Supporting maritime spatial Planning in the Eastern Mediterranean (SUPREME)

Recommendations and guidelines to support common understanding and integration of Barcelona Convention principles in MSP activities

with a focus on EU Member States within marine waters of the Adriatic, Ionian, Aegean and Levantine Seas

Deliverable No 1.1.2

Co-funded by the European Maritime and Fisheries Fund of the European Union.
Agreement EASME/EMFF/2015/1.2.1.3/01/S12.742087 – SUPREME

Project Full title	**Supporting maritime spatial Planning in the Eastern Mediterranean (SUPREME)**
Project Acronym	**SUPREME**
Grant Agreement No.	**Agreement EASME/EMFF/2015/1.2.1.3/01/S12.742087 – SUPREME**
Coordinator	**Dr. Pierpaolo Campostrini**
Project start date and duration	**01/01/2017 – 31/12/2018**
Project website	**http://www.msp-supreme.eu/**

Deliverable No.	**1.1.2**	**Deliverable Date**	**May 2018**
Status: Final (F) / Draft (D) / Revised draft (RV)	**F**		
Task number	**C 1.1.2**		
Task number Title	**Ensuring region-wide coherence, building on the Barcelona Convention and its Protocols, processes, decisions, in relation to the definition and application of MSP in a systematic manner**		
Responsible Institute (acronym)	**PAP/RAC**		
Coordination	**Marina Marković, Željka Škaričić**		
Authors	**Emiliano Ramieri, Daniela Addis, Athena Mourmouris**		
Contributions	**Braida, M., Celli, A., Montanaro, O. (IMELS) Avgerinou Kolonias, S. (NTUA) Antoniadis, S., Hema, T. (UN Environment/MAP)**		
Editing	**Pavasović, S.**		

ACKNOWLEDGEMENT

The work described in this report was supported by the European Maritime and Fisheries Fund of the European Union – through the Grant Agreement EASME/EMFF/2015/1.2.1.3/01/S12.742087 – SUPREME*, corresponding to the Call for proposal* EASME/EMFF/2015/1.2.1.3 for Projects on Maritime Spatial Planning (MSP).

DISCLAIMER

This document reflects only the authors' views and not those of the European Union. This work may rely on data from sources external to the SUPREME project Consortium. Members of the Consortium do not accept liability for loss or damage suffered by any third party as a result of errors or inaccuracies in such data. The user thereof uses the information at its sole risk and neither the European Union nor any member of the SUPREME Consortium, are liable for any use that may be made of the information.

The designations employed and the presentation of material in the present document do not imply the expression of any opinion on the part of the UN Environment/MAP Barcelona Convention Secretariat concerning the legal status of any country, territory, area, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The depiction and use of boundaries, geographic names and related data shown on maps included in the present document are not warranted to be error free nor do they imply official endorsement or acceptance by UN Environment/MAP Barcelona Convention Secretariat. The UN Environment/MAP Barcelona Convention Secretariat is not accountable for the data and cannot guarantee that they are correct, accurate or comprehensive.

Table of Contents

List of Acronyms

AII	Adriatic and Ionian Initiative
APEIs	Areas of Particular Environmental Interest
BC	Barcelona Convention
BD	Biological Diversity
BOD	Biochemical Oxygen Demand
CBD	Convention on Biological Diversity
CF	Conceptual Framework
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COP	Conference of the Contracting Parties
CPs	Contracting Parties
CRF	Common Regional Framework
DDT	Dichlorodiphenyltrichloroethane
EBA	Ecosystem-Based Approach
EBSA	Ecologically or Biologically Significant Marine Area
EcAp	Ecosystem Approach
EEZ	Exclusive Economic Zone
EFPZ	Ecological and Fisheries Protection Zone
EIA	Environmental Impact Assessment
EOs	Ecological Objectives
EPZ	Ecological Protection Zone
EU	European Union
EUSAIR	EU Strategy for the Adriatic and Ionian Region
FAO	United Nations Food and Agriculture Organization
FMSY	Maximum sustainable yield exploitation rate in fisheries
FPZ	Fisheries Protection Zone
FZ	Fishery Zone
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
GOBI	Global Ocean Biodiversity Initiative
GVA	Gross Value Added
ICCAT	The International Commission for the Conservation of the Atlantic Tuna
ICZM	Integrated Coastal Zone Management
IMAP	Integrated Monitoring and Assessment Programme
IMCAM	Integrated Marine and Coastal Area Management
IMMAs	Important Marine Mammal Areas
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
ISA	International Seabed Authority
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated (fishing)
KBAs	Key Biodiversity Areas
LBS	Land-Based Sources (of pollution)
LSIs	Land-Sea Interactions
MAB	Man and the Biosphere Programme
MAP	Mediterranean Action Plan
MedWet	Mediterranean Wetlands Regional Initiative
MEPC	Marine Environment Protection Committee
MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
MS	Member State
MSP	Marine/Maritime Spatial Planning

