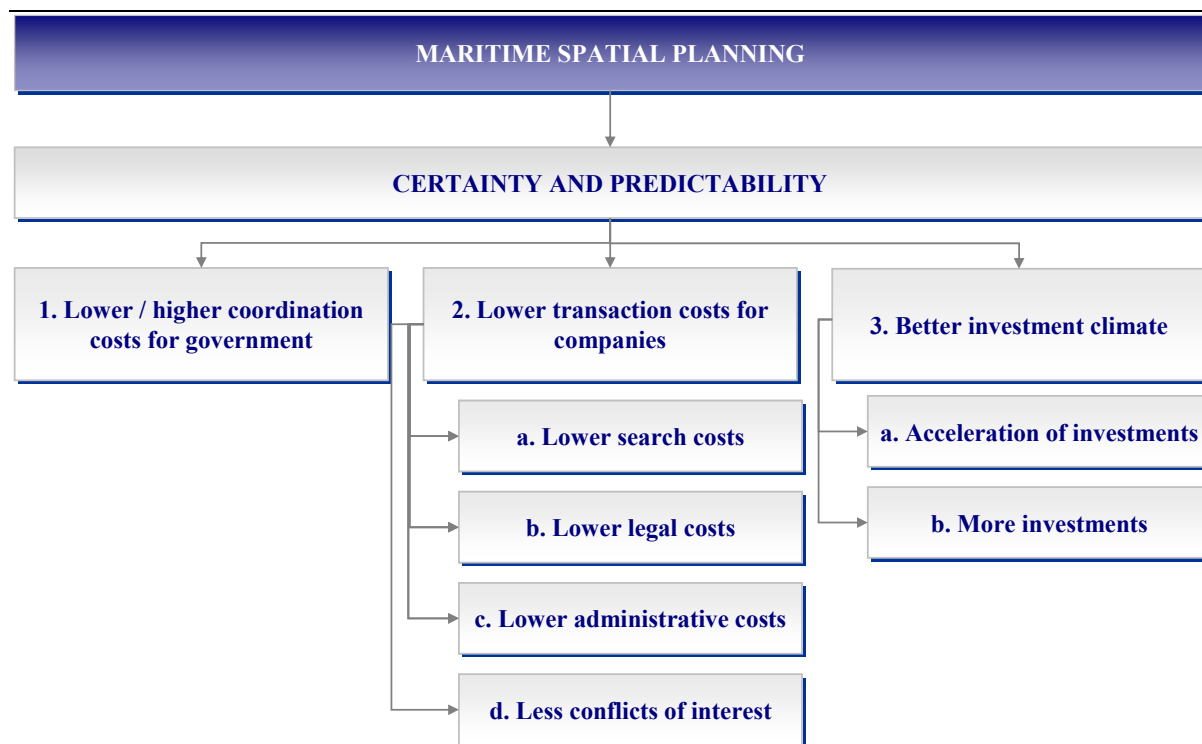
Legal costs are the costs related to ascertaining that the actions of a business are legitimate as well as setting up and enforcing compliance with regard to agreements (e.g. contracts). MSP aims at improving the legal framework to establish legal clarity and certainty. Therefore, applying MSP may lead to a reduction of legal costs. An example of the emergence of legal costs in the Mediterranean is a disagreement between regional and national government levels about the responsibility for issuing permits in a certain sea area. The legal costs that emerged might have been prevented if the application of MSP would have led to an agreement about responsibilities. Another form of transaction cost is the administrative costs of permits, licenses and certification. As mentioned before, increased coordination between governmental stakeholders will lead to better aligned procedures, which reduces administrative costs. The example of MEPA in Malta shows how a single organisation can be a contact point for sea-related planning issues.

One of the major benefits of MSP is that it can help in mitigating, solving or preventing conflicts of interest between different representatives of (potential) maritime activities. For example, mariculture and coastal and marine tourism both compete for shallow areas with high quality water. In general, coastal areas in the Mediterranean are intensively used and of high environmental value, so competition between different uses of the sea is often present or is likely to emerge in the future. If MSP is applied, coordinated decisions can be taken leading to an outcome that is likely to be more optimal than when MSP would not be applied. Cross-border/international conflicts, such as the plan for an offshore LNG-terminal in the Gulf of Trieste may be prevented as well by applying cross-border/international MSP.

A third economic effect is that MSP can lead to an improved investment climate. Enhanced certainty and predictability result in an improved *investment climate*. This can lead to an acceleration of economic activity and economic growth. The acceleration of investments can be prompted by optimised procedures and lower transaction costs. In the Mediterranean Sea the application of MSP may, for example, accelerate investments in offshore wind energy or mariculture. Besides accelerating investments, enhanced certainty and predictability, as a result of MSP, could also lead to investments that otherwise would not have been done.

Figure 4 shows the interrelationship between the various types of benefits.

Figure 4: Economic effects caused by enhancing certainty and predictability



Source: DG Mare, Study on the economic effects of Maritime Spatial Planning, 2010

III.2.2. FEASIBILITY: KEY ELEMENTS (CRITERIA 2 AND 3)⁷⁹

a/ Scientific data and knowledge base

Maritime Spatial Planning needs to be based on sound information and scientific knowledge⁸⁰. When the country or regions involved have sufficient knowledge on the maritime activities and geographical features of the area or they possess the tools to generate such data, MSP can be applied to manage the area in a more efficient and effective manner. Also, many countries may be encouraged by the concept and prospect of MSP to start collecting the necessary data. Both aspects are taken into consideration when analysing the potential for the application of MSP.

b/ Institutional framework/coordination within Member States

Maritime Spatial Planning, which is based on coordinated and cross-cutting plans, needs a single or

⁷⁹ See Figure 3.

⁸⁰ MSP key principle 10 based on the Communication from the Commission, 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

streamlined application process and sufficient coordination among administrative authorities. In addition, transparency will be needed for all documents and procedures related to MSP⁸¹. When a supportive national or regional institutional framework for maritime policy or coastal planning is already (partially) available, it will take less efforts to achieve these objectives.

III.2.3. FEASIBILITY: SUPPORTIVE ELEMENTS (CRITERIA 4, 5 AND 6)⁸²

a/ Legal framework

MSP should be legally binding if it is to be effective⁸³. In case countries or regions concerned possess already a supportive legal framework for the management of the land or the coast, the creation of an appropriate administrative framework for MSP can be facilitated. Such a legal framework could consist of a specific spatial planning regulation, which can also be applied to the sea, or a specific coastal law that incorporates marine areas.

b/ Coherence with other planning systems

Development of MSP in coherence with terrestrial spatial planning⁸⁴ is crucial. Member States more advanced in terrestrial planning or ICZM may strive to gradually integrate the marine area into their coastal management plans or coordinate their terrestrial planning with their maritime planning objectives, increasing the chances for the successful application of MSP. Countries might also consider land and sea as an integrated area where marine areas are managed in continuity with existing land-use plans.

c/ Stakeholder participation

In order to achieve broad acceptance, ownership and support for the implementation of Maritime Spatial Planning, it is important to involve all public and private stakeholders at the earliest possible stage in the planning process⁸⁵. The availability of specific national or regional cooperation platforms through which MSP could be introduced reinforces the potential for the application of MSP.

⁸¹ MSP key principles 3 and 5 based on the Communication from the Commission, 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

⁸² See Figure 3.

⁸³ MSP key principle 6 based on the Communication from the Commission, 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

⁸⁴ MSP key principle 9 based on the Communication from the Commission, 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

⁸⁵ MSP key principle 4 based on the Communication from the Commission, 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

III.2.4. CROSS-BORDER/INTERNATIONAL COOPERATION (CRITERION 7)⁸⁶

Cooperation across borders is necessary to ensure coherence of maritime spatial plans across ecosystems and in waters beyond national jurisdiction and to raise the overall quality of MSP⁸⁷. The availability of stakeholder platforms as well as bilateral maritime agreements (between opposite or adjacent Coastal States) can increase the potential for Maritime Spatial Planning at the cross-border/international level⁸⁸.

III.3. AREAS WITH MORE POTENTIAL FOR MARITIME SPATIAL PLANNING

The objective of *Task 3* of this study is to describe marine areas with more potential for the application of MSP in the Mediterranean Sea basin (*Chapter IV*). Under *Task 4*, the potential obstacles and difficulties for MSP application will be analysed, whereby particular focus will be put on the areas with more potential for the application of MSP (*Chapter V*).

As a starting point, marine sub-areas have been identified on the basis of clusters of maritime activities and opposite and adjacent maritime zones in the Mediterranean Sea basin. The eight areas identified on the basis of these two criteria are:

1. *Adriatic Sea* (Italy, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro and Albania);
2. *Alboran Sea* (Spain, United Kingdom (Gibraltar), Morocco and Algeria);
3. *Area surrounding Malta* (Malta, Italy, Tunisia and Libya);
4. *Western Mediterranean Sea* (Spain, France, Monaco and Italy);
5. *Area southeast of Cyprus* (Cyprus, Egypt, Israel and Lebanon);
6. *Northern part of the Levantine Sea* (Cyprus, Turkey and Syria);
7. *Aegean Sea* (Greece – Turkey);
8. *Libyan Sea* (Libya, Greece) *and Egypt*.

The eight areas are visualised in *Figure 5*. First, for each country surrounding the Mediterranean Sea, a country report was composed (see *Paragraph II.3*). The methodology developed to identify areas with more potential for the application of Maritime Spatial Planning (see *Chapter III*) was then applied using the information in the country reports (available in *Appendix I*). After the analyses of the country reports, the combined potential for the application of MSP in each area was assessed. Based on this assessment, it was concluded that four of these areas qualified for further research to explore the potential for the application of MSP: the Adriatic Sea, the Alboran Sea, the area surrounding Malta, and the Western Mediterranean. *Table 5* presents an overview of the scores of

⁸⁶ See *Figure 3*.

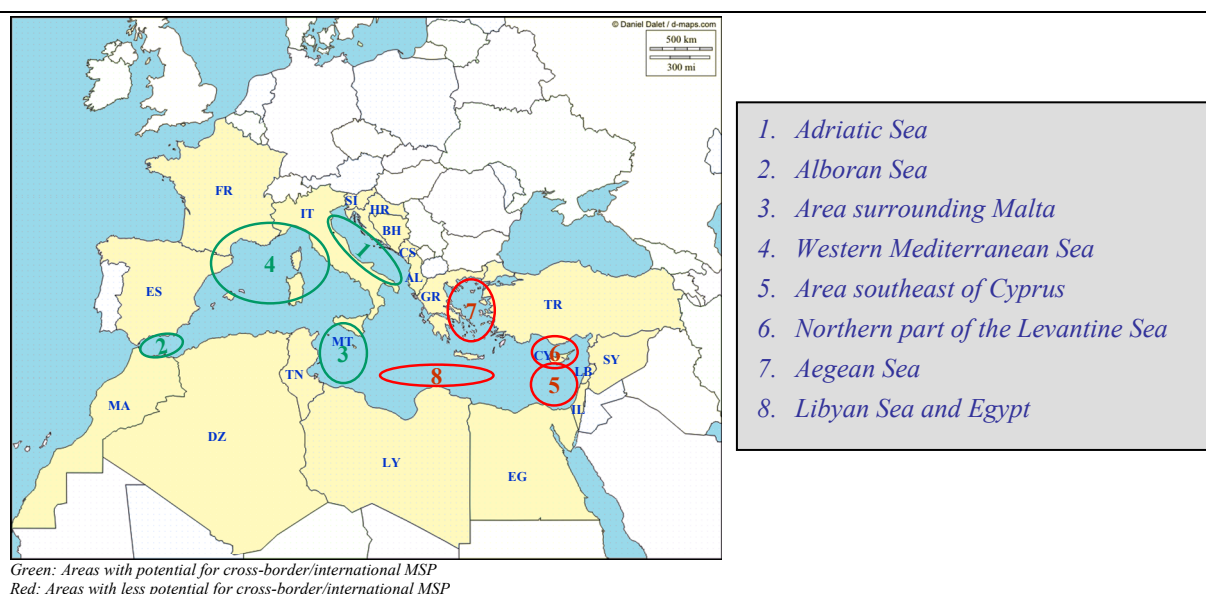
⁸⁷ MSP key principle 7 based on the Communication from the Commission, 2008, *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, COM (2008) 791 final.

⁸⁸ This issue is also discussed in *Chapter VI* and *Chapter VII*.

each of the eight areas on the methodology's key elements.

The four areas experience considerable competition between maritime activities and these activities exert significant pressure on the marine environment. Besides these pressures, these areas are characterised by a relatively strong institutional and legal framework and they have substantial knowledge of the marine environment and/or they have the ability to generate this knowledge. Moreover, the possibility of cross-border/international cooperation between the countries in these regions is present.

Figure 5: International marine areas in the Mediterranean Sea basin



Source: Policy Research Corporation

Table 5 : Identification of marine areas with more potential for the application of MSP

Key elements	Marine areas							
	Adriatic Sea	Alboran Sea	Area surrounding Malta	Western Med. Sea	Area southeast of Cyprus	North Levantine Sea	Aegean Sea	Libyan Sea and Egypt
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intensively used and conflicting human activities occur / will occur in the future	✓	✓	✓	✓	✓/?	?	?	?
Sufficient data or knowledge base to generate data is available	✓	✓	✓	✓	✓*	/**	/	/
A national or regional framework for marine policy or coastal planning is available	✓	✓	✓	✓	✓*	/**	/	/
Countries involved are open to cross-border / international cooperation	✓	✓	✓	✓	/	/	/	/
Potential for MSP	+	+	+	+	-	--	--	--

* As far as Cyprus concerns

** As far as Turkey concerns

Source: Policy Research Corporation

III.4. CHAPTER SUMMARY

In *Chapter III*, the methodology to identify areas with more potential for the application of MSP was explained. This methodology builds further upon the ten key principles of MSP and focuses on the purpose of MSP in the area, the feasibility of MSP in that area and the conditions for cross-border / international cooperation.

Using the information from the country reports (see *Chapter II* and *Appendix I*), this methodology was then applied to eight areas in the Mediterranean that had been identified on the basis of clusters of maritime activities and opposite or adjacent maritime zones. Based on this assessment, four areas qualified for further analysis to explore the potential of MSP: the Adriatic Sea, the Alboran Sea, the area surrounding Malta, and the Western Mediterranean. The outcome of these analyses is presented in *Chapter IV*.

IV. AREAS WITH MORE POTENTIAL FOR THE APPLICATION OF MSP

In the previous chapter four marine areas were identified as areas with currently more potential for the application of MSP in the Mediterranean:

- Adriatic Sea (initially the whole area of the Adriatic Sea was looked into; after further analysis, the focus was reduced to the northern part)⁸⁹;
- Alboran Sea (Spain, United Kingdom (Gibraltar), Morocco and Algeria);
- Area surrounding Malta (Malta, Italy, Tunisia (and Libya)⁹⁰);
- Western Mediterranean Sea (Spain, France, Monaco and Italy).

The selection of these areas does not implicate that there is no potential for MSP in other Mediterranean areas. Given the vast surface of the Mediterranean Sea, only a limited number of case studies could be elaborated. This choice was based on the methodology explained on in *Chapter III*.

This chapter provides analyses of the relevant issues concerning MSP for these four selected areas based on desk research and information from stakeholders. These analyses are summaries of the in-depth case study reports that are available in *Appendix II* to this final report and are structured as follows:

- a section ‘the need for MSP’, describing:
 - the characteristics of the area and maritime jurisdiction;
 - the competing maritime activities and the impact of these activities on the marine environment; this section includes two tables: the first table shows the competition⁹¹ between maritime activities in that specific area⁹² and the second table illustrates the impact of activities on the

⁸⁹ The analysis of the Adriatic Sea (see case study report Adriatic Sea) led to the selection of the Northern Adriatic Sea as the area within the Adriatic Sea which currently has the most potential for MSP, although this does not imply that other parts of the Adriatic would not benefit from MSP as well. This report thus focuses on the Northern Adriatic Sea and the countries Italy, Slovenia and Croatia.

⁹⁰ Contacts with Libyan authorities proved very difficult to establish. Consequently, information on the maritime activities in Libya as well as on the status of ICZM has been gathered through desk research.

⁹¹ The first table provides a general overview; it is not possible to assess the (intensity of) competition in every part of the sea areas under examination.

⁹² This table also indicates whether or not exclusive zones are present for stationary activities in which the presence of other activities is permanently prohibited (defined as ‘permanent zone’). The essence of such a zone is to ensure that a specific activity can take place in a pre-determined area without the presence of other activities (e.g. for safety purposes) so that in fact no competition is experienced in that area. However, this exclusion forces other activities to divert to alternative locations. If these locations are suboptimal, the presence of the permanent zone implies competition.

- marine environment
 - the benefits of the application of MSP;
- a description of the stakeholders, the institutional and legal framework and the status of cross-border cooperation;
- data collection, monitoring and evaluation;
- coherence between terrestrial and maritime spatial planning;
- a summary of the conclusions per sea area.

IV.1. THE NORTHERN ADRIATIC SEA

IV.1.1. THE NEED FOR MSP

IV.1.1.1. Area description

The Adriatic Sea is a semi-enclosed, narrow sea area solely connected to the rest of the Mediterranean through the Strait of Otranto, which is the narrowest part of the Adriatic Sea. The northern and north-western part of the sea are characterised by shallow waters and sandy beaches. The eastern part of the sea is deeper, rocky and contains many islands and islets. The deepest parts of the Adriatic are located in the south. The Adriatic Sea is bordered by six coastal states in total: Albania, Bosnia and Herzegovina, Croatia, Italy, Slovenia and Montenegro (see also *Figure 6*). The remainder of this section focuses on the Northern Adriatic (Italy, Slovenia and Croatia) since it currently has more potential for the application of MSP than the rest of the Adriatic Sea; this however does not imply that other parts of the Adriatic would not benefit from MSP as well.

Figure 6: The Adriatic Sea basin and its coastal states



Source: Vidas, D., 2008, The UN Convention on the Law of the Sea, the European Union and the Rule of Law, What is going on in the Adriatic?

Theoretically, permanent zones at sea always involve competition since it excludes other activities in a certain area.

IV.1.1.2. Jurisdiction

Croatia as well as Italy have established a territorial sea of 12 nm along their coasts. In principal, Slovenia is also entitled to a territorial sea of 12 nm. However, the country has not yet reached an agreement with Croatia on the exact delimitation of the border along the bay of Piran⁹³. Croatia and Slovenia recently agreed to set up an Arbitral Tribunal to reach an agreement on their maritime border⁹⁴. Regarding the maritime border between Croatia and Bosnia and Herzegovina, a treaty on the maritime borders of Bosnia and Herzegovina's territorial sea was signed in 1999. In this specific case, the ratification of the treaty has not yet been completed.

Croatia established an Ecological and Fishery Protection Zone (EFPZ) in 2003. The EFPZ only applies to non-EU Member States⁹⁵. In 2005, Slovenia established an Ecological Protection Zone. However, delimitation agreements with neighbouring coastal States are still pending⁹⁶. Italy has passed legislation empowering the establishment of Ecological Protection Zones beyond the Italian territorial sea. However, up until now, no zones have been formally established.

IV.1.1.3. Sea uses and environmental pressures

Economic activities are more concentrated in the northern part of the Adriatic Sea than in the other parts of the sea indicating the need for MSP; the focus of the analysis of the Adriatic Sea is therefore put on this northern part. *Table 6* shows which activities compete with each other, to what degree and how often this competition occurs. In addition, 'permanent zones' that may imply competition are indicated⁹⁷. Explanations are added in case of different degrees of competition. The case study provides more information on the competing activities.

⁹³ UNCLOS limits the Slovenian territorial sea to 12 nm but some sources of information indicate that currently Slovenia claims a territorial sea of 15 nm (Slovenia argues that this represents their territorial exit to the high seas); Vidas D., 2008, *The UN Convention on the Law of the Sea, the European Union and the Rule of Law, What is going on in the Adriatic?*

⁹⁴ Government of Slovenia, www.vlada.si/fileadmin/dokumenti/si/projekti/2010/Arbitrazni_sporazum/10.a_Arbitra%C5%BEni_sporazum_-_podpisan_EN.pdf.

⁹⁵ Vidas D., 2008, *The UN Convention on the Law of the Sea, the European Union and the Rule of Law, What is going on in the Adriatic?*

⁹⁶ UN, Maritime Space: Maritime Zones and Maritime Delimitation, *Ecological Protection Zone and Continental Shelf of the Republic of Slovenia Act*, 22 October 2005.

⁹⁷ This concept is explained in the introduction of this chapter.

Table 6 : Competing activities in the Adriatic Sea

Competing activities	Competition		High frequency?
	Strong conflict?	Permanent zoning?	
Fishing and maritime transport	+	-	√
Fishing: artisanal fishing versus trawling	-/++	√	-/√
Fishing and dredging (sand extraction)	++	-	-
Fishing and offshore structures: offshore platforms and terminals, cables and pipelines, mariculture	-	√	n.a.
Dredging and offshore structures: offshore platforms and terminals, cables and pipelines, mariculture	-	√	n.a.
Coastal tourism and offshore platforms / terminals	-/++	√	-/√
Coastal tourism and fishing	+	-	√
Coastal tourism and mariculture	-	√	n.a.
Military exercises and all other activities	++	-	-

Legend

- = no conflict ? = unknown
+ = moderate conflict √ = yes
++ = strong conflict n.a. = not applicable

Source: Policy Research Corporation

Competition between artisanal fishing and (illegal) trawling is only present in the Italian part of the sea (3 nm zone). Another particular type of competition is expected if a planned offshore LNG terminal in the Gulf of Trieste (Italian waters, near Slovenian border) is to be built: Slovenia protests against this plan because it will pollute the view from the shore, which may negatively impact tourism.

The activities presented in *Table 7* lead to pressure on the marine environment. A distinction can be made between the most intensive pressures and less intensive pressures on the marine environment. The separate case study provides more information on these environmental pressures.

Table 7 : Pressure of activities on the marine environment in the Adriatic Sea

Most intense pressure
Fishing
Shipping (directly and indirectly (risk of oil spill))
Dredging (sand extraction)
Land-based activities: non-purified wastewater discharges of tourism (urbanisation), industry and agriculture
Other pressures
Offshore platforms and terminals (directly and indirectly (risk of oil spill))
Coastal tourism
Mariculture

Source: Policy Research Corporation

IV.1.1.4. Economic effects of MSP⁹⁸ in the Adriatic Sea

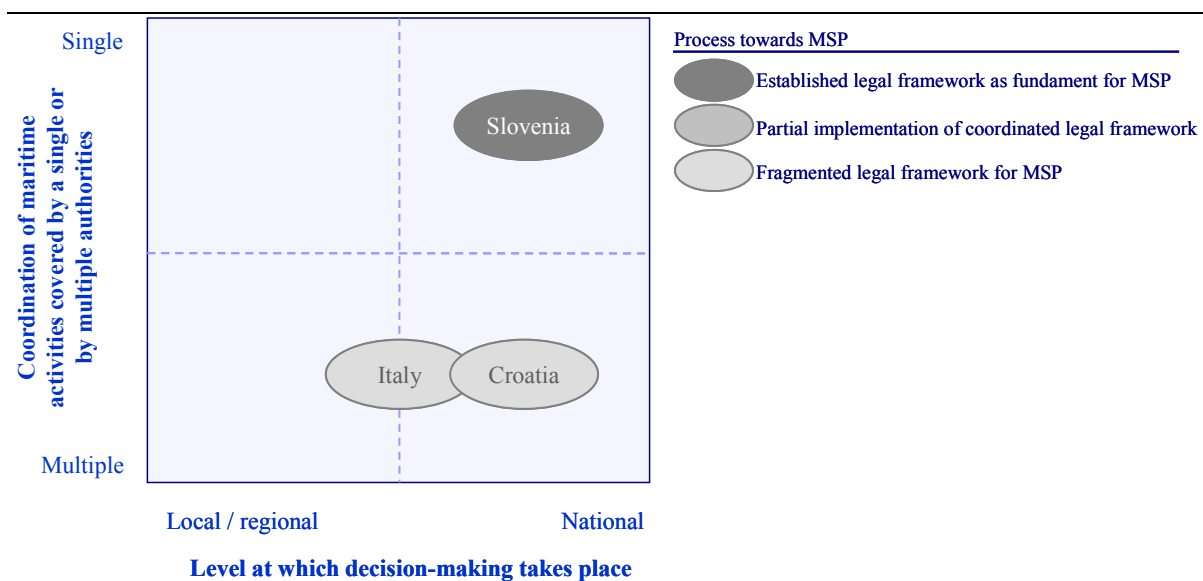
The full range of economic effects of MSP is expected to result from implementing Maritime Spatial Planning in the northern part of the Adriatic. First of all, governments are likely to increase their coordination efficiency due to enhanced coordination mechanisms. Italy and Croatia, in particular, could improve coordination between the different governmental stakeholders in light of the current shortage thereof; in Slovenia coordination is well-advanced. Second, transaction costs may be reduced and conflicts of interest between competing activities may be solved. Cross-border/international competition, such as with regard to the plan for an offshore LNG-terminal in the Gulf of Trieste, may be prevented through applying cross-border/international MSP. Also at the national level competition (e.g. between fisheries and sand extraction in Italy) may be mitigated. Transaction costs, in terms of lower administrative costs, can be realised given the current set-up of the institutional frameworks in the countries involved. Search costs can be reduced through improved and integrated knowledge of the sea. The GIS currently being developed by ISPRA in Chioggia, Italy, is an example of a system that can be employed to integrate knowledge of the sea. Improvements in the institutional and legal framework may also accelerate investments, resulting in economic benefits. Furthermore, new activities may be drawn towards the region, leading to additional economic growth of the Adriatic maritime economy.

IV.1.2. STAKEHOLDERS, INSTITUTIONAL AND LEGAL FRAMEWORK & CROSS-BORDER COOPERATION

As the acceptance, ownership and support of all stakeholders is essential for a successful implementation of MSP, this section describes the current stakeholder field for the Northern Adriatic Sea. This section aims to indicate the degree to which (1) Maritime Spatial Planning issues are coordinated through a single body (integrated approach) or multiple bodies (sectoral approach), (2) responsibility for MSP is assigned to the local/regional level, the national level or to a combination of both and (3) a legal framework relevant for MSP is currently present. This analysis is summarised in *Figure 7*. Besides public stakeholders, private stakeholders are of course important to MSP as well. They are however not discussed in detail here because of the great variety and number of stakeholders involved. Research institutes and similar stakeholders are discussed in the section on data collection, monitoring and evaluation.

⁹⁸ In *Chapter VII* an indication is provided of the quantification of the economic benefits of MSP for EU Member States in the Mediterranean. Because of the limits of data availability, detailed analyses are not available for subregions of the Mediterranean and for non-EU countries.

Figure 7: Characteristics of the stakeholder field of the Adriatic Sea



Source: Policy Research Corporation

In *Italy*, both regional and national authorities are involved in Maritime Spatial Planning and a variety of laws exist concerning both coastal and maritime planning. Responsible ministries for maritime issues are the Ministry of Environment, Protection of the Territory and the Sea, the Ministry of Infrastructure and Transport, the Ministry of Agriculture and Fisheries, and the Ministry of Defence. While a number of Italian coastal regions took the opportunity to develop their own Regional Coastal Plans and according legislation, there is no dedicated national legal framework for ICZM or MSP. Coastal and Maritime Spatial Planning is characterised by fragmentation between the different levels of authority, namely the state, the regions and the communes, which hampers the actual implementation of MSP as a tool for the sustainable management of the sea⁹⁹.

In *Slovenia*, coastal planning is coordinated through the Spatial Planning Act, which was established in 2007. This Act details the spatial planning process and stipulates the coordination and involvement of stakeholders at the national level; it is governed by the Spatial Planning Directorate of the Ministry of the Environment and Spatial Planning. While other ministries may also be involved in spatial planning, this ministry is the key actor responsible at the national level. The municipalities are responsible for the objectives and guidelines for spatial development at local level: they determine the land-use, set the conditions for spatial development, and plan spatial arrangements of local importance.

Although The Spatial Planning Act does not specifically address Maritime Spatial Planning, its regulations can also be applied to the entire Slovenian marine area. Consequently, substantial legislative changes are not necessary to enhance Maritime Spatial Planning in Slovenia¹⁰⁰. In case of MSP

⁹⁹ PAP/RAC, 2007, *National Report on Current Policy, Procedures, Legal Basis and Practice of Marine Spatial Planning in Emilia-Romagna region – Italy*, Bologna.

application, national authorities will be responsible and the Ministry of the Environment and Spatial planning will be the key actor.

In *Croatia*, coordination of spatial plans is carried out on the national level for activities taking place onshore and until 300 metres seawards. For the remaining part of the marine area, coordination among stakeholders is limited and a sectoral approach dominates¹⁰¹. Seven to eight different ministries, such as the Ministry of Environmental Protection, Physical Planning and Construction, the Ministry of Economy, Labour and Entrepreneurship, the Ministry of the Sea, Transport and Infrastructure, and the Ministry of Agriculture, Fisheries and Rural Development, are involved in Marine Spatial Planning. With the exception of the 300 m marine belt, which is protected under the Act on Physical Planning and Construction (1994) and the Government Regulation on Development and Protection of the Protected Coastal Area (2004), existing laws and regulations relevant within the framework of MSP are limited to a number of sectoral laws and regulations.

Four key initiatives on cooperation can be identified in the Adriatic Sea that could help facilitate the dissemination of the concept of MSP. The Trilateral Commission (Italy, Slovenia, Croatia and Montenegro) forms an institutional framework for the cooperation of the Adriatic States in the protection of the marine and coastal areas against pollution. The Adriatic-Ionian Initiative represents Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro and Slovenia in their effort to link the coastal countries of the Adriatic and Ionian seas, with the objective to cooperate in the development and safety of the whole area. The Adriatic Euroregion (AE) programme represents a model of cooperation that includes transnational and interregional cooperation between regions of the Adriatic coastline. In particular, the AE programme may provide the institutional basis for cross-border/international MSP since marine issues are approached from a sector-neutral point of view, although no national authorities are involved.

Other than that, several proposals have been made with relevance to MSP under the Instrument for Pre-Accession Assistance (IPA) Adriatic programme. The Emilia-Romagna region has submitted a project proposal called ‘Shape’¹⁰² (Shaping a Holistic Approach to Protect the Adriatic Environment), being a proposal for an international cooperation project aiming at the sustainable development of the Adriatic Maritime Region with focus on both ICZM and MSP. The project proposal has passed the formal assessment and is now admitted to the quality assessment¹⁰³. Other interesting projects are CAOS¹⁰⁴ and IMaGe¹⁰⁵. All these initiatives show that cross-border/international cooperation is well-

¹⁰⁰ PAP/RAC, 2008, *National Report on Current Policy, Procedures, Legal Basis and Practice of Marine Spatial Planning*, Koper; Regional Development Agency of South Primorska, e-mail 16 March 2010.

¹⁰¹ Relevant Croatian Ministries, meeting on February 2, 2010 in Zagreb.

¹⁰² The Shape project proposal was approved on December 2nd 2010.

¹⁰³ Adriatic IPA Cross-border Cooperation 2007 – 2013, *List of Admissible projects*, www.adriaticipacbc.org/download/List_of_admissible_projects_Priority_2.pdf.

¹⁰⁴ The CAOS project is a cross-border/international initiative between Italy, Slovenia and Croatia. Its aim is the creation of an Observatory for the protection of the marine and coastal environments in the Adriatic-Ionic basin.

¹⁰⁵ The IMaGe project involves 31 parties representing governments and civil society organisations from the countries

advanced.

IV.1.3. DATA COLLECTION, MONITORING AND EVALUATION

In Italy, the regions carry out the monitoring tasks through environmental agencies, universities and research institutes. One of these agencies is ARPA. The regional offices have water departments that monitor the marine and coastal habitat in a variety of ways. ISPRA (Istituto Superiore per la Protezione e la Ricerca Ambientale) and CNR-ISMAR (Consiglio Nazionale delle Ricerche – Istituto de Scienze Marine) are other marine-related Italian research institutes in this area.

In Slovenia a map illustrating the current maritime uses in the Slovenian internal and territorial waters was developed¹⁰⁶. In addition, one of the main objectives of the ‘Institute of the Republic of Slovenia for Nature Conservation’ is to conserve nature (including the sea). Furthermore, the Inspectorate for the Environment and Spatial Planning of the Ministry of the Environment and Spatial Planning maintains the ‘Spatial Information System’, which is used to facilitate the implementation and monitoring of national and municipal tasks in the area of spatial planning, although this information system mainly focuses on onshore development¹⁰⁷.

In Croatia, scientific work is carried out by the State Institute for Nature Protection. In addition, the Institute of Oceanography and Fisheries carries out sea-related research. A Croatian Vessel Traffic Monitoring System (VTMIS) is currently being implemented in order to avoid accidents and to monitor the density of the international traffic. Cross-border/international cooperation is considered needed in this respect since countries cannot tackle major accidents on their own¹⁰⁸.

IV.1.4. COHERENCE BETWEEN TERRESTRIAL AND MARITIME SPATIAL PLANNING

In Italy there is no national ICZM strategy; regions are responsible for spatial planning of the coast. Several regions (Liguria, Marche, Tuscany and Emilia-Romagna) have developed their own Coastal Plan, but have not yet developed any Maritime Spatial Plans. Emilia-Romagna has included maritime activities in its ICZM strategy, achieving coherence between strategies for land and sea in a number of cases. This is, however, a rare example. In Slovenia, legislation provides for the integration of the management of land and sea areas. Concrete examples towards such an attempt exist, indicating the government’s will to achieve coherence between terrestrial and Maritime Spatial Planning¹⁰⁹. In Croatia, integration between terrestrial and maritime planning is possible – so far only in theory for the 300 meter marine belt as this forms part of the Protected Coastal Area. For the remaining parts of the marine area, the sectoral approach dominates.

bordering the Adriatic Sea and from Corfu. Its main objective is to enhance the sustainability of the activities occurring in the Adriatic coastal and marine areas.

¹⁰⁶ Regional Development Centre Koper, meeting on February 2, 2010 in Koper.

¹⁰⁷ PAP/RAC, 2008, *National Report on Current Policy, Legal Basis and Practice of Marine Spatial Planning*, Koper.

¹⁰⁸ Relevant Croatian Ministries, meeting in Zagreb on February 2, 2010.

IV.1.5. CONCLUSIONS FOR THE ADRIATIC SEA

The need for and benefits of MSP

The need for MSP in the Adriatic Sea is perceived by most stakeholders to be the highest in the northern part where several areas with more potential for MSP have been identified: the Gulf of Trieste (Friuli-Venezia Giulia, Slovenia), the area surrounding the Venice lagoon and the Emilia-Romagna region, and the part of the Northern Adriatic Sea where there is a fish migration loop.

The types of benefits of MSP differ per area. Maritime transport may benefit because ships will not be hindered by other activities (e.g. offshore platforms). Planning the establishment of specific areas for sand extraction will be beneficial for the fishing sector and for the protection of the marine environment. When offshore platforms or other offshore structures are placed outside the visibility of tourism destinations, coastal tourism is likely to benefit. Important areas for the marine environment can benefit from MSP through zoning, specifically by establishing MPAs in those areas that are important for the sustainable development of the marine environment (e.g. fish species).

Pre-requisites for starting MSP

National stakeholder participation & institutional and legal framework

Overall, in the Northern Adriatic region, the institutional and legal framework is not yet ready to provide an efficient framework for the development of MSP. In Italy, the degree of the regions' autonomy differs and there is fragmentation between the different levels of authority. In Slovenia, the legal framework is transparent. In Croatia, a sectoral approach dominates.

Cross-border/international cooperation and consultation

- Cooperation between the different countries is well-established by means of e.g. the Trilateral Commission. However, different preferences between countries may cause obstacles (e.g. plans exist for oil exploitation in Croatia, while Italy rejects these plans based on environmental arguments);
- The research institutes in the Northern Adriatic maintain good relations and cooperate on a frequent basis;
- Because there is a lack of management/control of the sea on a national level, management/control on an international level will be even more difficult to establish.

Data collection, monitoring and evaluation

- In all three countries research institutes are present, providing a good basis for maritime data collection, monitoring and evaluation.

¹⁰⁹ Ministry of the Environment and Spatial Planning, meeting on February 3, 2010 in Ljubljana.

Coherence between terrestrial and Maritime Spatial Planning

- Since ICZM (apart from Emilia-Romagna) and MSP have not yet been developed in this specific area, coherence between terrestrial and Maritime Spatial Planning is missing, although the Slovenian legislation provides the necessary framework to accomplish this.

IV.2. THE ALBORAN SEA

IV.2.1. THE NEED FOR MSP

IV.2.1.1. Area description

The Alboran Sea is located in the Western Mediterranean and connects with the Atlantic Ocean through the Strait of Gibraltar. The Alboran Sea's border on the western side is the eastern limit of the Strait of Gibraltar and its border on the eastern side is the line joining Cape de Gata (Spain) to Cap Fegalo (Algeria). The Alboran Sea borders the countries Spain, Morocco, Algeria and UK (Gibraltar). *Figure 6* presents the Alboran Sea and its surrounding countries.

Figure 8: The Alboran Sea basin and its coastal states



Source: Policy Research Corporation based on Google Maps

IV.2.1.2. Jurisdiction

The territorial waters of Spain, Morocco and Algeria are 12 nm wide. All three countries have established a contiguous zone of 24 nm¹⁰. Morocco and Spain (Law 15/1978) have established an EEZ of 200 nm, but the EEZ is not in force in the Mediterranean. The UK, on behalf of Gibraltar, established jurisdiction of 3 nm around Gibraltar, with exemption of the 2 nm border on the west side where a median line exists between Spanish and UK waters.

In 1994, Algeria established an exclusive fishing zone (*zone de pêche réservée*), which extends 32 nm

from the western maritime border to Ras Ténés and 52 nm from Ras Ténés to the eastern maritime border. Spain, by Royal Decree No. 1315/1997, established a 37 nm fisheries protection zone measured from the outer limit of the territorial sea, but not in the Alboran Sea.

IV.2.1.3. Sea uses and environmental pressures

Competition between maritime activities and environmental pressure of maritime activities in the Alboran Sea is strongest in and around the Strait of Gibraltar and the coastal waters of Andalucía, but also in the other parts of the sea competition and environmental pressure are considerable. In the Strait of Gibraltar the risk of collisions and oil spills is considerable due to the intense maritime transport and the bunkering activities in the Bay of Algeciras. At the same time fishing activities take place. Moreover, the area is of high environmental importance for marine fauna that experience pressure from intensive human use of the Strait. Along the Spanish coast, the main competing activities are fishing and coastal and marine tourism activities. These activities, as well as certain land-based activities, ‘compete’ primarily with the marine environment. *Table 8* shows which activities compete with each other, to what degree and how often this competition occurs. In addition, current permanent zones are indicated¹¹¹. More information is provided in the case study (*Appendix II*).

Table 8 : Competing activities in the Alboran Sea

<i>Competing activities</i>	<i>Competition</i>		<i>High frequency?</i>
	<i>Strong competition?</i>	<i>Permanent zoning?</i>	
Fishing and maritime transport	+	-	√
Maritime transport: merchant shipping and ferries	+	-	√
Coastal tourism and fishing	+	-	√
Fishing and dredging (sand extraction)	++	-	-
Fishing and offshore structures, i.e. cables and pipelines, mariculture	-	√	n.a.
Dredging and offshore structures, i.e. cables and pipelines, mariculture	-	√	n.a.
Coastal tourism and mariculture	-	√	n.a.
Military exercises and all other activities	++	-	-
Future: Offshore wind and other activities, i.e. maritime transport, fishing, coastal tourism, dredging, mariculture	?	√	?

Legend

- = no conflict ? = unknown
+ = moderate conflict √ = yes
++ = strong conflict n.a. = not applicable

Source: Policy Research Corporation

The activities that are presented in *Table 9* lead to pressure on the marine environment. A distinction can be made between the most intensive pressures and less intensive pressures on the marine environment. More information is provided in the case study.

¹¹⁰ This includes the territorial waters (12 nm) and the contiguous waters (12 nm).

¹¹¹ This term is explained in the introduction of the chapter.

Table 9 : Pressure of activities on the marine environment in the Alboran Sea

<i>Most intense pressure</i>
Fishing
Shipping (directly and indirectly (risk of oil spill))
Dredging (sand extraction)
Land-based activities: non-purified wastewater discharges of tourism (urbanisation), industry and agriculture
<i>Other pressures</i>
Offshore platforms (directly and indirectly (risk of oil spill))
Coastal tourism
Mariculture

Source: Policy Research Corporation

IV.2.1.4. Economic effects of MSP¹¹² in the Alboran Sea

Maritime Spatial Planning is likely to bring significant economic direct benefits to the Alboran Sea, mainly because it will help solving conflicts of interest between maritime transport, fishing, sand extraction and tourism. Since the Alboran Sea contains one of the busiest shipping lanes of the world, the whole of the Mediterranean will benefit from a tool that enables a further sustainable development of shipping and trade. For the renewable energy industry – Spain, for example, is in the process of developing offshore wind farms – Maritime Spatial Planning is likely to bring benefits as well, since it will enforce a balance between interests of fishermen, touristic areas and energy companies. The application of MSP will lead to economic effects resulting from improved coordination between the different governmental key players. If the current sectoral approaches in the countries surrounding the Alboran Sea would be replaced by integrated approaches, procedures can become more efficient, leading to lower transaction costs. Since the Alboran Sea performs ‘the lung function’ for the entire Mediterranean the environmental effects of Maritime Spatial Planning can be vast, ultimately leading to indirect economic benefits (sustainability of fish stocks due to maintaining biodiversity, tourism due to preserving environmental heritage, etc).