MTS	Mid-Term Strategy
MWO	Mediterranean Wetland Observatory
NFPs	National Focal Points
PAP/RAC	Priority Actions Programme Regional Activity Centre
PEFZ	Protected Ecological-Fishery Zone
PoW	Programme of Work
RFMOs	Regional Fisheries Management Organizations
SDG	Sustainable Development Goals
SDI	Spatial Data Infrastructure
SPA/RAC	Specially Protected Areas Regional Activity Centre
RAC	Regional Activity Centre
RSCs	Regional Seas Conventions
SDGs	Sustainable Development Goals
SDIMED	Spatial Data Infrastructure of the Mediterranean
SEA	Strategic Environmental Assessment
TEIA	Trans-boundary Environmental Impact Assessment
TEU	Treaty on European Union
UNCLOS	United Nations Convention of the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO-IOC	United Nations Educational, Scientific and Cultural Organisation – Intergovernmental Oceanographic Commission
UN Environment / WCMC	The World Conservation Monitoring Centre of the United Nations Environment Programme
VASAB	Vision and Strategies around the Baltic Sea (Helcom-VASAB MSP)
VMEs	Vulnerable Marine Ecosystems

List of Figures

List of Tables

List of Boxes

Foreword

The preparation of this document overlaps with the parallel activity and preparation of the document *„Recommendations to support common understanding on a regional scale on MSP, including synergic implementation of regionally relevant policy instruments*", undertaken within the framework of **SIMWESTMED** project.

Performing and finalisation of these outputs was undertaken and presented in a synergic way, for the overall benefit of SUPREME and SIMWESTMED project partners.

1. Introduction

1.1 Geographical scope of the study

In the framework of Barcelona Convention (BC), generally considered, the Eastern Mediterranean is a wide area of approximately 1.7 million km^2 that has highly varied physiographic character. It includes the Strait of Sicily, the Adriatic Sea, the Ionian Sea, the Levantine Basin, and the Aegean Sea. In addition, for practical reasons and the unique purpose of the Initial Integrated Assessment of the Mediterranean Sea (2012)[1], in line with the Ecosystem Approach (EcAp), Roadmap the Contracting Parties (COP) have defined four sub-regions of the Mediterranean Sea (Barcelona Convention COP 17 Decision IG. 20/4 Annex I, presenting the *„Summary for Decision-Makers of the Initial Integrated Assessment of the Mediterranean Sea and Coastal Areas"*):

1. Western Mediterranean;
2. Central Mediterranean and Ionian subregion;
3. Adriatic Sea; and
4. Eastern Mediterranean (Aegean – Levantine).

According to the EASME Call for tender, the Eastern Mediterranean includes (Figure 1):

- the **Adriatic Sea** extending from the Strait of Otranto to the south (where it connects to the Ionian Sea) to the Gulf of Venice to the north;
- the **Ionian Sea**, lying to the south/east of Italy and west-south/west of Greece;
- the **Aegean Sea**, located between the Greek and the Anatolian peninsulas;
- the **Levantine Sea**, extending to the south of the Anatolia peninsula. It is bordered by Turkey in the north, Syria, Lebanon, Israel and the Gaza Strip in the east, Egypt and (part of) Libya in the south, and the Aegean Sea in the northwest.

Both the EU and non-EU countries have coasts on the East Mediterranean. The EU countries are Croatia, Cyprus, Greece, Italy and Slovenia. The non-EU countries are Albania, Bosnia-Herzegovina, Montenegro (with coasts on the Adriatic Sea) and Egypt, Israel, Lebanon, Libya, Syria, Turkey (with coasts on the Aegean and/or Levantine Seas). All these countries are Contracting Parties to the Barcelona Convention.