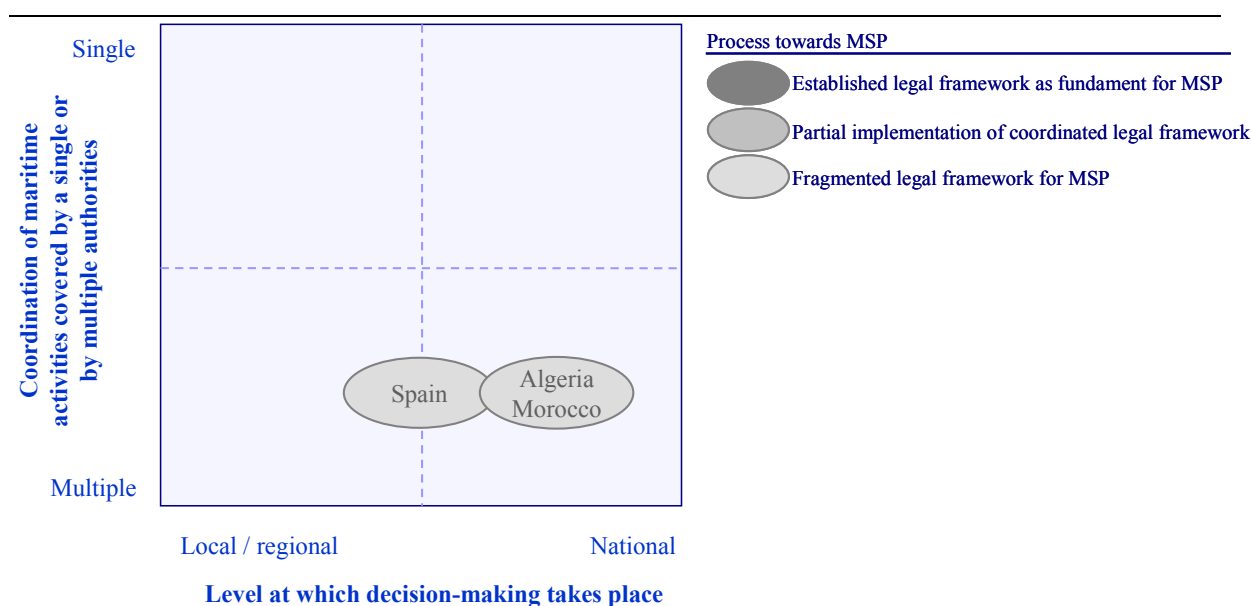
IV.2.2. STAKEHOLDERS, INSTITUTIONAL AND LEGAL FRAMEWORK & CROSS-BORDER COOPERATION

This section describes the degree to which (1) Maritime Spatial Planning issues are coordinated through a single body (integrated approach) or multiple bodies (sectoral approach), (2) responsibility for MSP is assigned to the local/regional level, the national level or to a combination of both and (3) a legal framework relevant for MSP is currently present. The summary of this analysis is illustrated in

¹¹² In *Chapter VII* an indication is provided of the quantification of the economic benefits of MSP for EU Member States in the Mediterranean. Because of the limits of data availability, detailed analyses are not available for subregions of the Mediterranean and for non-EU countries.

Figure 9. Algeria and Morocco both make decisions regarding maritime planning at the national level and multiple authorities are involved, whereas Spain involves both regional and national authorities. Besides public stakeholders, private stakeholders are of course important to MSP as well. They are however not discussed in detail here because of the great variety and number of stakeholders involved. Research institutes and similar stakeholders are discussed in the section on data collection, monitoring and evaluation.

Figure 9: Characteristics of the stakeholder field of the Alboran Sea



Source: Policy Research Corporation

Spain has a relatively complex legal-administrative organisation. The country consists of autonomous communities, which are subdivided in provinces and municipalities. Coastal and maritime planning is the responsibility of both the national and the autonomous governments, although the central government is the main responsible authority for drafting and implementing marine strategies. In this respect, the Ministry of Environment and Rural and Marine Affairs will always be involved; depending on the type of activity, various additional ministries are responsible for maritime planning. The State is currently working on a (draft) law called 'Marine Environment Protection' ('Ley de protección del medio marino' Bill 121/000059, 12 March 2010) to develop a strategy for protecting the marine environment. This law should provide the necessary framework for the protection of the marine environment and the application of MSP.

In Morocco, the national government is responsible for activities in the territorial sea. Depending on the nature of the marine activity, various ministries may be involved, although the Ministry of Spatial Planning, Water and Environment is the key party. The ICZM Protocol has been signed and will soon

be ratified and there is a strong will at the national level to stimulate the development of ICZM¹¹³, although the current sectoral approach may lead to difficulties when developing and implementing ICZM (and MSP).

In Algeria, it is also the national government that is responsible for activities in the territorial sea. The Ministry of Spatial Planning, the Environment and Tourism is responsible for these matters, although other ministries can be involved as well. The National Spatial Plan (SNAT) provides the framework for the management of the coastal areas, under which an ICZM strategy¹¹⁴ has been developed. MSP has not yet been developed in Algeria. Although the coastal law incorporates parts of the sea (soil and subsoil of the territorial sea) it does not provide a sufficient framework for MSP. As the government has a sectoral approach towards the planning of the sea, MSP implementation is challenging in the Algerian region.

On an international level, Algeria, Spain and Morocco have started to cooperate to protect the Alboran Sea. IUCN is coordinating this initiative. Representatives from the three countries coming from research institutes, universities, governments and NGOs have gathered with the objective to strengthen the process of exchanging information, examine the problems and solutions at the regional level in greater depth, and identify priorities for improving the management and governance of the Alboran region. Although this initiative is a good first step towards MSP, it is not sector-neutral and it currently does not provide the institutional basis for MSP application¹¹⁵.

IV.2.3. DATA COLLECTION, MONITORING AND EVALUATION

Spain has a well-developed marine research infrastructure. Departments of the autonomous government of Andalusia have extensive knowledge of the characteristics and state of the coastal waters. The Spanish Institute for Oceanography has a branch in Malaga, which investigates the flora and fauna of the sea. IUCN published a study in 2007 (updated in 2010)¹¹⁶ called ‘Conservation and sustainable development of the Alboran Sea: strategic elements for managing the future’ and it has an office in Malaga. Furthermore, the University of Seville (professor Suarez de Vivero) has developed maps of the Spanish part of the Alboran Sea containing information about its geomorphology¹¹⁷, ecology and maritime activities. Also, research has been carried out for finding suitable offshore wind energy locations in Spain (including the Alboran Sea)¹¹⁸.

¹¹³ According to the Moroccan CAMP coordinator, presentation in June 2010.

¹¹⁴ The strategy provides the framework for applying ICZM and it identifies the relevant circumstances of the current situation in order to establish the foundations of ICZM in Algeria.

¹¹⁵ More information about this initiative is provided in the case study for the Alboran Sea.

¹¹⁶ The study contains information on the Alboran Sea in terms of, amongst others, the environmental characteristics and flora and fauna, the maritime activities taking place and environmental threats.

¹¹⁷ Geomorphology is the scientific study of landforms and the processes that shape them.

¹¹⁸ Assessment study by Ministerio de Medio Ambiente y Medio Rural y Marino.

In Morocco *l'Institut National de Recherche Halieutique* (INRH) is the institute responsible for research related to fish. Also the university located in the northern part of Morocco (Abdelmalek Essaadi University) is involved in studying the Alboran Sea with topics such as geology and pollution. Different branches of the university and INRH cooperate on a frequent basis and international collaboration takes place as well (e.g. with the university of Cadiz and through EU programmes).

In Algeria the main research institute related to the sea is *l'École Nationale Supérieure des Sciences de la Mer et de l'Aménagement du Littoral* (ENSSMAL - marine science and coastal planning). The National Observatory for the Environment and Sustainable Development (ONEDD) is responsible for managing networks for observation and measuring (water) pollution. The National Office for the Coast (CNL) is involved in the preservation of protected areas. On the regional level, the Directorates of the Environment are active, which are attached to ONEDD.

IV.2.4. COHERENCE BETWEEN TERRESTRIAL AND MARITIME SPATIAL PLANNING

In 2007, Spain developed its national ICZM strategy '*Estrategia para la Sostenibilidad de la Costa*'. However, in this strategy no explicit reference was made to the management of the Spanish territorial waters¹¹⁹. In the future, coherence with terrestrial spatial planning (ICZM) could be established through the 'Marine Environment Protection' law (which is currently a draft). Because this law will only apply to aspects of protection or marine environment planning that are not integrated in the river basin management plans, duplication and overlap with existing legislation is avoided. Algeria has developed an ICZM strategy, but coherence with MSP is missing due to the sectoral approach to planning of the sea. Morocco did not yet develop an ICZM strategy.

IV.2.5. CONCLUSIONS FOR THE ALBORAN SEA

The need for and benefits of MSP

In particular the Strait of Gibraltar and the coastal area of the Spanish side of the Alboran Sea are in need of MSP. In and around the Strait, an improved planning of maritime traffic and bunkering activities will be beneficial for the maritime transport sector (fewer accidents), the protection of the marine environment and the fishing sector. MSP will not only be beneficial for the coastal area of Spain by reducing competition between coastal tourism, fishing activities and sand extraction, but will also be beneficial for the protection of the marine environment by reducing the human impact (also of land-based activities) through the selection of zones where protection is needed.

¹¹⁹ In addition, the Spanish regions of Catalonia and Andalusia have developed regional integrated plans to manage their coastal zone, but also in these plans, no explicit reference is made to the Spanish territorial waters.

Pre-requisites for starting MSP

National stakeholder participation & institutional and legal framework

In Spain, responsibilities for MSP are divided between the national and regional authorities, which would hinder communication and coordination if MSP were to be applied. Moreover, different ministries are involved. The national government is currently drafting a law for the protection of the marine environment that will improve the legal framework and the efficiency of coordination and cooperation. In Morocco and Algeria the national governments are responsible for MSP. While the Ministry of Environment (Morocco) and the Ministry of Spatial Planning (Algeria) are always involved, various other ministries are also involved in spatial planning.

Cross-border/international cooperation and consultation

- Differences in preferences between countries may cause obstacles (e.g. attitude towards sustainability);
- Political disagreement among countries, including the UK (Gibraltar), has been and still is present, making cooperation challenging. However, first steps towards cooperation between Morocco, Spain and Algeria have been made through the collaboration for the protection of the Alboran Sea;
- The research institutes and universities in Morocco and Andalucia regularly cooperate;
- There is a lack of management/control on a national level, so management/control on an international level will be even more difficult to establish.

Data collection, monitoring and evaluation

Spain has a well-developed research infrastructure with strong knowledge of the coastal waters. Also Algeria has some marine research institutes. Morocco does not have a research institute specifically focussing on the marine environment, although it has institutes and universities where research is conducted on the Alboran Sea.

Coherence between terrestrial and Maritime Spatial Planning

Spain has developed an ICZM strategy but has not yet adopted this strategy, although the law on marine environment protection that is currently being developed aims for coherence with ICZM. Algeria has developed an ICZM strategy as well. Morocco has not yet developed such a strategy.

IV.3. THE AREA SURROUNDING MALTA

IV.3.1. THE NEED FOR MSP

IV.3.1.1. Area description

Given Malta's central location in the Mediterranean Sea basin, the area surrounding Malta involves both EU Member States (Malta and Italy (the island of Sicily)) as well as non-EU Member States on

the African continent (Tunisia and Libya) (illustrated in *Figure 10*). The Strait of Sicily, located between the island of Sicily and Tunisia, connects the Eastern Mediterranean Sea with the Western Mediterranean Sea.

Figure 10 : The area surrounding Malta and its coastal states



Source : Policy Research Corporation based on Google Maps

IV.3.1.2. Jurisdiction

All coastal states involved have established a territorial sea of 12 nm. Moreover, zones of specific interest have been established: a collaborative Exclusive Fishing Zones in Libya (62 nm) and Tunisia (50 isobath depth), a Fisheries Management Zone in Malta (max. 25 nm) and an Exclusive Economic Zone in Tunisia and Libya. Consequently, the area surrounding Malta can be regarded as a mixture of marine areas under national jurisdiction (both full sovereignty and special interests) and areas beyond national jurisdiction (the high seas).

Agreements about the delimitation of the continental shelf were reached between Italy-Tunisia, Libya-Malta and Tunisia-Libya.

IV.3.1.3. Sea uses and environmental pressures

Competition between maritime activities and environmental pressure of maritime activities in the area surrounding Malta are the strongest in and around the Strait of Sicily and in the coastal waters of Sicily and Tunisia, but also in the other parts of the sea competition and environmental pressure are considerable. *Table 10* shows which activities compete with each other and to what degree and how often this competition occurs. In addition, current permanent zones are indicated¹²⁰. More information is provided in the case study (*Appendix II*).

¹²⁰ This term is explained in the introduction of the chapter.

Table 10 : Competing activities in the area surrounding Malta

Competing activities	Competition		High frequency?
	Strong conflict?	Permanent zoning?	
Fishing and maritime transport	+	-	√
Fishing: artisanal fishing versus trawling	++	√	√
Coastal tourism and fishing	+	-	√
Coastal tourism and mariculture	-	√	n.a.
Coastal tourism and offshore platforms	-	√	n.a.
Fishing and offshore structures, i.e. offshore platforms, cables and pipelines, mariculture	-	√	n.a.
Military exercises and all other activities	++	-	-
Future: offshore wind farms and other activities, i.e. maritime transport, fishing, coastal tourism, dredging, mariculture	?	√	?

Legend

- = no conflict ? = unknown
 + = moderate conflict √ = yes
 ++ = strong conflict n.a. = not applicable

Source: Policy Research Corporation

The activities that are presented in *Table 11* lead to pressure on the marine environment. A distinction can be made between the most intensive pressures and less intensive pressures on the marine environment. More information can be found in the case study.

Table 11 : Pressure of activities on the marine environment in the area surrounding Malta

Most intense pressure
Fishing
Shipping (directly and indirectly (risk of oil spill))
Land-based activities: non-purified wastewater discharges of tourism (urbanisation), industry and agriculture
Other pressures
Offshore platforms and related seismic surveys / drills (directly and indirectly (risk of oil spill))
Coastal tourism
Mariculture
Future: offshore wind farms

Source: Policy Research Corporation

IV.3.1.4. Economic effects of MSP¹²¹ in the area surrounding Malta

Maritime Spatial Planning can have positive economic effects as a result of reducing or preventing conflicts in the Strait of Sicily. Similar to the Alboran Sea, the strait contains a busy shipping lane that

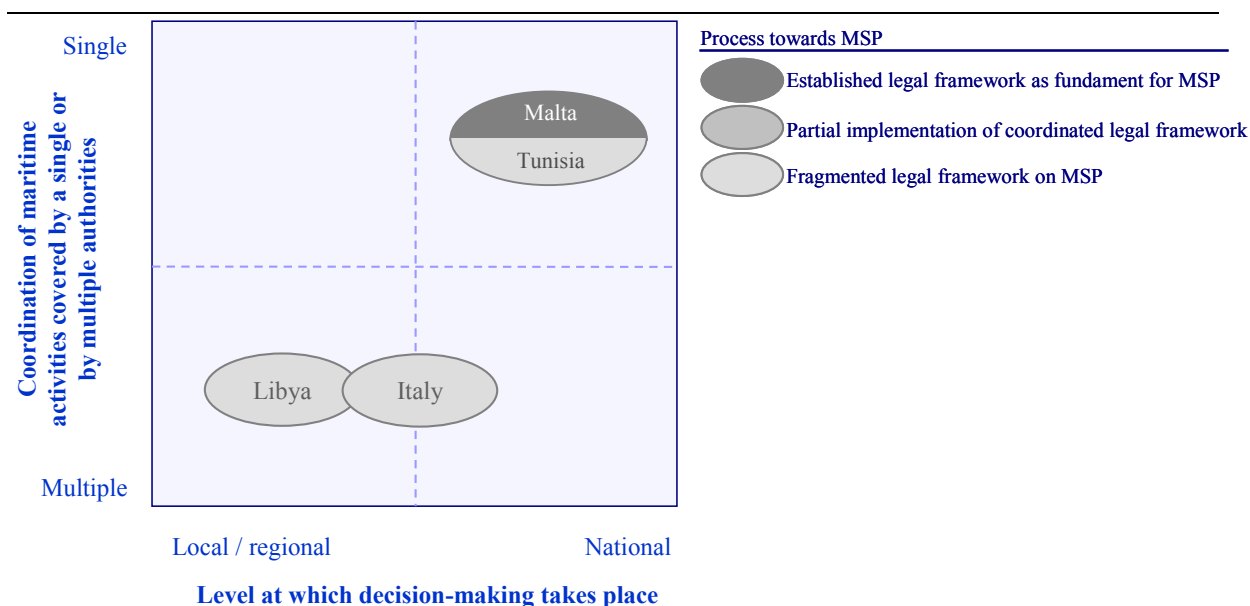
¹²¹ In *Chapter VII* an indication is provided of the quantification of the economic benefits of MSP for EU Member States in the Mediterranean. Because of the limits of data availability, detailed analyses are not available for subregions of the Mediterranean and for non-EU countries.

is of significant importance for Mediterranean countries, but also for transit to the Atlantic or Suez Canal. In addition, competition between maritime activities is present in a considerable number of places close to the shore. In Tunisia for example, concerns exist about the widespread presence of mariculture. Proposals have been made to redistribute mariculture sites to reduce competition with other activities. MSP can also help to achieve long-term sustainability of fish stocks, creating long-term economic value for the coastal areas in Sicily. The authorities are likely to increase their coordination efficiency if they apply MSP. Improved coordination reduces the costs for authorities in different ways (e.g. less administrative costs). In particular in the cases of Sicily and Libya, significant positive economic effects of MSP are to be expected in case coordination is improved, since the current sectoral approaches in these areas require considerable coordination costs. The inter-ministerial committee in Tunisia and the MEPA in Malta are examples of initiatives that improve coordination and thus reduce transaction costs.

IV.3.2. STAKEHOLDERS, INSTITUTIONAL AND LEGAL FRAMEWORK & CROSS-BORDER COOPERATION

This section describes the degree to which (1) Maritime Spatial Planning issues are coordinated through a single body (integrated approach) or multiple bodies (sectoral approach), (2) responsibility for MSP is assigned to the local/regional level, the national level or to a combination of both and (3) a legal framework relevant for MSP is currently present. The summary of this analysis is illustrated in *Figure 11*. Besides public stakeholders, private stakeholders are of course important to MSP as well. They are however not discussed in detail here because of the great variety and number of stakeholders involved. Research institutes and similar stakeholders are discussed in the section on data collection, monitoring and evaluation.

Figure 11: Characteristics of the stakeholder field of the Area surrounding Malta



* Malta and Tunisia both take decisions at the national level and have a single coordinating body for maritime planning issues. Moreover Malta has the legal framework available to apply MSP.

Source: Policy Research Corporation

In Italy, both regional and national authorities are involved in maritime planning and a variety of laws exist concerning both coastal and maritime planning. Responsible ministries for maritime issues are the Ministry of Environment, Protection of the Territory and the Sea, the Ministry of Infrastructure and Transport, the Ministry of Agriculture and Fisheries, and the Ministry of Defence. While a number of Italian regional authorities have developed their own Regional Coastal Plans and according legislation¹²², there is no dedicated national legal framework for ICZM or MSP. In short, there are many authorities involved in Coastal and Maritime Spatial Planning in Italy, which hampers the implementation of MSP as a tool towards the sustainable management of the sea¹²³.

The institutional and legal framework for Maritime Spatial Planning in Libya is relatively weak. The most important actors involved in spatial planning and marine protection are¹²⁴ the Urban Planning Agency (UPA), which monitors the development of spatial development plans at regional, sub-regional and local levels, and the Environment General Authority (EGA). In addition, the National Spatial Planning Strategy 2006 – 2030 provides guidelines for comprehensive planning. In practice, however, many of these plans failed because the local conditions and needs were not considered properly, indicating a lack of stakeholder involvement.

¹²² The issue of the division of competences over the territorial sea between the national government and the regions with a special status (notably Sicily) is being dealt with by an ongoing ruling (latest update: Corte Costituzionale, Sentenza n. 360 del 17/12/2010).

¹²³ PAP/RAC, 2007, *National Report on Current Policy, Procedures, Legal Basis and Practice of Marine Spatial Planning in Emilia-Romagna region – Italy*, Bologna.

¹²⁴ 2006, Libya – Urban Planning Agency.

In Malta, coastal and maritime planning is the responsibility of MEPA (Malta Environment and Planning Authority), the entity within the Office of the Prime Minister, responsible for land-use planning and environmental regulation. MEPA was established in 2001, based on the Environment Protection Act and the Development Planning Act¹²⁵. MEPA evaluates proposals on coastal and Maritime Spatial Planning. If reviews have to be made of spatial plans ('Local Plan Review'), MEPA consults the relevant ministries to determine any impacts on sectoral plans and strategies and consequent prioritisation of initiatives. The Local Plan Review process involves public consultation. Local Plan Reviews require endorsement by the minister responsible for Development Planning¹²⁶. Whilst there is no specific reference to the term 'Maritime Spatial Planning', the existing planning legislation provides the necessary framework for developing plans and issuing development permits to regulate sea-uses.

In Tunisia, the Ministry of Environment and Sustainable Development and the Ministry of Agriculture, Fisheries and Water Resources are key authorities for MSP. Depending on the maritime activities, other ministries may be involved. Proposals for maritime plans need several approvals: first by a ministry (that is related to the maritime activity, e.g. responsible for fisheries); then the Coastal Protection and Management Agency (APAL) checks whether the plan is in accordance with its objectives; subsequently the National Agency for the Protection of the Environment (ANPE) conducts an environmental assessment study. In case the project passes the environmental assessment, an inter-ministerial commission decides whether the project receives a license. No regional or local authorities (formally) participate in the decision-making process.

Relationships between EU as well as non-EU Member States are well-established in the area surrounding Malta. Bilateral interactions include the Maltese/Italian involvement in the FP7-funded MESMA (Monitoring and Evaluation of Spatially Managed Areas) project for the Strait of Sicily¹²⁷, and Maltese/Tunisian research cooperation programmes. Although the Barcelona Convention is regarded as an important facilitator of international cooperation, no specific platform is present in this area for cooperation on MSP. In the future, the well-established relations, especially between Italy, Tunisia and Malta, may create a framework that enables cooperation on MSP topics.

IV.3.3. DATA COLLECTION, MONITORING AND EVALUATION

Collection of information on the marine environment has only recently started in Malta. The main tools for gathering environmental data are projects (e.g. monitoring of the environmental status) and research conducted by specific institutes such as universities¹²⁸. In order to improve the safety and efficiency of vessel traffic and consequently protect the marine environment, the former Malta

¹²⁵ Malta Environment & Planning Authority, www.mepa.org.mt.

¹²⁶ Currently this is the Prime Minister.

¹²⁷ The project started in November 2009 and runs until November 2013. Office of the Prime Minister, Malta Environment and Planning Authority and Ministry of Resources and Rural Affairs, meeting in Valetta on 9 March 2010.

¹²⁸ Office of the Prime Minister and Malta Environment and Planning Authority, meeting in Valetta on 9 March 2010.

Maritime Authority established the Vessel Traffic Service in 2004¹²⁹.

In Sicily, the research institutes ARPA, ISPRA and CNR-IAMC are involved in marine research. One of the two marine research centres of ISPRA is located in Palermo. The Institute for Coastal Marine Environment of the National Research Council (CNR-IAMC) has three locations in Sicily and focuses on marine sciences, in particular aspects of biology, chemistry, physics and geology and studies on renewable resources (fisheries and aquaculture) and marine technologies.

In Tunisia the main organisations involved with marine data collection are APAL, ANPE and INSTM. APAL (Agence de Protection et d'Aménagement du Littoral) is responsible for the management and protection of the coast. It carries out studies and gathers data relevant for its main mission, i.e. to protect the (marine) environment, and it monitors the marine environment in fishing ports and areas used for recreation and industrial/commercial purposes. INSTM (Institut National des Sciences et Technologies de la Mer) is the focal point regarding fisheries and mariculture. The institute studies the Tunisian Sea in order to provide the DGPA (Directeur Général Pêche et Aquaculture) with recommendations about the actions that are needed to preserve ecosystems.

In Libya the only identified research institute relevant for MSP is the Marine Biology Research Centre (MBRC).

IV.3.4. COHERENCE BETWEEN TERRESTRIAL AND MARITIME SPATIAL PLANNING

Although no specific reference to the term ‘Maritime Spatial Planning’ is made in the Maltese legislation, it provides the necessary legislative framework for the development of plans and the issuing of development permits to regulate sea-uses. Nevertheless, at present, the Maltese planning process mainly focuses on land-use planning, although the framework should enable coherence in the future. In Tunisia, the government considers ICZM a high priority. A Coastal Area Management Programme (CAMP) was carried out for the Sfax region, located along the east coast of Tunisia. However, no national ICZM has been developed, making it difficult to achieve coherence between terrestrial planning and MSP. The same conclusion holds for Sicily and Libya: both have not yet developed an ICZM strategy or similar activities.

IV.3.5. CONCLUSIONS FOR THE AREA SURROUNDING MALTA

The need for and benefits of MSP

The Strait of Sicily is an intensively used area. Maritime traffic, the exploitation of oil and gas and fishing are currently the main activities in these areas. In addition, this area is of major importance to the marine environment. MSP can be helpful in identifying the areas that need protection and in

¹²⁹ Drago, A., 2004, *Building the best future for the marine sector in the Maltese Islands: ‘A vision towards enhancing the marine sector’s contribution to the Maltese economy in 2020’*.

selecting areas where and when activities can take place. This is likely to result in opportunities for the sustainable growth of maritime activities.

Pre-requisites for starting MSP

National stakeholder participation & institutional and legal framework

Sicily is an Italian region with many responsibilities of its own, including responsibility for certain activities in the territorial sea. While Sicily, Tunisia nor Libya has developed ICZM or MSP, Malta has developed an ICZM strategy. In Tunisia, the ministries are responsible for maritime issues, while municipalities are involved as stakeholders; an inter-ministerial committee ensures coordination between all sectoral stakeholders. In Malta, MEPA ensures coordination between ministries.

Cross-border/international cooperation and consultation

In general, the international relations in the area are well-established, including cooperation between research institutes. Specifically, the MESMA project for the Strait of Sicily (cooperation between Sicily and Malta) is strongly related to MSP. Cross-border management/control is likely to be challenging, as similar challenges already exist on a national level.

Data collection, monitoring and evaluation

Research institutes in Italy related to the marine environment are ARPA, ISPRA and CNR-IAMC. Tunisia and Malta also have relevant research institutes. A research institute in Libya is MBRC.

Coherence between terrestrial and Maritime Spatial Planning

Apart from Malta, ICZM and MSP have not been developed in any of the involved countries. Malta has experience with ICZM and currently prioritises terrestrial planning, although a framework for maritime spatial planning is available.

IV.4. THE WESTERN MEDITERRANEAN SEA

IV.4.1. THE NEED FOR MSP

IV.4.1.1. Area description

The Western Mediterranean, as included in this study, consists of (parts of) the waters of the north-western part of Italy (including the Island of Sardinia), the southern part of France (including the Island of Corsica), Monaco¹³⁰ and a part of the eastern coast of Spain (including the Balearic islands).

¹³⁰ Monaco is a small sovereign country bordering France in the east; for Monaco, only the marine jurisdiction and the relevant stakeholders with regard to the application of MSP are discussed.

The Western Mediterranean contains rare and vulnerable ecosystems while frequent maritime activities take place in the region. *Figure 12* presents the Western Mediterranean and the coastal states involved.

Figure 12: The Western Mediterranean and its coastal states



Source: Policy Research Corporation based on Google Maps

IV.4.1.2. Jurisdiction

France, Monaco, Italy as well as Spain have all established territorial seas of 12 nm¹³¹. Although Spain has established an Exclusive Economic Zone (EEZ) in the Atlantic Ocean, it did not establish an EEZ in the Mediterranean Sea basin. Instead, Spain opted for a Fishery Protection Zone (FPZ) of 37 nm that applies in the Western Mediterranean, but not in the Alboran Sea. France established an Ecological Protection Zone (EPZ) in the Mediterranean Sea basin¹³². In addition, France has a surveillance zone, a zone in which the coastal state ensures surveillance against offences breaking international regulations, including illicit discharges. At present, discussions about the delimitation of the maritime boundaries between France and Spain are still ongoing as France's Ecological Protection Zone borders overlap with Spain's Fisheries Protection Zone¹³³. This results from a different use of principles with regard to maritime delimitation. The area affected by this disagreement covers 47 476 km².

Moreover, France is in the process of establishing an Exclusive Economic Zone in the Mediterranean Sea. Initially, France intended to establish a Fishery Protection Zone within the same boundaries as its Ecological Protection Zone. Eventually, the country opted to establish an EEZ as this would be more effective when acting on a sustainable approach towards (their part of) the Mediterranean than a combined Ecological and Fisheries Protection Zone (EFPZ)¹³⁴.

¹³¹ With regard to the maritime boundaries with Monaco, a convention concerning its territorial sea and the waters beyond 12 nautical miles was signed in February 1984.

¹³² The breadth of the French Ecological Protection Zone reaches up to 70 nm; the total area covered amounts to 66 153 km².

¹³³ IFREMER, meeting in La Seyne sur Mer on 29 March 2010.

¹³⁴ Ministère de l'Écologie, de l'Énergie, du Développement Durable et de la Mer, 2009, *La Méditerranée devient une zone*

In 2006, Italy passed framework legislation that empowers the establishment of Ecological Protection Zones¹³⁵. Such zone(s) would include waters beyond the territorial sea up to the agreed boundary with neighbouring States or, if no such boundaries have been established, up to the median line¹³⁶. At present, no Ecological Protection Zone has yet been established.

IV.4.1.3. Sea uses and environmental pressures

Competition between maritime activities and environmental pressure of maritime activities in the Western Mediterranean Sea is considerable. *Table 12* shows which activities compete with each other, to what degree and how often this competition occurs. In addition, current permanent zones are indicated¹³⁷. More information is provided in the case study (*Appendix II*).

In the Western Mediterranean, the following regions were identified as areas with more potential for MSP within the Western Mediterranean: the Languedoc-Roussillon region (including the Gulf of Lion and more specifically the spawning areas of the hake fish), the Pelagos Sanctuary, the Strait of Bonifacio and the Southern Balearics.

Table 12: Competing activities in the Western Mediterranean Sea

<i>Competing activities</i>	<i>Competition</i>		<i>High frequency?</i>
	<i>Strong conflict?</i>	<i>Permanent zoning?</i>	
Fishing and dredging (sand extraction)	++	-	√
Fishing and mariculture	-/++	√	-/√
Fishing and maritime transport	+	-	-
Coastal tourism and fishing	++	-	√
Coastal tourism and mariculture	-/++	√	-/√
Military exercises and all other activities	++	-	-
Future: offshore wind and other activities, i.e. maritime transport, fishing, coastal tourism, dredging mariculture	?	√	?

Legend

- = no conflict ? = unknown
 + = moderate conflict √ = yes
 ++ = strong conflict n.a. = not applicable

Source: Policy Research Corporation

In France, the abundant presence of mariculture competes with fishing activities and coastal tourism. In the other parts of the Western Mediterranean (as defined in this study), competition between

économique exclusive ; www.france24.com; Union for the Mediterranean, telephone conference on 5 July 2010.
¹³⁵ The Ecological Protection Zone(s) should not be confused with Marine Protected Areas. Ecological Protection Zone(s) are maritime zones which can be established along portions of the entire coastline, while Marine Protected Areas are specific areas protected because of their special biological characteristics.
¹³⁶ Law n. 61 of 8 February 2006, in Gazzetta Ufficiale no. 52 of 3 March 2006.
¹³⁷ This term is explained in the introduction of the chapter.

mariculture and other activities is more limited.

The activities that are presented in *Table 12* lead to pressure on the marine environment. A distinction can be made between the most intensive pressures and less intensive pressures on the environment (see *Table 13*).

Table 13: Pressure of activities on the marine environment in the Western Mediterranean Sea

<i>Most intense pressure</i>
Fishing
Shipping (directly and indirectly (risk of oil spill))
Sand extraction
Land-based activities: non-purified wastewater discharges of tourism (urbanisation), industry and agriculture
<i>Other pressures</i>
Coastal tourism
Mariculture
Military exercises
Future: offshore wind farms

Source: Policy Research Corporation

IV.4.1.4. Economic effects of MSP¹³⁸ in the Western Mediterranean

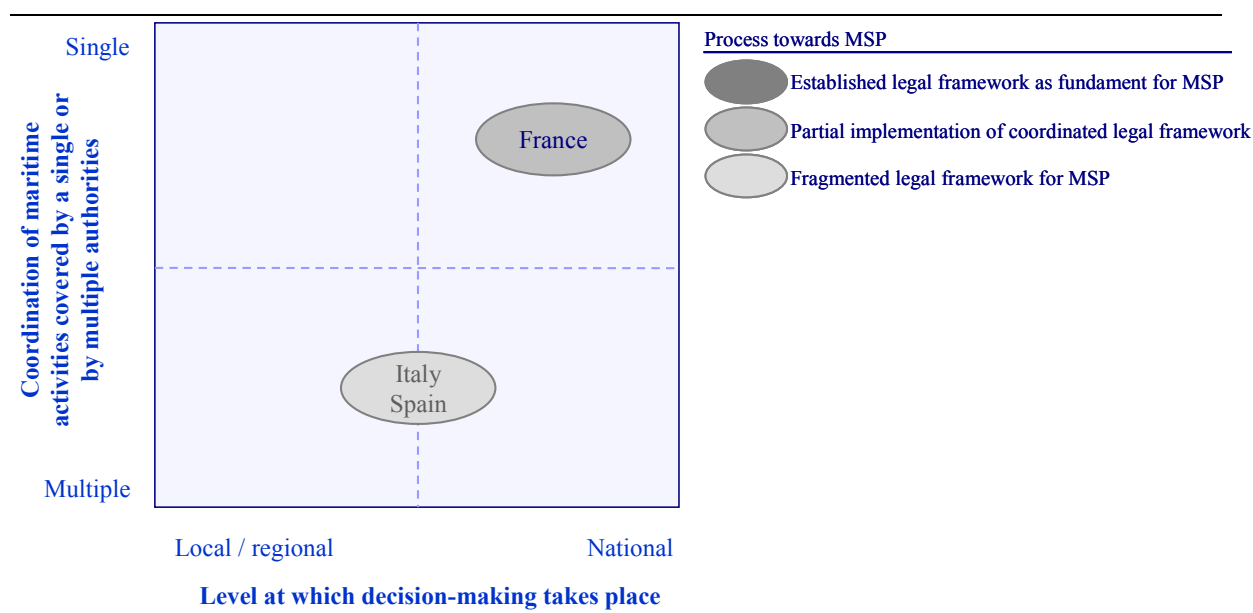
Being a major touristic hotspot, the Western Mediterranean can bring about strong benefits from Maritime Spatial Planning if it helps to achieve its objective of sustainable economic growth, since preservation of the area is a must for maintaining its attractiveness to tourists. Moreover, important spawning areas of fish species could be protected, enabling the sustainable development of fishing. Coordination benefits are most likely to be achieved in Spain and Italy, since France has already taken measures to improve coordination, such as the establishment of the SGMer and CIMer. In Italy and Spain, sectoral approaches are still present, but coordination is also challenging due to a division of powers between the national and regional governments in these countries. Besides the economic effects resulting from improvements in the institutional and legal framework, MSP can also contribute to a reduction of search costs. Since all three countries already have a relatively well-advanced research infrastructure, resources could be allocated to the integration of knowledge to reduce search costs. Also the creation of additional knowledge – in particular for areas further offshore – will contribute to a reduction of search costs.

¹³⁸ In *Chapter VII* an indication is provided of the quantification of the economic benefits of MSP for EU Member States in the Mediterranean. Because of the limits of data availability, detailed analyses are not available for subregions of the Mediterranean and for non-EU countries.

IV.4.2. STAKEHOLDERS, INSTITUTIONAL AND LEGAL FRAMEWORK & CROSS-BORDER COOPERATION

This section describes the degree to which (1) Maritime Spatial Planning issues are coordinated through a single body (integrated approach) or multiple bodies (sectoral approach), (2) responsibility for MSP is assigned to the local/regional level, the national level or to a combination of both and (3) a legal framework relevant for MSP is currently present. Besides public stakeholders, private stakeholders are of course important to MSP as well. They are however not discussed in detail here because of the great variety and number of stakeholders. Research institutes and similar stakeholders are discussed in the section on data collection, monitoring and evaluation. The summary of this analysis is illustrated by *Figure 13*.

Figure 13: Characteristics of the stakeholder field of the Western Mediterranean



Source: Policy Research Corporation

In France, the management of the sea area is the responsibility of the national government, although certain services are decentralised through interregional (DIRM) and interdepartmental (DDTM) organisations. The new maritime policy, which includes an integrated land-sea approach¹³⁹, led to changes in the French administration including the setting up of the DIRM and DDTMs. This change is meant to increase understanding of sea-related policies set out at the national level while uniting several decentralised services of the state. The SGMer (Secretary General for the Sea) and CIMer (Interministerial Committee for the Sea) ensure coordination between the authorities responsible for MSP.

¹³⁹ The 'national strategy for the sea and oceans' (i.e. Blue Book) does not specifically mention MSP, although it does highlight that sea areas will be managed in continuity with ICZM.

In Italy, both regional and national authorities are involved in Maritime Spatial Planning and a variety of laws exist concerning both coastal and maritime planning. Responsible for maritime issues are the Ministry of Environment, Protection of the Territory and the Sea, the Ministry of Infrastructure and Transport, the Ministry of Agriculture and Fisheries, and the Ministry of Defence. While a number of Italian regional authorities have developed their own Regional Coastal Plans and according legislation, there is no dedicated national legal framework for ICZM or MSP. Coastal and Maritime Spatial Planning is characterised by fragmentation between the different levels of authority, hampering the implementation of MSP as a tool towards the sustainable management of the sea¹⁴⁰.

Spain has a relatively complex legal-administrative organisation. The country consists of autonomous communities, which are subdivided in provinces and municipalities. Coastal and maritime planning is the responsibility of both the national and the autonomous governments, although the central government is the main responsible for drafting and implementing marine strategies. In this respect, the Ministry of Environment and Rural and Marine Affairs will always be involved; depending on the type of activity, various additional ministries are responsible for maritime planning. The State is currently working on a (draft) law called ‘Marine Environment Protection’ (‘Ley de protección del medio marino’ Bill 121/000059, 12 March 2010) to develop a strategy for protecting the marine environment. This law should provide the necessary framework for the protection of the marine environment and the application of MSP.

Cross-border/international cooperation between the different countries in the Western Mediterranean is established through a threefold of initiatives: the Pelagos Sanctuary (France, Italy and Monaco), the Strait of Bonifacio (France and Italy) and the Ramoge Agreement (France, Italy and Monaco). The Ramoge Agreement has been designed to prevent pollution of the marine environment within a designated maritime zone. In addition, numerous international (EU and non-EU funded) MSP-related projects exist involving the countries of the Western Mediterranean (see *Annex II* and *Appendix I*). As these initiatives are MSP-related, they could further facilitate the dissemination of the concept, although they are mainly focused on the environment and not primarily on balancing the interests of both economic activities and the environment.

IV.4.3. DATA COLLECTION, MONITORING AND EVALUATION

Several research institutes in France conduct research related to MSP-topics. L’Institut français de recherche pour l’exploitation de la mer (IFREMER) is a French marine research institute. Several relevant research topics are aquaculture, fisheries, biodiversity and marine ecosystems. The Pôle de compétitivité Mer PACA (The Provence Alpes Côte d’Azur competitiveness Maritime Cluster) unites around 300 members from research centres and private companies. The cluster’s expertise is mainly

¹⁴⁰ PAP/RAC, 2007, *National Report on Current Policy, Procedures, Legal Basis and Practice of Marine Spatial Planning in Emilia-Romagna region – Italy*, Bologna.

related to marine technologies. Plan Bleu is one of the Regional Activity Centres established under the Action Plan for the Mediterranean (UNEP/MAP). Plan Bleu is responsible for producing information and knowledge in order to alert policy makers and stakeholders on environmental risks and challenges of sustainable development in the Mediterranean. For instance, they assess the interaction between the environment and socio-economic developments to measure progress towards sustainable development, which is interesting from the perspective of the ecosystem approach. In addition, there are several other research institutes such as the Centre d'Études Techniques Maritimes et Fluviales (CETMEF), the Centre National de Recherche Scientifique (CNRS) and the Programme National Environnement Côtier.

In Italy, the regions carry out the monitoring tasks through environmental agencies, universities and research institutes. One of these agencies is ARPA. The regional offices have a water department that monitors the marine and coastal habitat in a variety of ways. ISPRA (Istituto Superiore per la Protezione e la Ricerca Ambientale) and CNR-IAMC are other Italian research institutes involved in research related to the sea.

An important research institute in Spain is the Spanish Institute of Oceanography (IEO), receiving assignments from the State for oceanographic research in, amongst others, the Western Mediterranean. The Institut de Ciències del Mar (Institute of Marine Sciences), located in Barcelona, studies marine ecosystems, assesses the impact of human activities on the environment and seeks appropriate solutions. Another relevant institute in Spain is IMEDEA, the Mediterranean Institute for Advanced Studies. One of their main research topics is how to achieve an integrated and sustainable management of coastal areas. The ecology and marine resources department's main goal is to contribute to the sustainability of marine systems by providing sound scientific knowledge about its structure, functioning and response to natural and anthropogenic pressure.

IV.4.4. COHERENCE BETWEEN TERRESTRIAL AND MARITIME SPATIAL PLANNING

Integrated strategic planning of space and resources takes a lead position in the new French maritime policy. The 'national strategy for the sea and oceans' (i.e. Blue Book) does not specifically mention MSP but highlights that sea areas will be managed in continuity with ICZM. An evolution towards integrated management of the sea and coast – including MSP – would then be noticeable¹⁴¹.

In Italy there is no national ICZM strategy; regions are responsible for spatial planning of the coast. Several Italian regions (including Liguria and Tuscany) have developed their own Coastal Plan, which do not include MSP.

In 2007, Spain developed its national ICZM strategy '*Estrategia para la Sostenibilidad de la Costa*'.

¹⁴¹ Le Grenelle de la Mer, 2009, *Blue Book Commitments of the Oceans Round Table (Grenelle de la Mer)*.

However, in this strategy no explicit reference was made to the management of the Spanish territorial waters¹⁴². In the future, coherence with terrestrial spatial planning (ICZM) could be established through the ‘Marine Environment Protection’ law (which is currently a draft). Because this law will only apply to aspects of protection or marine environment planning that are not integrated in the river basin management plans, duplication and overlap with existing legislation is avoided.

IV.4.5. CONCLUSIONS FOR THE WESTERN MEDITERRANEAN SEA

The need for and benefits of MSP

The following regions have more potential for MSP: the Languedoc-Roussillon region (including the Gulf of Lyon and more specifically the spawning areas of the hake fish), the Pelagos Sanctuary, the Strait of Bonifacio and the Southern Balearics. MSP could help finding solutions for competition between relevant activities such as mariculture, marine and coastal tourism, fisheries, sand extraction, maritime transport and offshore wind farms. MSP can also be beneficial for the protection of the marine environment (spawning areas, biodiversity hotspots and protection of cetaceans) by enabling the selection of areas that are in need of protection.

Pre-requisites for starting MSP

National stakeholder participation & institutional and legal framework

France is moving towards a new maritime policy. Changes in the institutional and legal framework have been made in order to come to an integrated approach towards the land and sea. In Spain, responsibilities are divided between the national and regional governments, not always facilitating communication and coordination, although improvements are being made by means of new legislation. The various regions in Italy have differing levels of autonomy and their responsibilities are fragmented. However, in general, the Western Mediterranean area has the most developed institutional and legal framework for MSP of the four areas studied.

Cross-border/international cooperation and consultation

Cross-border/international cooperation between the different countries in the Western Mediterranean is currently already established through: the Pelagos Sanctuary, the Strait of Bonifacio and the Ramoge Agreement. In addition, numerous cross-border/international MSP-related EU and non-EU funded projects exist, which also involve the countries of the Western Mediterranean. As these initiatives are MSP-related, they could further facilitate the dissemination of the concept, although they are mainly focused on the environment and not equally on balancing the interests of both economic activities and the environment. Moreover, cross-border management/control also still needs to be set up.