Therefore, although this paper elaborates on the need to integrate the BC principles into Maritime Spatial Planning (MSP) activities in the Eastern Mediterranean, the geographical scope it covers does not fully correspond to the BC notion of the Eastern Mediterranean. Rather, the document has a focus on the EU member States within marine waters of the Adriatic, Ionian, Aegean and Levantine Seas, taking into considerations the countries of the southern rim, within the red-line zone indicated in the Figure 1.

[1] Prepared to fulfil the step 3 of the UN Environment/MAP ecosystem approach process. The document is available at http://www.rac-spa.org/sites/default/files/ecap/initial_integrated_assessement.pdf.

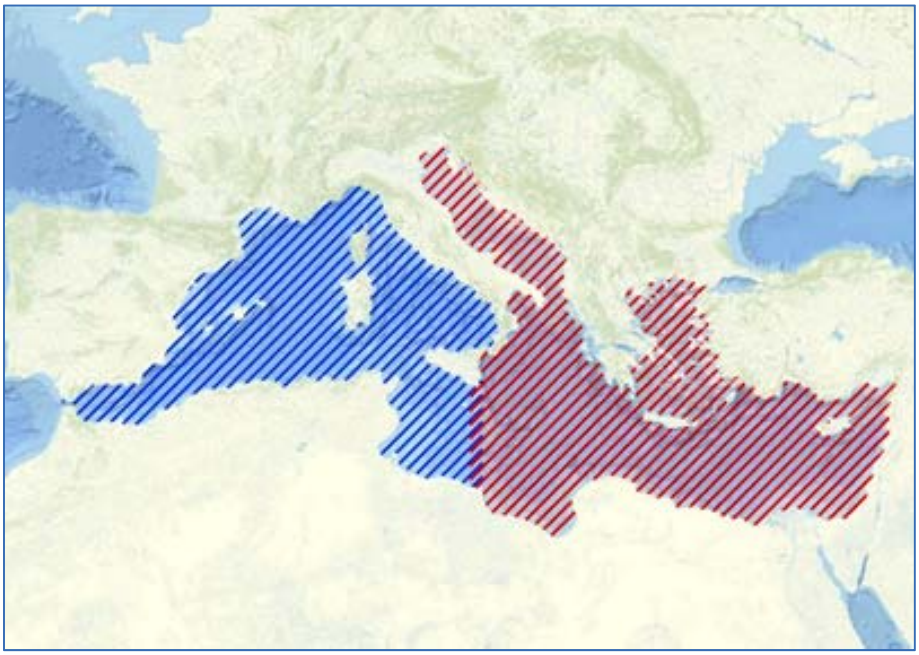

Figure 1: The Eastern (red lines) and the Western (blue lines) Mediterranean

1.2 About Mediterranean Sea with a focus on the Eastern Mediterranean

The Mediterranean Sea has often been called the incubator of Western civilization, to underline its cultural and historical significance. This region comprises a vast set of coastal and marine ecosystems delivering valuable benefits to its coastal inhabitants (UN Environment/MAP, 2012) and forming, together with cultural and historical assets, the essence of the Mediterranean beauty. The Mediterranean is not only complex in ecology, but also socio-politically and economically; over the last decades, it has faced rapid economic development, which has increased pressures on the marine space, biological resources and ecological habitats and processes.

In the twelve EU and candidate or potential candidate countries of the Mediterranean (Croatia, Cyprus, France, Greece, Italy, Malta, Spain, Slovenia as well as Albania, Bosnia and Herzegovina, Montenegro, and Turkey), the total gross value added (GVA) generated by maritime economic activities exceeded EUR 63 billion in 2010, i.e. more than three times the total GVA generated by the same activities in the Baltic Sea (EUNETMAR, 2014). Italy, Greece and Spain represent 81% of this activity. For the purpose of the analysis, the EUNETMAR study identifies three sub-regions, providing a picture of the relative weight in terms of blue economy: Western Mediterranean (Spain, France and the Tyrrhenian coast of Italy) accounts for EUR 27.1 billion (in terms of GVA), followed by the Central Mediterranean (Adriatic and Ionian, including Malta) with a total of EUR 19.3 billion; the Eastern Mediterranean region considered by the study (Aegean coast of Greece, Mediterranean coast of Turkey, Cyprus and Malta) totals EUR 16.9 billion, i.e. 27% of the total GVA of the blue economy in the Mediterranean. Aggregating this data for the geographic scope of the SUPREME project, GVA in 2010 accounts for EUR 35.5 billion which is more than 50% of the Mediterranean total (Table 1).