¹⁴² In addition, the Spanish regions of Catalonia and Andalusia have developed regional integrated plans to manage their coastal zone, but also in these plans, no explicit reference is made to the Spanish territorial waters.

Data collection, monitoring and evaluation

All three countries have well-developed marine research infrastructure facilities.

Coherence between terrestrial and Maritime Spatial Planning

Integrated strategic planning of space and resources has a major role in the new French maritime policy. The ‘national strategy for the sea and oceans’ (i.e. Blue Book) does not specifically mention MSP, but highlights that sea areas will be managed in continuity with ICZM. Spain has developed an ICZM strategy, but has not yet implemented it; the law on marine environment protection could further contribute to the coherence between ICZM and MSP. ICZM has been developed in coastal regions in Italy (Liguria, Tuscany) although, since MSP has not yet been developed, coherence between ICZM and MSP is not yet present.

IV.5. CHAPTER SUMMARY

In *Chapter IV*, an overview is provided of the more detailed analyses carried out for the four areas in the Mediterranean that currently have more potential for the application of MSP: the Adriatic Sea, the Alboran Sea, the area surrounding Malta, and the Western Mediterranean. The in-depth case study reports are available in *Appendix II*.

For each of the four areas, the following characteristics have been looked into:

- The need for MSP;
- Stakeholders, institutional and legal framework & cross-border cooperation;
- Data collection, monitoring and evaluation;
- Coherence between terrestrial and Maritime Spatial Planning.

The need for MSP in the **Adriatic Sea** is the highest in the northern part. Positive elements towards the future application of MSP are that:

- Cooperation between the three countries involved is well-established;
- Marine research institutes are present and cooperate on a frequent basis;

Issues that require attention in order to elaborate MSP in the Adriatic are:

- The institutional and legal framework;
- Management and control of the sea, both nationally and internationally;
- The development of ICZM (coherence with MSP).

The need for MSP in the **Alboran Sea** is the highest in the Strait of Gibraltar and the coastal waters of Andalucía. Positive elements towards the future application of MSP are that:

- Spain has been developing an ICZM strategy and a law on marine environment protection that could contribute to establishing coherence between ICZM and MSP;
- Relevant research institutes in Morocco and Spain are present and regularly cooperate;

Issues that require attention in order to elaborate MSP in the Alboran Sea are:

- The fragmentation of public responsibilities (sectoral approach and responsibilities on different levels);
- Political disagreements among countries and differences in preferences (e.g. attitude towards sustainability);
- Management and control of the sea, both national and international.

The need for MSP in the **area surrounding Malta** is the highest in the Strait of Sicily and the coastal waters of Sicily and Tunisia. Positive elements towards the future application of MSP are that:

- International relations in the area are well-established, including cooperation between research institutes;
- Malta has developed an ICZM strategy;

Issues that require attention in order to elaborate MSP in the area surrounding Malta are:

- Management and control of the sea, both national and international;
- ICZM, as a step towards MSP, has not yet been set up in Italy, Tunisia or Libya.

The need for MSP in the **Western Mediterranean** is the highest in the Languedoc-Roussillon region, the Pelagos Sanctuary, the Strait of Bonifacio and the Southern Balearics. Positive elements towards the future application of MSP are that:

- Of the four areas studied, the Western Mediterranean has the most developed institutional and legal framework for MSP;
- Cross-border / international cooperation has already been established through several initiatives;
- All three countries involved have well-developed marine research infrastructure facilities;
- Coherence between ICZM and MSP is very promising in France and also Spain is heading in that direction;

Issues that require attention in order to elaborate MSP in the Western Mediterranean are:

- The possibilities to improve the sector-neutrality of the cooperation platforms;
- The fragmentation of responsibilities for maritime affairs in Italy and the broader implementation of ICZM as a basis for MSP.

V. OBSTACLES AND DIFFICULTIES OF IMPLEMENTING MSP IN THE MEDITERRANEAN SEA

A number of obstacles and difficulties have been identified that may hinder the successful application of MSP in the Mediterranean Sea. These obstacles/difficulties are related to the following topics:

- Management and control of the sea;
- Data collection, monitoring and evaluation
- Cross-border cooperation;
- Institutional and legal framework.

V.1. MANAGEMENT AND CONTROL OF THE SEA

Management of the high seas

As the risks of user and environmental competition increase on the high seas¹⁴³ in the Mediterranean Sea due to, for example, the expansion of maritime transport, offshore platforms and offshore wind farms, the need for MSP in these seas rises. Taking into account the key principles of MSP and the ecosystem based approach, the management of the high seas can take different forms. Through the establishment of maritime zones in general and Exclusive Economic Zones (EEZ)¹⁴⁴ in particular, a country can gain jurisdiction over part of the high seas – within the limits of international law in general and UNCLOS in particular – and thus obtain the rights and duties to manage such zones. Some countries have established such zones in the Mediterranean Sea for the sustainable development of the maritime activities and/or for the protection of the marine environment. Establishing a maritime zone enables the adoption of measures under national legislation, which implies that the country is not solely depending on international cooperation for introducing measures¹⁴⁵.

In the case of the Mediterranean where there is no area wider than 400 nautical miles, the establish-

¹⁴³ The high seas are the seas outside of national jurisdiction.

¹⁴⁴ An EEZ is one of the maritime zones understood as zones relating to the implementation of UNCLOS. Other maritime zones are: contiguous zones, contiguous archaeological zones, fisheries zones (or fisheries protection zones), ecological protection zones, and ecological and fisheries protection zones.

¹⁴⁵ The type of zone (i.e. EFZ, EPZ, EFPZ or EEZ), determines what kind of measures can be taken. The Exclusive Economic Zone is the only type of zone that facilitates the introduction of a Maritime Spatial Plan since it is the only cross-sectoral type of zone.

ment of maritime zones implies either an agreement amongst neighbouring States on a delimitation boundary or, if no agreement is reached, the submission of a dispute to a third party dispute resolution body.

Throughout the Mediterranean Sea there are overlapping maritime zones for the EEZ. There are only limited cases of delimited boundaries through agreements or tribunal decisions. In addition, although States have established maritime zones, the boundaries of most of them have not been fully acknowledged by other parties. The reasons making delimitation difficult in the Mediterranean Sea are due primarily to geographic factors such as islands, gulfs, concave coasts, but also economic factors such as fishing interests or other considerations of a political nature.

If countries do not establish maritime zones or when the high seas extend beyond the boundaries of these zones, the management of the high seas in the Mediterranean Sea has to rely on international cooperation. Through international conventions and treaties countries can develop a legally binding framework – again taking into account international law and its legal instruments (e.g. UNCLOS) for the management of the high seas¹⁴⁶. The management of the high seas in the Mediterranean and application of MSP through international cooperation will require intensive and complex cross-border communication and cooperation between countries. Not only may the interests and needs of the countries bordering the Mediterranean Sea differ, the different areas within the Mediterranean Sea (e.g. Adriatic Sea, Ionian Sea, Western Mediterranean Sea or Aegean-Levantine Sea) imply different risks and potential conflicts. *Chapter VII.2* provides a recommendation concerning this issue.

Control of the sea

The aim of implementing the principles of MSP in the Mediterranean Sea is to establish maritime spatial plans for specific sea regions. The successful implementation of these (cross-border/international) maritime spatial plans requires proper management, control and surveillance. Consequently, significant resources may be needed to exercise sufficient levels of control and surveillance, especially for high sea areas further offshore. Currently, control problems exist not only in areas far offshore (high seas), but also in the territorial sea. According to stakeholders, the current surveillance efforts are often too low, resulting in, for instance, illegal fishing in designated protected areas. Furthermore, control in zones in the high seas will be even more challenging given the extent of the areas. For instance, oil spills or illegal waste discharges from maritime transport will be difficult to detect, although the emergence of new techniques such as CleanSeaNet (a near-real-time satellite-based oil spill and vessel monitoring service) will improve monitoring options.

Implementing MSP in the Mediterranean Sea may eventually require more means for surveillance and control. Furthermore, increased cross-border communication and cooperation between countries and

¹⁴⁶ More information about international conventions (i.e. HELCOM and OSPAR) is provided in *Chapter VI*. In addition, recommendations with regard to this topic are provided in *Chapter VII.2*.

between sectors with regard to maritime surveillance is required. An example of increased cooperation in the Mediterranean Sea (cross-border and cross-sectoral) is the BluemassMed project (see *Chapter VI* for more information).

V.2. DATA COLLECTION, MONITORING AND EVALUATION

Data collection, monitoring and evaluation are crucial in order to gain insight into the potential of the application of MSP and to serve as the basis for decision-making as regards the use and protection of the sea. Data and knowledge need to be available about the physical and ecological patterns and processes in the seas, the ecological conditions and values of areas, the current uses of the seas and existing measures. For instance, knowledge of the sea can lead to the identification of the areas most suitable for offshore wind energy or to the establishment of a protection zone for an endangered species. In this respect, the resources have to be available to investigate, analyse and forecast those aspects of the sea relevant to MSP.

Some of the countries included in the four areas with more potential for MSP have a well-developed network of research institutes, universities and government departments that have extensive knowledge of the sea. Most of this knowledge is related to coastal areas. For example, nursery and spawning areas for fish species have been discovered and protected areas have been established along the coasts based on the knowledge of ecosystems. A promising initiative is the GIS database which is currently being developed by the ISPRA office in Chioggia (Italy) with information about the different sea uses in the northern part of the Adriatic Sea. Another example of integrated information is the project for the Alboran Sea (and the Gulf of Cadiz)¹⁴⁷ in which all information about sea characteristics and sea uses in the Spanish part of the Alboran Sea is combined to produce maps that integrate this information. However, data with regard to areas further offshore are often missing or still need to be improved and integrated. In the countries with a less developed research infrastructure, more work needs to be done to provide the knowledge base for the development of MSP, not only for areas further offshore but also for the ones close to the shore.

In sum, since MSP has to be based on sound information and scientific knowledge, additional efforts and integration of existing resources are needed to gather and integrate marine data in order to obtain an accurate overview of the characteristics of the sea and the activities that are taking place.

V.3. CROSS-BORDER COOPERATION

There are a number of well-established initiatives of cooperation that could constitute a sound basis for the application of MSP:

- Broad-based initiatives in the Mediterranean such as the Barcelona Convention (see *paragraph*

¹⁴⁷ This project is being carried out by professor Suarez de Vivero of the University in Seville.

II.1);

- Specific regional initiatives or platforms such as the initiatives in the Adriatic Sea (e.g. the Trilateral Commission) and the Western Mediterranean (e.g. the Pelagos initiative);
- Cooperation between research institutes of two or more countries in the Mediterranean.

Despite these initiatives, cooperation in the Mediterranean is often complex because of the following reasons:

- Different institutional and legal frameworks, not only between EU and non-EU countries, but also within the EU (see *paragraph V.4*);
- Political disagreements among countries and differences in preferences and priorities; an example of such a difference is the plan for oil drilling in Croatia, which is disputed by Italy because of environmental concerns¹⁴⁸;
- Many of the current initiatives focus on environmental issues, whereas a sector-neutral approach is more suitable for the purpose of MSP;
- The lack of a clear division of responsibilities over the seas (see also *paragraph V.1*);
- Language differences pose problems when sharing information (e.g. data or papers);
- Different research methods and data collection methods are being used, making it difficult to compare data.

V.4. INSTITUTIONAL AND LEGAL FRAMEWORK

Coordination between national, regional and local authorities needs to be established when MSP is to be introduced. In the Mediterranean, this coordination is often complex because of issues concerning the institutional and legal framework:

- Institutional framework:
 - Significant differences in government structures are present in the countries bordering the Mediterranean Sea, making it difficult to introduce uniform solutions for MSP policy making and coordination;
 - Coordination is particularly complex when responsibilities are shared between national, regional and local authorities, even more when there are differences in this respect within a country (i.e. one region has other responsibilities than a neighbouring region);
 - In many cases, multiple ministries and/or sectoral departments are responsible for MSP-related topics; when there is no focused platform to coordinate the discussions between all these stakeholders involved (for example by means of an inter-ministerial committee), it is difficult to align all the interests and positions involved;
- Legal framework;
 - The limited number of established maritime zones in the Mediterranean pose a significant challenge in terms of responsibilities, rights and duties over the seas;
 - Although ICZM is an important step towards MSP (including its coherence with MSP), it has not yet been developed in many Mediterranean countries;
 - A legal framework that enables integrated management of the sea is absent in most Mediterranean countries.

¹⁴⁸ ARPAV, meeting in Padova on 25 May 2010.

Despite these difficulties, there are some good practices in the Mediterranean that can contribute to provide a solid base for the application of MSP:

- The coordination of the institutional and legal framework can be facilitated through a single coordinating body¹⁴⁹ in order to improve the effectiveness and efficiency of MSP policy making and execution. The example of MEPA in Malta provides a good example of such a coordinating body. Other bodies facilitating coordination are inter-ministerial committees (e.g. Tunisia and France).
- A legal framework that can accommodate the needs of MSP and enables well-coordinated, efficient and effective decision-making (see, for example, the initiatives taken in France and Malta).

¹⁴⁹ It is important to recognise that this does not entail that the responsibilities for MSP should be the sole responsibility of for instance the central government. On the contrary, the active involvement of stakeholders on a regional level is an important aspect of MSP.

VI. BEST PRACTICES

This chapter provides best practices, studies and programmes from the Mediterranean and other parts of the world on a number of MSP-related topics, structured in terms of current MSP initiatives in the EU, stakeholder involvement, institutional and legal framework, cross-border cooperation, data collection and knowledge, surveillance, and coherence between MSP and terrestrial spatial planning.

Current MSP initiatives in the EU¹⁵⁰

Germany has established an Exclusive Economic Zone (EEZ) that lies partly in the Baltic Sea and partly in the North Sea. Applying the Federal Land Use Planning Act, Germany has developed maritime spatial plans for its EEZ to mitigate or prevent competition between activities at sea. The objectives of these spatial plans are to improve the management of the different uses of the marine space, to reduce environmental impacts of human and marine activities and to provide opportunities for the development of offshore wind energy farms.

Similarly, The Netherlands developed an Integrated Management Plan for the Dutch part of the North Sea in order to mitigate or prevent competition between activities at sea. One of the objectives of this plan is to maintain and develop the international ecological and landscape features of the North Sea by developing and harmonising sustainable existing and potential new spatial-economic activities in the North Sea. Both the German and Dutch plans focus on the protection and conservation of the marine environment and take into account an ecosystem based approach.

Stakeholder involvement¹⁵¹

The need for stakeholder participation is stressed in the EU ICZM Recommendation, the EU Water Framework Directive and the EU Marine Strategy Framework Directive as well as in regional sea conventions like HELCOM and OSPAR. The importance of stakeholder involvement was also

¹⁵⁰ Interdepartmental Directors' Consultative Committee North Sea (2005), *Integrated Management Plan for the North Sea 2015*; Bundesamt für Seeschifffahrt und Hydrographie (2009), *Spatial Plan for the German Exclusive Economic Zone in the Baltic Sea*.

¹⁵¹ Ekebom, J., Jäänheimo, J. & Reker, J., 2008, *Towards marine spatial planning in the Baltic Sea*.

recognised in the BALANCE project, an EU funded project aiming to develop tools for promoting a transnational and cross-sectoral approach to MSP within the Baltic Sea, Kattegat and Skagerrak. The project ran from 2005 until 2007. It involved 27 governmental agencies, research institutes, universities, regional authorities and NGOs in eight countries of the Baltic Sea Region. Attention to stakeholder participation and transparency was considered crucial; stakeholders were consulted early in the process and during the whole process of developing maritime spatial plans. Establishing a dialogue between different interest groups and conservationists helped dissolve unfounded fears about the impacts of MSP. One specific example of stakeholder consultation in the BALANCE project was an e-survey on stakeholder perceptions on spatial maps.

Different opinions exist about *when* stakeholder engagement should start. The Irish Sea pilot project recommends that stakeholders should already be involved before the start of the MSP process, aiming to involve them when identifying and prioritising the objectives of MSP. The BALANCE project, however, argues that the planning body or lead authority is responsible for determining the vision and objectives of MSP. This means that stakeholders have no (official) participation in the definition of the objectives.

The BALANCE project distinguished two approaches to stakeholder participation: the authoritarian approach and the cooperative approach. The authoritarian approach stands for a more top-down planning approach speeding up the process in the beginning of the project. This means that stakeholders are informed about a planned project and that their opinions will be taken into consideration. However, there is little opportunity for stakeholders to directly influence the process outcomes. The cooperative approach offers more possibilities for the engagement of stakeholders. This approach includes the mutual exchange of information and knowledge and a commitment to open discussion by all parties involved. In this approach, stakeholders will have a greater impact on the MSP process outcomes and their opinions will be taken more into account in the decision-making process. The cooperative approach requires more time and resources in the beginning, but can save efforts later in the process if stakeholders come to an agreement on how to proceed. Such an approach also increases the likelihood of agreement between the stakeholders.

An example of a way to involve stakeholders is a stakeholder survey. The two most suited types of surveys for MSP are questionnaires and interviews. Questionnaires are relatively inexpensive and often result in standardised answers facilitating the analysis of the data. A possible disadvantage of questionnaires can be the low response rate although this can be intercepted by targeting the right stakeholders and by closely following up the questionnaires by e-mail and telephone. An important advantage of conducting interviews is that the questions can be clarified with the respondent so that they are clearly and correctly understood, requiring skilled interviewers. Another interesting way of engaging stakeholders is the use of internet fora on which stakeholders can submit opinions and comments. Important for the successful use of electronic fora is the use of clear user manuals so that stakeholders know how to contribute. As an illustration, an overview of the way in which stakeholders

were involved in the PlanCoast project is provided in *Table 14*.

Table 14: Ways to involve stakeholders in the PlanCoast project

Activity	Advantages	Disadvantages	Comment
<i>Stakeholders' forum</i>	Good PR, genuine opportunity for genuine exchange of views, can lead to topic groups and other more suitable mechanisms.	Conflicts may get out of hand, requires skilful handling, discussions can be dominated by strong personalities, difficult to keep to agenda, poor vehicle for introducing new ideas.	Needs careful presentation, provision of venue, handling of agenda, time-consuming but often necessary.
<i>Workshops</i>	Encourages 'grass roots' to express views; people feel views are valued; can be very creative; flexible, targeted debate, possibly less confrontational, involves interested and well informed; helps start a common outlook.	May arouse expectations that can't be met; needs careful management, continuity and follow-up, depends on quality of facilitation; doesn't necessarily represent a balanced point of view.	Results depend strongly on participants. Useful in a range of contexts, e.g. smaller community sessions, to break up larger meetings, sometimes known as scenario workshops.
<i>Newsletter</i>	Sets scene for dialogue, opportunity for all to contribute, strong image of the project, can be co-ordinated with a website.	Open-ended commitment, can suffer from 'fatigue' if process extended, may use too much professional terminology.	A useful tool of communication, but must be attractive, relevant, accessible and clear.
<i>Exhibitions</i>	Can be seen by whole community, opportunity to imaginatively present context and issues, useful for distributing newsletters, leaflets, and questionnaires or as back cloth to meeting, staff can directly answer questions and attract interest.	May be poorly attended, not all venues equally attractive, runs risk of dullness	A useful resource when combined with wider information programme.
<i>Local media</i>	Large potential audience, relatively cheap, good for public relations, raises awareness.	Uncertainty over how media will use material; may not use it at all, get story wrong, or stress conflicts.	Good PR skills required, still results may be disappointing.
<i>Flyers</i>	Useful to identify key issues, easy to produce, useful public relations, wide coverage.	Takes time and money to produce, may over-simplify, may encourage unjustified claims.	Probably works best with targeted groups on specific issues, otherwise too expensive, stakeholders likely to want full documents.
<i>GIS based website</i>	Large potential audience, raises awareness and provides open access to data, positive image.	Intimidating medium for many sectors of population, needs constant updating to remain relevant, can be expensive and impersonal.	A website without GIS can also be a good idea.

Source: PlanCoast (2008), *Handbook on Integrated Maritime Spatial Planning*

Institutional and legal framework¹⁵²

In the United Kingdom, the authority responsible for MSP is the Secretary of State. The Secretary of State delegates a large number of its functions to the Marine Management Organisation (MMO) which is responsible for the sustainable development of British marine areas. The MMO, established in 2009 under the Marine and Coastal Access Act, has incorporated the work of the Marine and Fisheries Agency and has acquired several important new roles, principally marine-related powers and specific functions previously associated with the Department of Energy and Climate Change and the Department for Transport. The MMO is thus a cross-government organisation responsible for

¹⁵² Marine Management Organisation, www.marinemanagement.org.uk; UK Government, 2009, Marine and Coastal Access Act 2009.

maritime related issues such as maritime spatial planning. Also in Malta, a single body (MEPA) coordinates issues related to maritime activities, but it has, just as the MMO, no decision-making power. In Tunisia, an alternative approach is used to achieve coordination. An inter-ministerial committee decides about proposals, taking into account the outcomes of the environmental impact assessments and the objectives of the agency for coastal protection.

Cross-border cooperation¹⁵³

In 1992, the Convention on the Protection of the marine environment of the Northeast Atlantic was developed (OSPAR Convention). Fifteen countries and the European Union signed this convention and committed themselves to prevent and eliminate pollution and to take all the necessary measures to protect the marine area against the adverse effects of human activities. The OSPAR Commission has developed work programme elements based on an invitation from the Fifth North Sea Conference (Bergen Declaration) to consider the need for international cooperation on MSP. The OSPAR Commission agreed to hold an annual workshop on marine spatial management. The programmes for these workshops concentrate on exchange of information on best practices, description of the spatial control systems applied in the North Sea and the Irish Sea, and the transboundary and cumulative impacts of decisions regarding the use of specific sea areas. The OSPAR Working Group on Spatial Planning is currently considering setting up a consulting procedure on implementing MSP in the Northeast Atlantic Region.

The Helsinki Commission, or HELCOM, works to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental co-operation between Denmark, Estonia, the European Union, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. HELCOM is the governing body of the "Convention on the Protection of the Marine Environment of the Baltic Sea Area" – commonly known as the Helsinki Convention. In the HELCOM Baltic Sea Action Plan, which was adopted in November 2007, HELCOM Contracting Parties committed themselves to develop, by 2010, as well as test, apply and evaluate by 2012, in co-operation with other relevant international bodies, broad-scale, cross-sectoral, marine spatial planning principles based on the ecosystem approach.

To account for different interests and needs of countries and areas within the Mediterranean Sea, a regional approach for the Mediterranean may be necessary. Such an approach is followed by the United States in their coastal and maritime spatial planning policy¹⁵⁴. According to this policy, the development of nine regional planning bodies is recommended for the different seas bordering the US territory.

¹⁵³ OSPAR Commission, 2004, *Convention on the protection of the marine environment of the North-East Atlantic*; OSPAR Commission, 2006, *General Report to North Sea Ministers On Follow-Up To The 2002 Bergen Declaration*.

¹⁵⁴ The White House Council on Environmental Quality, 2010, *Final Recommendations of the Interagency Ocean Policy Task Force*.

Data collection and knowledge¹⁵⁵

EU Member States already collect a significant amount of marine data and are in some cases legally obliged to do so by EU Directives (MSFD, INSPIRE¹⁵⁶) or by recommendations (ICZM recommendation)¹⁵⁷. A specific project concerning maritime data and knowledge is Marine Knowledge 2020. In 2010, the European Commission developed the communication Marine Knowledge 2020. In this communication, three objectives to improve marine knowledge have been established:

- Reducing operational costs and delays for those who use marine data;
- Increasing competition and innovation amongst users and re-users of marine data;
- Reducing uncertainty in knowledge of the oceans and the seas and so providing a sounder basis for managing future changes.

Another instrument to improve the knowledge on maritime issues is the European Commission Communication ‘A European Strategy for Marine and Maritime Research: A coherent European Research Area framework in support of a sustainable use of oceans and seas’¹⁵⁸, which was drawn up in 2008. The aim of the strategy is to propose the means to create a better integration between marine and maritime research. The focus is on improving interactions between marine and maritime research centres rather than specifically addressing well-established research sectors. The strategy will:

- Address system complexity and interactions through enhanced integration of knowledge and research. It will look at bridging traditional boundaries between science and policy-making;
- Bring about new forms of governance in research that will seek consensus among all concerned parties and establish a continuous dialogue between scientists, policy-makers, industrialists and representatives from society.

Details on these European Commission initiatives are provided in *Chapter II.2*.

Furthermore, there are also a number of non-legally binding data collection initiatives, e.g. the Global Monitoring for Environment and Security Initiative (GMES), the Shared Environmental Information System (SEIS) and its marine environmental component WISE-marine. WISE-marine is scheduled to be set up by mid 2012 and will collect and visualise Member States’ data on the marine environment and human activities. Another relevant project currently under development is EMODNET (European Marine and Data Observation Network). EMODNET will be a network of existing and future European observation systems, linked by a data management structure covering all European coastal waters, shelf seas and surrounding ocean basins, accessible to everyone. The goal of EMODNET is to assemble fragmented and inaccessible marine data into interoperable, continuous and publicly

¹⁵⁵ European Commission, 8 September 2010, *Marine Knowledge 2020: marine data and observation for smart and sustainable growth*. COM (2010) 461.

¹⁵⁶ European Parliament and Council, 2007, Directive establishing an Infrastructure for Spatial Information in the European Community (INSPIRE), 2007/2/EC. This Directive aims to improve the quality, comparability and accessibility of spatial data.

¹⁵⁷ For more information, see *Chapter II.2*.

¹⁵⁸ European Commission, 2008, *A European Strategy for Marine and Maritime Research: A coherent European Research Area framework in support of a sustainable use of oceans and seas*, COM(2008) 534 final.

available data streams for complete maritime basins. The EC, together with a specially-constituted Expert Group, has formulated the basic design principles¹⁵⁹ of EMODNET.

With regard to monitoring and evaluation of MSP, the Intergovernmental Oceanographic Commission of the United Nations provides useful recommendations for setting up a monitoring system¹⁶⁰. The commission identified several tasks, the first one being to develop a performance monitoring programme. To accomplish this task, five actions are required:

- Reconfirming the objectives;
- Agreeing on outcomes to measure;
- Identifying key performance indicators to monitor;
- Determining baseline data on indicators;
- Selecting outcome targets.

After having developed the performance monitoring programme, performance monitoring data should be evaluated. Ideally, the evaluation is a continuous process in which measures or indicators of performance are defined and systematically compared with programme goals and objectives. To achieve a good evaluation process, MSP should have clearly defined goals that are easy to measure. If the goals of MSP are very vague or too general, it will be very difficult to determine the extent to which goals and objectives are being achieved. The final task of the monitoring and evaluation process is reporting the results of the performance evaluation. Based on these results, the MSP plans and processes should be updated and improved.

Surveillance

To improve the effectiveness of maritime surveillance in European seas (i.e. increase cooperation between national and transboundary enforcement agencies), the European Commission (DG MARE) sponsors the project Bluemassmed, which is carried out in the Mediterranean Sea and its Atlantic approaches. This is a pilot project aimed at increasing the cross-sectoral cooperation for maritime surveillance in the region between countries and within countries. Six EU Member States (France, Greece, Italy, Malta, Portugal and Spain) cooperate on their common actions against illicit trafficking, illegal immigration and environmental pollution. In addition, techniques such as vessel tracking systems, satellites and cameras can be used to improve surveillance and, consequently, the enforcement of MSP.

¹⁵⁹ These principles are: collect data once and use it many times; develop standards across disciplines as well as within them; process and validate data at different levels (structures are already developing at national level, but infrastructure at sea-basin and European level is needed); provide sustainable financing at an EU level so as to extract maximum value from the efforts of individual Member States; build on existing efforts where data communities have already organised themselves; develop a decision-making process for priorities that is user-driven; accompany data with statements on ownership, accuracy and precision; recognise that marine data is a public good and discourage cost-recovery pricing from public bodies.

¹⁶⁰ The website of the IOC contains an extensive section on Marine Spatial Planning, including a document that provides a step-by-step approach to MSP, including how to monitor and evaluate MSP. The website can be found at www.unesco-ioc-marinesp.be.

The project aims to define the architecture of the future European-wide Maritime Surveillance Network that will allow the interoperability among all existing or future Maritime Surveillance Systems, based on an agreed, standard reference model, to optimise the efficiency of the maritime patrolling and surveillance resources. It aims to develop methodologies and procedures common to all European States for the exploitation of the Network. This standardisation of procedures will lead to improved coordination and cooperation. Also relevant in this respect are the Communications of the European Commission on a Common Information Sharing Environment¹⁶¹.

A similar project is being carried out in the northern part of Europe. The MARSUNO (Maritime surveillance in the Northern European Sea Basins) project supports the policy process of the European Commission to create a Common Information Sharing Environment for the EU maritime domain. The project consists of 24 authorities from ten different countries and runs from January 2010 to December 2011. The main objective of the project is to achieve higher interoperability among existing monitoring and tracking systems. The project will focus on how to realise cross-border and cross-sector maritime surveillance data exchange on an experimental scale. Furthermore, it will determine the extent of exchange of information and enforcement of international/European Union/national legislation and cooperation that already takes place between the Member States

The management and control of regional seas is also carried out by regional sea conventions like OSPAR and HELCOM. Participating countries to these conventions bind themselves to plan and use marine areas in a sustainable way.

Coherence between MSP and terrestrial spatial planning¹⁶²

The United States have recently (July 2010) adopted the recommendations for an integrated approach to Coastal and Marine Spatial Planning (CMSP) developed by the Interagency Ocean Policy Task Force by Executive Order. CMSP is defined as a comprehensive, adaptive, integrated, ecosystem based, and transparent spatial planning process, based on sound science, for analysing current and anticipated uses of ocean, coastal and the American Great Lakes areas. The successful implementation of CMSP is intended to provide substantial economic, ecological and social benefits to the US. The health and well-being of the oceans and coastal areas are in large part considered to be the result of the interrelationship among land, water, air and human activities. The successful implementation of CMSP requires the integration of coastal planning that considers influences from, and activities within, coastal watersheds and other coastal land areas. Similarly, land-based planning should take potential effects of ocean and coastal activities into account.

¹⁶¹ Communication from the Commission, 15 October 2009. *Towards the integration of maritime surveillance: A common information sharing environment for the EU maritime domain*. COM (2009) 0538 final and Communication from the Commission, 20 October 2010 *Draft Roadmap towards establishing the Common Information Sharing Environment for the surveillance of the EU maritime domain* COM (2010) 584.

¹⁶² The White House Council on Environmental Quality, 2010, *Final Recommendations of the Interagency Ocean Policy Task Force*.

VII. STUDY CONCLUSIONS AND RECOMMENDATIONS

The first section of this final chapter provides the main conclusions on topics relevant to the application of MSP in the Mediterranean, in line with the ten key principles of MSP and the methodology used in this study to identify areas with more potential for the application of MSP. Subsequently, recommendations are provided for the application of MSP in the Mediterranean Sea. The conclusions and recommendations are described bullet wise.

VII.1. CONCLUSIONS

The need for MSP

- MSP is designed to promote the rational use of the sea and to improve decision-making. It seeks to balance sectoral interests and use space more efficiently, thereby contributing to the long-term sustainable use of marine resources. Also in the Mediterranean Sea, the development of maritime spatial plans needs to be considered, especially if an increase in maritime activities and/or the development of new activities is expected, possibly leading to competition between maritime activities or between such activities and the environment. In areas with (increasing) competition, more detailed maritime spatial objective setting and plans need to be considered¹⁶³. In areas with less competition, a less detailed form of MSP (e.g. general management principles) can suffice;
- The highest need for the application of a detailed form of MSP can, in general, be found in **coastal areas**;
 - o The most intensively used areas in the Mediterranean Sea are those situated near the coast. In these coastal areas a variety of maritime activities take place, such as mariculture, fishing, maritime transport (ports), dredging/sand extraction and marine and coastal tourism (e.g. recreational boating, bathing, diving). Moreover, these coastal areas are often important from an environmental perspective: endangered flora and fauna are present and / or the area contains spawning/nursery areas. Since maritime activities can negatively impact these areas of environmental importance, also here, competition for space may exist;
 - o Besides spatial competition, competition is often experienced through the impact of human (maritime) activities on the marine environment. Close to the shore, land-based activities are in many areas one of the main sources of pollution, such as untreated wastewater discharges;
- Also **areas further offshore** can benefit from MSP:

¹⁶³ See also: The roadmap for Maritime Spatial Planning: achieving common principles in the EU, European Commission, 2008, COM (2008) 791 final.

- Certain areas further offshore are highly important for the marine environment and experience a negative impact of maritime activities. In some cases, these areas qualify for incorporation into a Maritime Spatial Plan in a detailed way because the location of the area of interest can be precisely defined. More specifically, nursery/spawning areas for fish can often be pinpointed to a defined, relatively limited area, which enables a detailed incorporation of these areas in a spatial plan. In practice, MSP could for example support the creation of a (cross-border) network of MPAs in order to protect endangered species and/or increase biodiversity;
- More extensive areas further offshore that are of high value to the marine environment (e.g. the Pelagos Sanctuary, or a large part of the Alboran Sea) need to be managed through MSP in a broader sense. MSP targets need to be more general in this case, instead of developing specific targets for each specific part of the area. A detailed form of MSP should only be applied when other options are not effective, since it requires relatively strong management and control efforts and decreases the flexibility of sea usage;
- Currently, competition between maritime activities further offshore in the Mediterranean Sea is not a significant issue, so MSP based on general objectives is likely to suffice in the near future. However, given that the use of the maritime space is likely to increase in the longer run also in offshore areas, consideration should be given to plan for this evolution ahead by putting the necessary mechanism in place.

Stakeholder involvement¹⁶⁴

- There are several examples of countries in the Mediterranean that facilitate stakeholder involvement at the level of the national government for MSP-related issues, although this is not common practice throughout the Mediterranean;
- When **regional authorities** in the Mediterranean have responsibilities for certain maritime issues, they are much more likely to be involved as a stakeholder in the MSP process; if all responsibilities are allocated to the national level, involvement of regional actors appears to be rather limited. Thus, from the perspective of stakeholder involvement, a division between national and regional responsibilities seems to provide the structure to ensure the more automatic involvement of different levels of authority at an early stage in the process. Nonetheless, countries in which all maritime responsibilities are allocated to the national level can of course develop procedures that involve regional authorities in an early phase;
- Besides participation of the different levels of authority, the involvement of **public stakeholders** is important to create support for MSP and provide useful input. Although some Mediterranean countries have incorporated involvement of public stakeholders in laws, their involvement is not always brought into practice.

Institutional and legal framework

- Some countries have established (e.g. Tunisia, France) or are planning to establish (e.g. Spain) **inter-ministerial committees**, ensuring the involvement of all relevant ministries in an early phase. Malta has created an **entity responsible for spatial planning issues**, which is also responsible for coordinating the discussions among ministries based on their input;
- Clarity of jurisdiction is essential for MSP. One of the ways to create such clarity is the

¹⁶⁴ The development and implementation of MSP requires frequent and transparent consultation of stakeholders and experts. The involvement of stakeholders is useful for: better understanding the complexity of ecosystems, understanding the human influence on the ecosystem and its management, examining the compatibility and/or (potential) conflicts of multiple use objectives, identifying, predicting and resolving areas of conflict, discovering existing patterns of interaction and management of various human uses at sea.

establishment of maritime zones through which the rights and duties to manage zones are assigned under national law (see *paragraph V.1*). In particular the establishment of the **EEZs** could prove to be beneficial for MSP, although their establishment requires agreements on delimitation boundaries which is difficult in the Mediterranean (see *paragraph V.1*)¹⁶⁵. In this respect, most of the countries in the Mediterranean have **not yet established EEZs** and few countries have developed legislation that accommodates MSP. Often the existing sectoral approaches are accompanied by separate legislation for its maritime activities and topics;

- **Significant differences in government structures** are present in the Mediterranean countries, making it difficult to introduce uniform solutions for MSP policy making and coordination. Countries often apply **sectoral approaches** and divide responsibilities between national and regional authorities. Coordination and decision-making requires more efforts in those countries compared to countries that take decisions on the national level with integrated decision-making processes (e.g. through a separate body or an inter-ministerial committee);
- Besides a need for **horizontal coordination** (e.g. between ministries) to overcome inefficiencies as a result of a sectoral approach, countries with maritime responsibilities at the regional level also need to find ways to achieve effective and efficient **vertical coordination**.

*Cross-border/international cooperation*¹⁶⁶

- In the Mediterranean Sea **several cross-border initiatives exist**. These initiatives have different forms, such as platforms, international research projects and management projects. These initiatives can become important fundaments for the cross-border application of MSP;
- Ideally, the set-ups of such initiatives should be **neutral** in the sense that they do not only aim at environmental protection or the development of one or more particular economic activities. They should have a holistic ecosystem-based approach aiming at sustainable economic development hereby seeking a balance between economic activities and the environment. However, strictly ‘neutral’ platforms are still rare in the Mediterranean:
 - Currently, the **most cross-border initiatives** that provide a platform for MSP have been set up in the past for the **protection of the marine environment**, which may be a disadvantage when sector-neutral decisions need to be taken. Nonetheless, such initiatives may provide a useful starting point for the development of MSP;
 - In the Mediterranean Sea, the **Barcelona Convention** could act as a platform for the Mediterranean-wide development of MSP. Within the framework of the Barcelona Convention, MSP is considered to be a complementary tool to the Convention’s activities (see *Chapter II.1.a/*). A separate protocol, like the ICZM protocol, could be established for MSP in the Mediterranean Sea;
- In general, cross-border cooperation between **research institutes** and universities from the different countries involved does exist, but at the **political level** cooperation tends to be more difficult. These tensions are often related to maritime boundaries and differences between countries and regions in preferences and priorities regarding the exploitation of the sea and the protection of the marine environment;
- Next to establishing EEZs, the management of (part of) the high seas in the Mediterranean Sea

¹⁶⁵ The costs and benefits arising from the establishment of maritime zones in the Mediterranean Sea are being examined in a separate study on behalf of DG Mare. The contract for the study was awarded in the last trimester of 2011 and runs for twelve months.

¹⁶⁶ There are a number of issues that call for international cooperation on MSP. Ecosystems are not limited to national boundaries, requiring international cooperation to protect valuable resources, species and habitats and to maintain and restore the quality of marine regions. Fisheries, pipelines, marine pollution, navigation and shipping are also issues that should be dealt with internationally.

can be established through **international conventions and treaties**, although this will require intensive and complex cross-border communication and cooperation for countries.

*Data collection, knowledge creation and evaluation*¹⁶⁷

- Many of the countries surrounding the Mediterranean Sea have research institutes that focus on **fisheries** (primarily research on fish stocks and threats). Some countries have research institutes with a wider maritime scope, such as Spain (IEO) and France (IFREMER);
- Several countries surrounding the Mediterranean Sea have organisations that possess **considerable knowledge of the sea near the coastline**. However, in general, there is only limited knowledge about the sea further offshore, especially in terms of the characteristics of the sea and the ecosystems;
- If MSP is to be applied in areas **further offshore**, the availability of data and knowledge **requires upgrading**. As already identified, a detailed form of MSP is mostly not required further offshore, reducing the need for detailed information on each part of the area. However, if specific special marine areas are in need of protection, they need to be identified and, subsequently, protected in order to enable sustainable development of maritime activities¹⁶⁸;
- Furthermore, the development of **more uniform research methodologies**, both at the national and international level, is needed to make data comparable. Also the selection of research topics is important in order to avoid overlapping work (see *Chapter VI* for relevant initiatives that have been set up);
- In the Mediterranean Sea **international initiatives** have been set up to increase and improve data and knowledge on sea-related issues, signifying a positive development for the feasibility of MSP (see *Chapter VI*). However, these initiatives mostly involve only EU Member States;
- It is important that knowledge on marine issues is effectively and efficiently **disseminated to decision-making authorities**. Initially, to provide the basis for the development of MSP, but also later in the process when monitoring and evaluation of MSP is required. In some of the Mediterranean countries this needs to be improved considerably, for example when research institutes are not involved in the decision-making process for the designation of MPAs.

Coherence between MSP and terrestrial spatial planning

- Although a number of countries (and/or regions) have started to develop Integrated Coastal Zone Management (**ICZM**) or similar strategies, the majority of the countries that were investigated for this study has **not yet implemented** the concept;
- Often **fragmented, sectoral approaches** to coastal planning **complicate the coherence** between MSP and terrestrial planning, although such coherence is necessary because spatial competition at sea is often related to activities performed in the coastal areas (e.g. ports or coastal tourism). Moreover, ICZM also includes coastal waters, making the coherence between MSP and ICZM even more important;
- In general, countries prefer to start developing integrated coastal planning before setting up MSP.

¹⁶⁷ Data collection is crucial in order to gain insight into the actual potential of the application of Maritime Spatial Planning. Knowledge of the sea needs to be the basis for decision-making as regards the exploitation and protection of the sea and thus also for MSP. If MSP has been developed, the maritime activities and marine environment need to be monitored to check if its targets are met and, subsequently, the spatial planning needs to be monitored and evaluated as well.

¹⁶⁸ Often, researchers know which areas may be of high environmental value (because of specific characteristics, such as seamounts), but they do not have the resources to measure its true importance (e.g.. in terms of biodiversity or

Monitoring and control

- In the Mediterranean, **control problems** currently exist not only in areas far offshore (high seas), but also in the territorial sea, although the **emergence of new techniques** such as CleanSeaNet (a near-real-time satellite-based oil spill and vessel monitoring service) will improve monitoring options;
- Furthermore, increased cross-border communication and cooperation between countries and sectors with regard to maritime **surveillance** is required. An example of increased cooperation in the Mediterranean Sea is the BluemassMed project (see *Chapter VI* for more information).

Economic effects

The introduction of MSP in the Mediterranean is likely to lead to the full range of economic effects as identified in *Figure 4*. Considerable improvements can be made to the institutional and legal frameworks of countries surrounding the Mediterranean Sea. The majority of countries have frameworks in place that currently do not optimally facilitate coordination between governmental (maritime) stakeholders. Improvements in coordination will lead to benefits for both governments (i.e. lower administrative costs) and companies (i.e. less time-consuming and/or less expensive procedures). The certainty and predictability resulting from a well-established legal framework will also reduce legal costs and improve the investment climate. As knowledge of the sea is rather limited in most countries, considerable economic effects can be reached in terms of lower search costs if the knowledge of the sea is improved.

Building further on the methodology developed and the calculations made in *The economic effects of MSP study*¹⁶⁹, an indication¹⁷⁰ can be provided of the quantification of the economic benefits of MSP for EU Member States¹⁷¹ in the Mediterranean¹⁷². Taking into account the assumptions¹⁷³ made in that study, the main economic effects of MSP are related to lower transaction costs and the acceleration¹⁷⁴ of mariculture and offshore wind energy projects. Based on these assumptions the quantification of these effects indicates a potential economic benefit of MSP in the Mediterranean of up to € 600 million value added¹⁷⁵ in 2030. Over half of these effects are related to fewer conflicts of interest¹⁷⁶, about 40% is related to the acceleration of wind energy projects and the remaining part concerns

productivity of fish species).