Table 1: Importance of the blue economy in the 12 countries considered by the study. Source: (EUNETMAR, 2014)

	GVA (billion EUR)	% total
IT	23.6	37%
GR	16.7	26%
ES	11.1	18%
FR	4.4	7%
TR	3.3	5%
HR	1.5	2%
CY	0.8	1%
MT	0.7	1%
AL	0.6	1%
ME	0.5	1%
SI	0.1	0%
BA	0.0	0%
Total	**63.3**	**100%**

This figure is surely higher if the other Mediterranean countries are taken into consideration. According to the same study quoted above, coastal tourism and shipping (both deep-sea and short-sea shipping[2]) represent 73% of this total at the Mediterranean scale.

In the Eastern Mediterranean coastal tourism and marine aquaculture are identified as the most promising and important maritime activities in all the 9 analysed countries, followed by short-sea shipping (Greece, Croatia, Italy, Montenegro, Turkey, Slovenia) and cruise tourism (Cyprus, Greece, Croatia, Italy, Slovenia, Turkey). According to quotes study short-sea shipping *„emerged considering the geographical configuration of the basin, with many countries and a lot of exchanges…, cruise tourism emerged because of the extraordinary attractiveness of Mediterranean countries and their coasts*". Coastal tourism and maritime transport are also significant economic activities for the European Neighbourhood Policy's partner countries analysed by the same study (Egypt, Israel, Palestine, Lebanon), with the exception of Palestine. In Egypt and Israel tourism is mainly concentrated along the Red Sea; the Mediterranean offers an important development opportunity, being however negatively affected by the current unstable geo-political situation. Oil and gas extraction is considered another promising activity for all the four countries (the real unique opportunity for Palestine according to the study), while aquaculture seems to assume perspective as a real opportunity only for Israel at the moment.

According to the analysis carried out by the MEDTRENDS project (Piante and Ody, 2015), except for professional fisheries, all Mediterranean maritime sectors (such as tourism, shipping, aquaculture and offshore oil and gas, etc.) are expected to keep growing during the coming 15 years. Emerging sectors, such as renewable energy, seabed mining and biotechnology are expected to grow even faster, although

[2] The term „short-sea shipping" refers to the historical terms coastal trade, coastal shipping, coasting trade and coastwise trade, which encompass the movement of cargo and passengers mainly by sea along a coast, without crossing an ocean. The term „deep-sea shipping" refers to maritime traffic that crosses oceans.

in absolute terms they will be less relevant than more traditional uses also in the future and there is greater uncertainty on their possible evolution as well as expected impacts on marine ecosystems.

About 36% of the EU coastal regions' populations live in coastal regions bordering the Mediterranean. Population density is highest in coastal area of the Northern and Eastern Mediterranean (Piante and Ody, 2015). In 2012, the number of tourists visiting the Mediterranean represented 30% of the total world tourists' number and half of it was concentrated in coastal areas (Plan Bleu, 2014).

The initial assessment undertaken within the SUPREME project (SUPREME, 2017) confirms that the Eastern Mediterranean area has a high concentration of all main maritime activities. In addition to the synergies among their different uses, there are number of competitions and conflicts among these sectors (Table 2).

Table 2: Current and future conflicts between activities in the SUPREME Area

	Professional Fishery	Recreational Fishery	Aquaculture	Maritime transport	Energy	Coastal & Maritime Tourism
Professional Fishery						
Recreational Fishery						
Aquaculture						
Maritime transport						
Energy						
Coastal & Maritime Tourism						

Low Conflict	
High Conflict - Competition for Resources	
High Conflict - Competition for Space	
High Conflict - Competition for Space and Negative effects on the environment	

This adds further pressures on the already stressed coastal areas, exacerbating the process of coastal littoralization. Marine habitat degradation and biodiversity loss are due to a diverse range of human activities which, besides tourism and recreational uses, include fishery, shipping, sea pollution, marine littering and offshore oil and gas development. On top of this, climate change effects provide additional pressures on already stressed ecosystems, habitats and species (MedPAN, RAC-SPA, 2016).