¹⁶⁹ European Commission, 2010.

¹⁷⁰ The results presented need to be interpreted with great care; they provide insights on a macroeconomic level, but are based on assumptions and require in-depth studies on a case-by-case basis in order to be able to draw more accurate conclusions.

¹⁷¹ Although a large part of France's coastline concerns the Atlantic Ocean, the full economic effects of MSP have been taken into account, because the main challenges related to MSP seem to be situated in the Mediterranean.

¹⁷² Because of the limits of data availability, detailed analyses are not available for subregions of the Mediterranean and for non-EU countries.

¹⁷³ Among others with regard to autonomous growth forecasts of the sectors involved, the direct relation between transaction costs and value added and scenarios used, e.g. the scenario of a reduction of 1% in transaction costs and different subscenarios (ranging from the case where only the renewable energy and mariculture sectors, the strongest growing maritime sectors, are affected to the case in which all maritime sectors benefit directly economically from MSP).

¹⁷⁴ The interest rate used for accelerated investments is 4%, a rate commonly used to discount investments in public sector finance.

¹⁷⁵ The value added represents the contribution of economic activities to the Gross Domestic Product.

¹⁷⁶ Conflicts of interest may arise in case one maritime activity is not compatible with another maritime activity or does not

accelerated investments in the mariculture sector.

These estimated economic benefits are based on cautious assumptions, implying that they may very well be surpassed by the magnitude of the actual benefits.

Overall conclusion

When considering the application of the MSP key principles in the Mediterranean Sea, the conclusion can be drawn that the potential for MSP is certainly present. The feasibility of MSP depends on a variety of factors, of which some currently pose significant challenges, some of which are more easily to overcome than others. *Table 15* shows a summarising overview of factors that determine the applicability of MSP in the four areas which have been analysed in more detail¹⁷⁷. Of these areas, the Western Mediterranean Sea (Spain, France and Italy) seems to be the area which currently has the highest potential for the application of MSP.

Table 15 : Potential and feasibility of MSP in the four selected areas

Principles	(Northern) Adriatic	Alboran	Area surrounding Malta	Western Mediterranean
Competition between activities or environmental pressures	+	+	+	+
Institutional and legal framework ¹	-	-	-	-
Cross-border cooperation ²	+/-	-	+	+
Data and knowledge base ³	+	+/-	+/-	+

¹ *Is the current institutional and legal framework in the countries involved ready for cross-border / international MSP?*

² *Will cross-border / international cooperation not be hindered by tensions at the political level?*

³ *Is a well-developed data and knowledge base available in all countries involved ?*

Source: Policy Research Corporation

VII.2. RECOMMENDATIONS

In this section recommendations are provided for the future implementation of MSP in the Mediterranean. Taking into account the obstacles and difficulties identified in this study, these recommendations are based on best practices from the Mediterranean countries, best practices and examples on the application of MSP in other parts of the world and studies related to MSP. The references to these examples are provided in the footnotes.

allow its presence in time or in space.
¹⁷⁷ As the scores are presented for the whole area in order to provide a general overview, differences between countries and specific areas with potential for MSP are not reflected in this table.

Stakeholder involvement¹⁷⁸

- Stakeholder participation should be **linked to the decision-making structure**, otherwise it will be ineffective. It is important to first have governance structures such as inter-ministerial committees in place in order to organise effective stakeholder participation (see institutional and legal framework);
- Stakeholders signify a valuable source of relevant information and their early involvement in the process is necessary in order to get their acceptance of the outcome. Their participation needs to be promoted throughout the MSP process via **transparent, open and inclusive information sharing** and exchange and involvement in the decision-making process. As indicated in *Chapter VI*, stakeholder involvement is recommended in policy papers and scientific research;
- MSP should be an **integrated cross-sectoral process**, implying that interested public and private parties from all maritime sectors get involved in the planning process;
- The **degree** to which stakeholders are involved at different points in the process **will vary** and it may not be helpful to involve all stakeholders in all aspects or at all times, although most authors and experts agree that stakeholders should be consulted frequently and throughout the whole planning process (see *Chapter VI* for more information);
- Stakeholders can be involved in various ways and there is **no single best way** to achieve stakeholder participation in the MSP planning process. Different examples of stakeholder involvement are provided in *Chapter VI*.

Institutional and legal framework¹⁷⁹

- It is important to adopt a **planning process that is cross-sectoral**, i.e. that all relevant sectors are taken into account, to avoid and solve competing uses of the marine space;
- To promote such a holistic, cross-sectoral and integrated approach to MSP it is recommended that the planning at the **national** level of the whole sea region is coordinated by a **single planning body**; such a planning body should be the guardian of the planning and management process. In particular it should be responsible for coordinating the production, adoption, implementation, enforcement, monitoring and review of maritime spatial plans. However, at this stage, the most realistic way of delivering MSP in an effective way might be to establish a single MSP body to prepare the plans and facilitate coordination, whilst leaving regulation with the existing regulators for the time being. Best practices in this regard are provided in *Chapter VI*;
- The issue of coordination becomes **more complicated** in case responsibilities for maritime issues are shared between authorities at the **national and the regional level** as is, for example, the case in Italy and Spain. In that case, states need to take measures to ensure coordination between the different levels of authority. A good initiative in this respect is the development of a law in Spain for the protection of the marine environment in which Spain takes measures to ensure cross-sectoral coordination, as well as coordination between the national and regional levels;
- With regard to the preferred legal status of MSP, studies¹⁸⁰ argue that it is important to introduce MSP as a **statutory, legally binding and enforceable process**, rather than a non-binding one. If

¹⁷⁸ Ekebon, J., Jäänheimo, J. & Reker, J., 2008, *Towards Marine Spatial Planning in the Baltic Sea*; MSPP Consortium 2006, *Marine Spatial Planning Pilot*; Blaesberg, M., Pawlak, J.F., Sorensen, T.K. & Vestegaard, O., 2009, *Marine Spatial Planning in the Nordic Region – Principles, Perspectives and Opportunities*; Stockholm Resilience Centre, 2010, *Managing the Marine Mosaic: A Briefing on Marine Spatial Planning with an Ecosystem Approach*.

¹⁷⁹ Ehler, C., 2008, *Conclusions: Benefits, lessons learned, and future challenges of marine spatial planning*, Marine Policy; Tyldesley, D., 2004, *Making the case for marine spatial planning in Scotland*; MSPP Consortium, 2006, *Marine Spatial Planning Pilot*.

¹⁸⁰ Ehler, C., 2008, *Conclusions: Benefits, lessons learned, and future challenges of marine spatial planning*, Marine Policy; Tyldesley, D., 2004, *Making the case for marine spatial planning in Scotland*; MSPP Consortium, 2006, *Marine Spatial Planning Pilot*.

this path is chosen, the plan-making, regulatory controls and implementation processes should all be embraced in the statutory process.

- The establishment of additional **EEZs** is an instrument that can be considered by Mediterranean countries (see *paragraph V.1*). If countries experience difficulties in establishing delimitation boundaries, a resolution is necessary to apply MSP since jurisdiction needs to be clear. The establishment of an Arbitral Tribunal may provide a solution (see *Chapter IV.1.1.2*).

Cross-border/international cooperation¹⁸¹

- An approach for the Mediterranean versus a regional approach:
 - Through international conventions and treaties countries can develop a **legally binding framework** – taking into account international law and its legal instruments like UNCLOS – for cross-border/international cooperation for the management of the high seas. Within an international convention provisions can be incorporated, for instance related to the establishment of an international management body or a working group focused on MSP. This work could be carried out through the establishment of a new convention or through a revision of the mandate of an existing one, such as the Barcelona Convention¹⁸²;
 - If a Mediterranean-wide approach turns out not to be feasible (e.g. because of geographic or economic factors or other considerations of a political nature) the use of **regional political initiatives** (see *Chapter II.1*) is recommended. Through for instance the establishment of regional advisory committees on MSP for the different subregions, the management of the high seas¹⁸³ could significantly be improved. A similar approach is adopted by the United States (see *Chapter VI*);
- Sector-neutral initiatives:
 - A Mediterranean-wide **sector-neutral initiative** is currently not present. Also regional initiatives' backgrounds are mostly oriented on protection of the environment. As mentioned before, an alternative starting point for MSP in the Mediterranean Sea may be set up within the framework of the **Barcelona Convention**¹⁸⁴ or a new convention. For the Mediterranean Sea, a protocol could be developed specifically aiming at MSP. Lessons learned from the **ICZM protocol** may be useful in this respect;
 - In order to ensure sector-neutrality, subsequent measures need to be taken if a platform with an environment-oriented background is selected for setting up MSP;
- **Lessons can be learned from various international MSP projects** (e.g. BaltSeaPlan, BALANCE, VASAB) in which countries jointly try to develop MSP. These initiatives can advance MSP through closer cross-sectoral approaches and their results and recommendations can be integrated into an international policy. At the EU level, a detailed overview of MSP initiatives at local and national levels can be compiled, along with lessons learned, aiming to feed the dialogue on MSP and to exchange experiences.

¹⁸¹ Blaesberg, M., Pawlak, J.F., Sorensen, T.K. & Vestegaard, O., 2009, *Marine Spatial Planning in the Nordic Region – Principles, Perspectives and Opportunities*; Gee, K., 2007, *Marine Spatial Planning - A theoretical overview*; Plancoast, 2008, *Handbook on Integrated Maritime Spatial Planning*.

¹⁸² Through the Barcelona Convention a framework for ICZM has been developed, which has become legally binding after the sixth ratification of the Protocol.

¹⁸³ These are the same regions within the Mediterranean Sea as mentioned in the Marine Strategy Framework Directive.

¹⁸⁴ As shown in *Chapter VI*, similar initiatives such as the HELCOM and OSPAR Commissions are nowadays dedicating more and specific attention to MSP.

Data collection, knowledge creation and evaluation¹⁸⁵

- In order to have a sound basis of scientific marine information and knowledge at the national level, it is important to have a **well-developed network** of research institutes, universities and other organisations involved in research related to the sea. They need to be able to understand the characteristics of the sea, identify areas of environmental importance and identify the areas where and when activities can take place and compete with each other or impact the environment;
- European Union Member States will need to be able to obtain a **stronger maritime knowledge base** in the near future anyway because of the **Marine Strategy Framework Directive**¹⁸⁶. In order to measure the environmental status, a good knowledge base of the state of the sea is required. Furthermore, in order to improve the environmental status, sufficient monitoring capabilities need to be available. Since these requirements are also essential for MSP, the development of MSP will benefit from the investments for the MSFD and vice versa;
- At the **EU-level**, **several other initiatives** have been set up (see *Chapter II.2* and *Chapter VI*) that will improve knowledge of the sea through data collection and (inter)national cooperation. Most of the countries surrounding the Mediterranean however, are **not EU-Members**, and therefore, do not participate in such initiatives. However, for achieving more knowledge on the sea they also need to consider to increase their efforts and, given the existence of transboundary effects, they should ideally look for ways to **participate in non-legally binding EU initiatives** such as EMODNET (see *Chapter VI*);
- If cross-border/international MSP is set up through the Barcelona Convention, the establishment of a **separate Regional Activity Centre**¹⁸⁷ could facilitate data collection and knowledge creation relevant to MSP on a Mediterranean level and could enable cooperation on relevant topics with other RACs. An alternative is to integrate research on MSP in one of the RACs (Plan Bleu);
- Next to intelligence on maritime and **environmental issues**, information should also be gathered about compatible maritime activities and (potentially) conflicting maritime activities. Furthermore, in case a more detailed form of MSP is needed, knowledge is required about **suitable maritime areas** for specific uses. Similarly, **forecasts** for the use of maritime areas, resources and services should be developed, e.g. the predicted need for marine aggregates or the total area needed for offshore wind-farming. Such input is necessary to set up an integrated, informed long term spatial plan. In this respect, the European Commission's Communication 'A European Strategy for Marine and Maritime Research: A coherent European Research Area framework in support of a sustainable use of oceans and seas'¹⁸⁸ provides a useful strategy for countries;
- For monitoring trends and sea uses, **data should be collected regularly and continuously**. For case-specific planning in limited sea areas, information should be gathered according to the most acute spatial problems. Within the same marine region, the **information should be harmonised** nationally and internationally;
- The development of **more uniform research methodologies** and a more internationally coordinated model for setting the marine research **agenda** are recommended;

¹⁸⁵ Blaesberg, M., Pawlak, J.F., Sorensen, T.K. & Vestegaard, O., 2009, *Marine Spatial Planning in the Nordic Region – Principles, Perspectives and Opportunities*; MSPP Consortium, 2006, *Marine Spatial Planning Pilot*; Plancoast, 2008, *Handbook on Integrated Maritime Spatial Planning*; Intergovernmental Oceanographic Commission, 2009, *Marine spatial planning: A step-by-step approach toward Ecosystem-based management*; European Commission, 2010, *Marine Knowledge 2020: marine data and observation for smart and sustainable growth*.

¹⁸⁶ In 2012, they need to have determined what good environmental status of their marine waters is and, in 2020, they need to achieve this good environmental status. See *Chapter II.2* for more information.

¹⁸⁷ Currently, six RACs are in place with different research topics. Plan Bleu focuses on the Mediterranean environment and develops scenarios to reconcile the environment and the realities of socio-economic development.

¹⁸⁸ European Commission, 2008, *A European Strategy for Marine and Maritime Research: A coherent European Research Area framework in support of a sustainable use of oceans and seas*, COM(2008) 534 final.

- MSP should take an **adaptive and flexible approach**, meaning that MSP is able to be adapted when, for example, environmental conditions change. MSP needs to be open to future trends, developments and newly arising problems that cannot yet be foreseen. What is important in this respect is the **flow of (scientific) knowledge to the appropriate authorities**. **Multi-disciplinary working groups** (including research institutes, representatives of maritime activities and NGOs) could be formed to provide the knowledge base for the decision makers;
- With regard to the organisation of monitoring and evaluation, it is recommended to adopt an approach like the one proposed by the Intergovernmental Oceanographic Institute (see *Chapter VI*).

Coherence between ICZM/coastal/terrestrial planning & MSP¹⁸⁹

- MSP needs to be coherent with land-based planning (and ICZM), in particular because land-based activities are in a number of cases one of the main sources of human pressures on the maritime area. **Consistency between MSP and land-use planning** will contribute to avoiding transferring land-based problems to the sea;
- The land-sea coherence can be reached in two ways. First, an overlap between terrestrial and maritime planning jurisdictions can be **formally mandated**, as is done in the UK¹⁹⁰ (see *Chapter VI*). Second, the overlap can also be created via a **more informal collaborative process** that ensures that the key elements of terrestrial and maritime planning objectives are aligned;
- During the study process it was found that the level to which **ICZM** (or similar strategies) has been implemented in the Mediterranean countries still **requires further developing**. Hence, countries are recommended to take action. To ensure integration between terrestrial and maritime planning, MSP could involve some of the stakeholders that were also involved in the land-use planning;
- The development of an **ICZM** strategy is often being perceived as being a higher priority than the development of MSP. It is however recommended to **implement MSP in parallel** with the implementation of ICZM.

Monitoring and control of the sea¹⁹¹

- In the Mediterranean Sea a major issue regarding MSP is the **surveillance** of the sea. Since the application of a maritime spatial plan will not be effective without sufficient monitoring and enforcement capabilities, this requires a better integration and cross-sector use of maritime data (cf. Bluemassmed) and/or additional ways of control (e.g. use of GIS, VTMIS, satellite monitoring (e.g. CleanSeaNet) or cameras). If this proves to be insufficiently effective, providing additional control/monitoring resources needs to be considered;
- **International cooperation** is another point of attention. The **Bluemassmed** project is a relevant initiative at EU-level but, due to the transboundary environmental effects of human activities in the Mediterranean Sea, other parts of the Mediterranean (including the high seas) need to be

¹⁸⁹ Gilliland, P.M. & Laffoley, D., 2008, *Key elements and steps in the process of developing ecosystem-based marine spatial planning*; Stockholm Resilience Centre, 2010, *Managing the Marine Mosaic: A Briefing on Marine Spatial Planning with an Ecosystem Approach*; Blaesberg, M., Pawlak, J.F., Sorensen, T.K. & Vestegaard, O., 2009, *Marine Spatial Planning in the Nordic Region – Principles, Perspectives and Opportunities*; MSPP Consortium, 2006, *Marine Spatial Planning Pilot*.

¹⁹⁰ In the UK the mandates for terrestrial and marine planning have been made formal; the MMO is responsible for the area until mean high water spring tide whereas local authorities' responsibilities run down to low water mark (implies slight overlap).

¹⁹¹ The White House Council on Environmental Quality, 2010, *Final Recommendations Of The Interagency Ocean Policy Task Force*; Gee, K., 2007, *Marine Spatial Planning - A theoretical overview*; Ekeboom, J., Jäänheimo, J. & Reker, J., 2008, *Towards Marine Spatial Planning in the Baltic Sea*.

monitored and controlled as well in order to effectively solve certain conflicts. Therefore, such an initiative should **ideally also include non-EU Member States**.

ANNEX I: OTHER AREAS THAT HAVE BEEN INVESTIGATED ON POTENTIAL FOR MSP

Based on the methodology presented in *Chapter III* and the information included in the country reports, four of the initially eight marine areas in the Mediterranean (see *Chapter III*) have been identified as areas which, compared to the four selected areas, currently have less potential for the application of MSP. As a result, they did not qualify for further examination under *Task 3* and *Task 4* of the study. This, however, does not imply that there is no potential for the application of MSP in these areas or any other area in the Mediterranean. The four areas concerned are:

- Area southeast of Cyprus (Cyprus, Egypt, Israel and Lebanon);
- Northern part of the Levantine Sea (Cyprus, Turkey and Syria);
- Aegean Sea (Greece and Turkey);
- Libyan Sea (Greece and Libya) and Egypt.

In consultation with the EC steering group, these areas have not been studied in further detail under *Task 3* and *Task 4* of this study. More details on each of the areas are provided in the following paragraphs.

VII.2.1. AREA SOUTHEAST OF CYPRUS

The marine area southeast of Cyprus borders four countries: Cyprus, Egypt, Israel and Lebanon, which is presented in *Figure 14*.

Figure 14: The area southeast of Cyprus



Maritime zones:

- Cyprus established an Exclusive Economic Zone*, but its boundaries are disputed by Turkey
- Egypt established an Exclusive Economic Zone**
- Israel did not establish maritime zones outside its territorial sea
- Lebanon did not establish maritime zones outside its territorial sea

* EEZ law of 2 April 2004

** Declaration on 26 August 1983

Source: Policy Research Corporation

a/ Competing activities

- The potential for MSP is mainly identified for oil and gas activities (at sectoral level); however, disputes with regard to maritime boundaries hamper (future) hydrocarbon activities; concrete competing activities could not be identified:
 - No offshore wind farms are planned in this area (source: 4COffshore);
 - Fishery has limited importance in the area surrounding Cyprus;
 - Shipping is mainly situated in the marine area close to Egypt (Suez Canal).

b/ Openness to cross-border or international cooperation with regard to MSP

- Political issues between Cyprus and Turkey might impact the potential for applying MSP in the area southeast of Cyprus;
- Political issues between Lebanon and Israel hamper the application of cross-border/international MSP and require a political solution¹⁹²;
- The maritime borders between Lebanon and Syria are not clearly defined.

VII.2.2. NORTH LEVANTINE SEA

The countries bordering the Northern part of the Levantine Sea are Cyprus, Turkey and Syria. This marine area is visualised in *Figure 15*.

¹⁹² University of Balamand, Lebanon, contacted on 21 January 2010.

Figure 15: The North Levantine Sea*Maritime zones:*

- Cyprus established an Exclusive Economic Zone*, but its boundaries are disputed by Turkey
- Turkey did not establish any maritime zones outside its territorial sea
- Syria established an Exclusive Economic Zone**

* EEZ law of 2 April 2004

** Loi n°28 du 19 novembre 2003 concernant l'Acte de définition des limites eaux intérieures et de la mer territoriale

Source: Policy Research Corporation

a/ (Access to) data and scientific knowledge

- Turkey: Based on desk research and the information received by stakeholders, it could not be examined to which extent the country has sufficient marine data available or the scientific knowledge to map marine activities; such information has not been identified;
- Syria: the lack of scientific data and reliable statistics and the inadequate identification or diagnoses of problems do not seem to allow for effective planning in Syria¹⁹³.

b/ Institutional framework for marine policy and/or coastal planning

- Turkey: various organisations have responsibilities in planning and/or coastal management resulting in overlap as well as gaps; institutional frameworks for ICZM have not yet been established; ICZM efforts do not go beyond the project level¹⁹⁴;
- Syria: A strategic integrated approach to spatial planning of the coastal area is absent; despite the high degree of pollution, public and private stakeholders have limited environmental awareness¹⁹⁵.

c/ Openness to cross-border or international cooperation with regard to MSP

- Turkey disputes Cyprus' EEZ boundaries and the delimitation agreements Cyprus established with its neighbouring countries; the dispute hinders potential oil and gas exploitation in this area;
- Turkey and Syria have not ratified UNCLOS.

VII.2.3. AEGEAN SEA

The countries bordering the Aegean Sea are Greece and Turkey. This marine area is visualised in Figure 16.

¹⁹³ Al-Azmeh H., Abed Rabboh R. & Shipman B., 2008, *ICZM Policy Brief "Towards a Strategy for Syria's coast."*

¹⁹⁴ http://ec.europa.eu/environment/iczm/evaluation/iczm_national_reporting_turkey.htm.

¹⁹⁵ Al-Azmeh H., Abed Rabboh R. & Shipman B., 2008, *ICZM Policy Brief "Towards a Strategy for Syria's coast."*

Figure 16: The Aegean Sea



Maritime zones:

- Both *Greece* and *Turkey* established a 6 nm territorial sea in the Aegean Sea
- *Turkey* disputes the extension of the Greek territorial sea towards 12 nm
- *Greece* declared that it reserves its legitimate right under international law to establish a 12 nm territorial sea at a time deemed appropriate*

* Source: Strati A., Greek Ministry of Foreign Affairs, e-mail 10 February 2010

Source: Policy Research Corporation

a/ (Access to) data and scientific knowledge

- Turkey and Greece: Based on desk research and the information currently received by stakeholders, it could not be examined to which extend both countries have sufficient marine data available or the scientific knowledge to map marine activities; such information has not been identified.

b/ Institutional framework for marine policy and/or coastal planning

- Turkey and Greece: Uncoordinated policy/management as regards coastal planning; various organisations have authorities in planning and/or coastal management resulting in overlap as well as gaps;
- Turkey: institutional frameworks for ICZM have not yet been established; ICZM efforts do not go beyond the project level¹⁹⁶;
- Greece¹⁹⁷: Greece signed the ICZM Protocol in 2008, but has not yet developed an ICZM strategy; a framework for spatial planning of the coastal areas and islands (including an action programme and incorporating the principles of the EU Recommendation on ICZM as the main pillars of coastal zone management) is still under preparation.

¹⁹⁶ http://ec.europa.eu/environment/iczm/evaluation/iczm_national_reporting_turkey.htm.

¹⁹⁷ Ministry of the Environment, Energy and Climate Change, Athens, contacted on 22 January 2010.

c/ Openness to cross-border or international cooperation with regard to MSP

- The Aegean dispute between Greece and Turkey regarding the delimitation of the sea area is still ongoing; the extension of the Greek territorial sea towards 12 nm has been disputed by Turkey; nevertheless, Greece declared that it reserves the legitimate right under international law to establish a 12 nm territorial sea at a time deemed appropriate¹⁹⁸;
- Turkey has not ratified UNCLOS.

VII.2.4. LIBYAN SEA AND EGYPT

The countries bordering the Libyan Sea are Greece and Libya. Together with Egypt, this marine area is presented in *Figure 17*.

Figure 17: The Libyan Sea and Egypt



Maritime zones:

- Greece did not establish maritime zones outside its territorial sea
- Egypt established an Exclusive Economic Zone*
- Libya established an Exclusive Fishing Zone and an Exclusive Economic Zone**

* Declaration on 26 August 1983

** EEZ declared in May 2009

Source: Policy Research Corporation

a/ (Access to) data and scientific knowledge

- Egypt: The availability of spatial data is affected by the lack of spatial data infrastructure, data fragmentation, the lack of a legal framework on data policies and a lack of coordination between the administrations concerning spatial data management¹⁹⁹;
- Libya: *Policy Research* has not been able to find any information on marine activities or establish contacts with authorities.

b/ Institutional framework for marine policy and/or coastal planning

- Egypt: ICZM is only recently being promoted and applied; workshops with stakeholders are being organised since the beginning of 2009 with the aim to develop an ICZM strategy in compliance

¹⁹⁸ Greek Ministry of Foreign Affairs, e-mail February 10, 2010.

¹⁹⁹ Sano, M., *GIS implementation for ICZM in the Mediterranean Coast of Egypt*.

with the ICZM Protocol²⁰⁰;

- Libya: Environmental legislation is considered to be weak²⁰¹; so far no concrete information on the status of ICZM could be found; contact with authorities could not be established;
- Greece: Uncoordinated policy/management as regards coastal planning; various organisations have authorities in planning and/or coastal management resulting in overlap as well as gaps; Greece signed the ICZM Protocol in 2008, but has not yet developed an ICZM strategy; a framework for spatial planning of the coastal areas and islands (including an action programme and incorporating the principles of the EU Recommendation on ICZM as the main pillars of coastal zone management) is currently still under preparation.

c/ Openness to cross-border or international cooperation with regard to MSP

- Sectoral cooperation between Egypt and Libya seems to chiefly concern oil and gas exploitation;
- No information has been found with regard to cross-border/international cooperation based on an ecosystem approach.

²⁰⁰ PAP/RAC, The Coastal Management Centre, www.pap-thecoastcentre.org; Priority Action Programme – EEEA, 2009, *Report on the first and the third workshop on the preparation of a 'National ICZM Strategy for Egypt'*.

²⁰¹ Metap: Mediterranean Environmental Technical Assistance Programme.

ANNEX II: EU-FUNDED PROJECTS RELATED TO ICZM AND MSP

Table 16: EU-funded projects related to ICZM and MSP (1/3)

<i><u>Project Acronym, Name & Objectives</u></i>	<i><u>Countries involved</u></i>	<i><u>Timeframe</u></i>	<i><u>Funding instrument</u></i>
<p><i>ACESSIBILITA INTERMODALITA - Developing the cohesion of the Mediterranean Basin through the management of regional transport systems</i></p> <p>The project focuses on all types of transportation systems in order to improve network access and ensure intermodality.</p>	ES, IT, PT	Dec 2002 – Oct 2004	INTERREG IIIB Western Mediterranean
<p><i>AMPAMED - The role of Marine Protected Areas in sustainable management of economic activities, such as traditional fisheries and tourism, in harmony with the cultural identity of the Western Mediterranean Region</i></p> <p>The main goal of the project is to use three MPAs in the Western Mediterranean (Corsica, Sardinia and Murcia) to provide a basis for achieving sustainable management of traditional activities.</p>	ES, FR, IT	Jun 2006 – Jun 2008	
<p><i>BEACHMED - Environmental reconstruction and maintenance of beaches under erosion by using sand marine carriers</i></p> <p>The purpose of this project is to define technical, environmental and economic issues connected to the extraction of marine borrow sand, essential for the reconstruction and the conservation of erosive coasts.</p>	ES, FR, IT, TN	Dec 2001 – Oct 2004	
<p><i>BEACHMED-E - Strategic management of the coastal protection for the sustainable development of coastal areas of the Mediterranean</i></p> <p>The main objective of the project is to pinpoint and improve technical and administrative tools for strategic management of the coastal defence, in order to achieve a sustainable development of the Mediterranean coastal zones.</p>	ES, FR, GR, IT, MA, TN	Jul 2005 – Jun 2008	INTERREG IIIC – South Zone
<p><i>COASTANCE - Regional action strategies for coastal zone adaptation to climate change</i></p> <p>Objectives: 1) to develop mid- and long-term ICZM Master Plans; 2) to use innovative actions to capitalize on previous experience concerning coastal erosion in the Mediterranean basin; 3) to produce results to be used as Public Policy Tools for erosion control; 4) to form a SDIC (Structural Data Infrastructure Community) to ensure durability.</p>	CY, ES, FR, IT, GR, HR	Apr 2009 – Mar 2012	MED Operational Programme
<p><i>DEDUCE - Sustainable development of European Coastal Zones</i></p> <p>Its main objective is to evaluate the usefulness of indicators for optimal decision-making on the coast, following the principles and criteria established by the EU Recommendation on ICZM.</p>	ES, FR, LV, MT, PL	Oct 2004 – Jun 2007	INTERREG IIIC – South Zone

Source: Policy Research Corporation

Table 17: EU-funded projects related to ICZM and MSP (2/3)

<u>Project Acronym, Name & Objectives</u>	<u>Countries involved</u>	<u>Timeframe</u>	<u>Funding instrument</u>
<p>ECASA - Ecosystem approach for Sustainable Aquaculture</p> <p>The key deliverable produced by the project was a virtual toolbox, which contains 'tools' to aid owners and operators of fin-fish and shell-fish farms in selecting farm sites and operating farms, so as to minimize environmental impact and ensure the sustainability of sites and water bodies for aquaculture.</p>	DE, ES, FR, GR, HR, IT, NO, PT, SE, SI, UK	Dec 2004 – Nov 2007	Sixth Framework Programme for Research
<p>ECOSUMMER - Ecosystem approach to sustainable management of the marine environment and its living resources</p> <p>The project offers training for 3 to 6 months on the following topics: marine resources, promotion of ecological, environmental, economical and social sustainability and preservation of biodiversity.</p>	ES, GR, UK	Jan 2006 – Dec 2009	
<p>EMPAFISH - European Marine Protected Areas as tools for fisheries management and conservation</p> <p>The project's objectives were (1) to investigate the possibilities to protect sensitive and endangered species, habitats and ecosystems from the effects of fishing by establishing different types of MPAs in Europe, (2) to develop quantitative methods to assess the effects of MPAs, (3) to provide the EU with a set of integrated measures and policy proposals for the implementation of MPAs.</p>	ES, FR, IT, MT, PT, UK	Mar 2005 – Feb 2008	
<p>ENCORA - European Network on Coastal Research</p> <p>The services provided by ENCORA include: (1) a contact database with information on people, institutes and projects related to ICZM in Europe, (2) Web search: searching the internet for ICZM information and (3) WIKI: the Coastal Wiki (Coastal and marine encyclopedia)</p>	BE, DE, DK, ES, FR, GR, IE, IT, MC, NL, PL, PT, RU, SE, UK, Ukraine	Feb 2006 – Jan 2009	Sixth Framework Programme for Research
<p>HERMES - Hotspot Ecosystem Research on the Margins of the European Seas</p> <p>Designed to create a better understand of the biodiversity, structure, function and dynamics of ecosystems along Europe's deep-ocean margin, enabling the development of appropriate and sustainable management strategies based on scientific knowledge</p>	BE, DE, ES, FR, GR, IE, IT, Kenya, MC, NL, NO, PT, RO, RU, SE, TR, UK, Ukraine	Apr 2005 – Mar 2009	
<p>EUROSION</p> <p>The overall objective of EUROSION was to provide the EC with a package of recommendations for policy-making and information management practices to address coastal erosion in Europe, after assessing knowledge gained from past experiences and of the current status and trends of European coasts.</p>	ES, FR, NL	Jan 2002 – May 2004	DG ENV
<p>MedPAN - Network of managers of marine protected areas in the Mediterranean</p> <p>The main objective of the network is to facilitate cooperation between protected marine areas at European and interregional levels and with third countries in the Mediterranean basin and, on based on exchanges, to propose tools to render the management of such territories more efficient.</p>	DZ, ES, FR, GR, HR, IT, MA, MT, SI, TN, TR	Jan 2005 – Mar 2008	INTERREG IIIC – South Zone
<p>MedWetCoast - Conservation of Wetlands and Coastal Ecosystems in the Mediterranean Region</p> <p>The project aims to contribute to the conservation and sustainable use of wetland biodiversity in the Mediterranean. The project's objective is to achieve and demonstrate this a group of 15 important sites in 6 countries: Albania, Egypt, Lebanon, Morocco, Palestinian Authority, Tunisia.</p>	AB, EG, LB, MA, PS, TN	1999 – 2004	Global Environment Facilities (GEF) Fond Français pour l'environnement mondial (FFEM)

Source: Policy Research Corporation

Table 18: EU-funded projects related to ICZM and MSP (3/3)

<i>Project Acronym, Name & Objectives</i>	<i>Countries involved</i>	<i>Timeframe</i>	<i>Funding instrument</i>
MESMA The MESMA project focuses on Marine Spatial Planning and aims to produce integrated management tools (concepts, models and guidelines) for monitoring, evaluation and implementation of Spatially Managed Marine Areas, based on European collaboration.	BE, BG, DE, DK, ES , GR , IE, IT , MT , NL , NO, PL, SE, UK,	2009 - 2011	Seventh Framework Programme for Research
OURCOAST OURCOAST will support the exchange of best practices in coastal management in Europe. It will eventually lead to the development of guidance for sustainable use of the coastal zone in Europe, as well as the encouragement of the coastal Member States to implement ICZM policy.	All coastal EU countries	2009 – 2012	DG ENV
PEGASO - People for Ecosystem Based Governance in Assessing Sustainable Development of Ocean and Coast The main objective of PEGASO is to build on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea basins in ways consistent with and relevant to the implementation of the ICZM Protocol for the Mediterranean.	BE, CH, DZ , EG , ES , FR , GR , HR , IT , LE , MA , RO, TN , TR , UA, UK	Jan 2010 – Dec 2013	Seventh Framework Programme for Research
PlanCoast - Spatial Planning in Coastal Zones The project intends to promote the implementation of ICZM measures in coastal zones of the Baltic, Adriatic and Black Sea by enhancing the role of spatial planning within coastal zone management. In pilot projects the land as well as the seaside will be considered when developing and implementing new fields of spatial planning in maritime areas (sea-use planning) throughout the EU's coastal zones in a coherent manner while complying to international standards and facilitating international exchange and comparison of information.	AB , BA , BG, DE, HR , IT , ME , PL, RO, SI , UA	Apr 2006 – Apr 2008	INTERREG IIIB Baltic Sea
SAFEMED The objective is to mitigate the existing imbalance in the application of maritime legislation in the region between the EU Member States and the Mediterranean partner countries through promoting a coherent, effective and uniform implementation of the relevant international conventions and rules aimed at better protection of the marine environment in the Mediterranean region by preventing pollution from ships.	DZ , EG , IS, JO , LB , MA , PS , SY , TN , TR	SAFEMED I: 2006 – 2008 SAFEMED II: 2009 - 2011	MEDA Programme
SECURSEA SECURSEA aims to protect and integrate the management of the Adriatic Sea (IC2M), including the preservation of the coastal areas' natural, environmental, social and economic heritage.	HR , IT	Jun 2004 – Jun 2006	INTERREG IIIA Adriatic New Neighbourhood Programme

Source: Policy Research Corporation

ANNEX III: OVERVIEW OF PERSONS CONTACTED

<i>Country</i>	<i>Contact</i>	<i>Organisation</i>
Albania	Alma Bako	Ministry of Environment, Forests and Water Administration
Albania	Etleva Canaj	Ministry of Environment, Forests and Water Administration
Albania	Marietta Mima	Environmental Centre for Administration and Technology Albania
Albania	Sokol Kapidani	Ministry of Public Works, Transport and Telecommunications
Algeria	Nadia Chenouf	Ministère de l'Aménagement du Territoire, de l'Environnement et du Tourisme
Algeria	Samir Grimes	Institut des Sciences de la Mer et de l'Aménagement du Littoral
Algeria	Samira Nateche	Ministère de l'Aménagement du Territoire, de l'Environnement et du Tourisme
Algeria	Farid Nezzar	MAP Focal Point
Bosnia and Herzegovina	Silvana Cavar	Neretva Cantonal Ministry of Physical Planning
Bosnia and Herzegovina	Tarik Kupusovic	MAP Focal Point
Croatia	Antun Paunovic	Ministry of Environmental Protection, Physical Planning and Construction, Institute for Physical Planning
Croatia	Goranka Radovic	Ministry of Environmental Protection, Physical Planning and Construction, Directorate for Physical Planning
Croatia	Ivan Benkovic	Ministry of Economy, Labour and Entrepreneurship, Directorate for Energy

Croatia	Ivica Trumbic	Former Priority Actions Programme Regional Activity Center
Croatia	Katja Božic	Ministry of the Sea, Transport and Infrastructure, Directorate for Maritime Transport, Maritime Domain and Ports
Croatia	Marijana Mance Kowalsky	Ministry of Environmental Protection, Physical Planning and Construction, Directorate for International Cooperation and Sustainable Development
Croatia	Marko Prem	Priority Actions Programme/Regional Activity Centre
Croatia	Martina Sorsa	Ministry of Environmental Protection, Physical Planning and Construction, Directorate for International Cooperation and Sustainable Development
Croatia	Mira Morovic	Institute of Oceanography and Fisheries
Croatia	Nevia Kruzic	Ministry of Environmental Protection, Physical Planning and Construction
Croatia	Petar Krznaric	Ministry of Agriculture, Fisheries and Rural Development, Directorate for Fisheries
Croatia	Ratimir Zimmermann	Ministry of Environmental Protection, Physical Planning and Construction, Institute for Physical Planning
Croatia	Velimir Dumicic	Ministry of Environmental Protection, Physical Planning and Construction, Institute for Physical Planning
Croatia	Vesna Rajkovic	Ministry of Tourism, Directorate for Tourism Infrastructure and Resource Protection
Cyprus	Andreas Demetropoulos	Cyprus Wildlife Society
Cyprus	Jason Sofos	Ministry of Communications and Works - Coastal Section
Egypt	Gehan Elsakka	Egyptian Environmental Affairs Agency (EEAA)
Egypt	Mohamed Farouk	Egyptian Environmental Affairs Agency (EEAA)
Egypt	Mootaz Ahmadein Khali	Deputy assistant Foreign Minister for Environment and Sustainable Development
Egypt	Nehad Abdel Latif	Ministry of Foreign Affairs - Ambassador - Chairman - National Steering Bureau - EU

		Action plan & Association Agreement
Greece	Anastasia Strati	Ministry of Foreign Affairs
Greece	Athina Mourmouris	Ministry of the Environment, Energy and climate Change
Greece	Elpida Politi	Ministry of the Environment, Energy and climate Change
Israel	Adam Schalimtzek	Foreign Relations Coordinator – Division of International Relations within the Ministry of Environmental Protection
Israel	Ilana Shafran	Ministry of Interior
Israel	Ruth Yahel	Israel Nature and Parks Authority
Israel	Valerie Brachya	Environmental Policy Center
Italy	Aldo Consenti	Coordinator for the Barcelona Convention
Italy	Andrea Bonometto	ISPRA
Italy	Angelo Ciasca	Ministry of Environment, Land and Sea
Italy	Angelo Marino	Fisheries department – Puglia region
Italy	Bianca Picciurro	Assologistica
Italy	Carlo Lombardi	Confitarma/Federazione del Mar
Italy	Carlo Pipitone	ISPRA Sicilia
Italy	Carlo Visca	Aree urbane, servizio idrico integrato, manutenzione programmata del territorio – Abbruzzo region
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ANNEX IV: GENERAL ABBREVIATIONS

AE	Adriatic Euroregion
ANPE	Agence Nationale de Protection de l'Environnement
APAL	Agence de Protection et d'Aménagement du Littoral
ARPA	Agenzia Regionale per la Protezione Ambientale
CAMP	Coastal Area Management Programme
CAOS	Coordinated Adriatic Observing System
CMIMA	Centre Mediterrani d'Investigacions Marines i Ambientals
CNDPA	Centre National d'Etudes et de Documentation pour la Pêche et l'Aquaculture
CNL	Commissariat National du Littoral
CNR-IAMC	Consiglio Nazionale delle Ricerche-Institute for coastal marine environment
CNR-ISMAR	Consiglio Nazionale delle Ricerche – Istituto de Scienze Marine
CNRS	Centre National de la Recherche Scientifique
DG	Directorate General
DGPA	Directeur Général Pêche et Aquaculture
EC	European Commission
EEZ	Exclusive Economic Zone
EFPZ	Ecological and Fishery Protection Zone
EFZ	Exclusive Fishing Zone
EIA	Environmental Impact Assessment
EMODNET	European Marine Observation and Data Network
ENNSMAL	Ecole Nationale Supérieure des Sciences de la Mer et de l'Aménagement du Littoral
EPZ	Ecological Protection Zone
EU	European Union
FAO	Fisheries and Agriculture Organisation
GFCM	General Fisheries Commission for the Mediterranean

GIS	Geographic Information System
GT	Gross tonnage
ICZM	Integrated Coastal Zone Management
IEO	Instituto Español de Oceanografía
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
IPA	Instrument for Pre-Accession Assistance
IMEDEA	Mediterranean Institute of Advanced Studies
IMO	International Maritime Organisation
INRH	Institut National de Recherche Halieutique
INSTM	Institut National des Sciences et Technologies de la Mer
ISM	Institut Supérieur Maritime
ISPRA	Istituto Superiore per la Protezione e la Ricerca Ambientale
IUCN	International Union for Conservation of Nature
LNG	Liquefied Natural Gas
LR	Languedoc-Roussillon
LRSE	Laboratoire de Recherche Réseau de Surveillance Environnementale
MAP	Mediterranean Action Plan
MBRC	Marine Biology Research Centre
MEDPAN	Mediterranean Protected Areas Network
MEPA	Malta Environment and Planning Authority
MESMA	Monitoring and Evaluation of Spatially Managed Areas
METAP	Mediterranean Environmental Technical Assistance Program
MPA	Marine Protected Area
MSFD	Maritime Strategy Framework Directive
MSP	Maritime Spatial Planning
n/a	Not applicable
NATO	North Atlantic Treaty Organisation
NGO	Non-Governmental Organization
NHRI	National Fisheries Research Institute
nm	Nautical mile
NS ICAM	National Strategy on Integrated Coastal Area Management
ONEDD	Observatoire National de l'Environnement et Développement Durable
PACA	Provence Alpes-Côte d'Azur
PAP/RAC	Priority Actions Programme/Regional Activity Center

PSSA	Particularly Sensitive Sea Area
RAC/SPA	Regional Activity Center for Specially Protected Areas
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean sea
SAC	Special Area for Conservation
SEA	Strategic Environmental Impact Assessment
SHAPE	Shaping a Holistic Approach to Protect the Adriatic Environment
SMA	Spatially Managed Area
SMAP	Short and Medium Term Priority Environmental Action Programme
SNAT	Schéma National d'Aménagement du Territoire
SPA	Special Protection Area
SPAMI	Specially Protected Areas of Mediterranean Interest
SSS	Short Sea Shipping
TEU	Twenty feet Equivalent Unit
TS	Territorial Sea
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP-MAP	United Nations Environment Programme – Mediterranean Action Plan
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPA	Urban Planning Agency
USTHB	Université des Sciences et de la Technologie Houari Boumediène
VTMIS	Vessel Traffic Monitoring System
WFD	Water Framework Directive
WWF	World Wide Fund for Nature