Even though in the last years significant efforts have been made to improve protection of the Mediterranean biodiversity and the extension of protected areas, achievement of the Convention on Biological Diversity (CBD) Aichi objective No. 11 (i.e. 10% of coastal and marine areas covered through Marine Protected Areas (MPAs) is far to be reached (Piante and Ody, 2015). There is still a clear unbalanced distribution of MPAs, being the Western Mediterranean characterized by a relative better situation than the Eastern; the unbalance is even more evident comparing northern and southern areas of the basin (largely due to EU Natura 2000 sites and the Pelagos Sanctuary for marine mammals).

Ecological coherence and connectivity is still a great challenge in particular in the Eastern Mediterranean and most of the MPAs are located along the coast, with limited protection of open sea areas. Moreover, for the majority of sites, there is not enough knowledge on implementing „effective and equitable management" (CBD Aichi objective No. 11) towards the site's conservation targets. This calls for further qualitative improvements with regards to, among others, legal framework and governance, stakeholder engagement and integration with MSP (MedPAN, RAC-SPA, 2016).

2. MSP in the Mediterranean to date

Maritime Spatial Planning, compared to land-use planning, is a fairly new and emerging process in the Mediterranean Region. In general, the process is at its initial stage and is highly influenced by differences among countries, related in particular to their institutional and legal framework and to some extent to the availability of reliable knowledge base. With the adoption of the EU Directive on Maritime Spatial Planning (2014/89/EU), all coastal EU Member States are required to prepare cross-sectoral maritime spatial plans by 2021 aimed at promoting the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources. In addition, although still indirectly, the Barcelona Convention and in particular the ICZM Protocol provide an overall framework for MSP implementation within territorial sea limits of all Mediterranean countries, as detailed in chapter 3. Indeed, planning of the marine space is a concept widely taken on board by the ICZM Protocol (see sub-chapter 3.1), while the Barcelona Convention recently embarked in policy initiatives directly addressing MSP (see sub-chapter 3.3).

It is recognized that the EU Directive on MSP is a key enabling factor (Zerkavi, 2015) that has triggered initial concrete actions towards MSP implementation in all EU Member States of Eastern Mediterranean (and in general in the entire Mediterranean) as reported in the web-site of the EU MSP Platform[3]. Croatia, Cyprus, Italy and Slovenia have finalized the transposition of the MSP EU Directive into national legislation, while this is still in progress in Greece. Actually, this country has linked the transposition of the MSP Directive with the ratification of the ICZM Protocol, aiming to implement MSP and ICZM through a coherent and integrated approach.

However, all Eastern Mediterranean EU countries have identified the competent MSP national authorities, i.e.: the Ministry of Transport and Infrastructure in Italy; the Ministry of Environment and Spatial Planning in Slovenia; the Ministry of Construction and Physical Planning, including the Croatian Institute for Spatial Development, in Croatia; the Ministry of Environment and Energy in Greece; and the Ministry of Transport, Communication and Works in Cyprus. Indeed, MSP is a cross-sector process and its implementation involves a wider number of authorities acting at the national (mainly other sector or cross-sector Ministries) and sub-national levels where relevant (e.g. the Italian coastal regions or the spatial planning institutes of Croatian coastal counties).

Coordination mechanisms exist or are being created to this scope and definition of roles and responsibility within the MSP process is in progress. Through the Legislative Decree 17.10.2106 n. 201, Italy established the Inter-Ministerial Coordination Table chaired by the Presidency of the Council of Ministries (Department of European Policies) and the Technical Committee coordinated by the Ministry of Infrastructures and Transport. The first is in charge of defining the marine areas for the development of MSP plans and coastal areas for sea-land interactions analysis as well as defining guidelines for the

[3] msp-platform.eu; accessed on 10.11.2017. See in particular country fiches (http://msp-platform.eu/msp-practice/countries) describing the status of MSP implementation in each Member State and the wide database of practices (http://msp-platform.eu/msp-practice/database) including also those developed in the Eastern Mediterranean.

implementation of MSP and elaboration of related plans. The second will elaborate MSP plans according to the guidelines elaborated by the Inter-Ministerial Coordination Table, including Strategic Environmental Assessment (SEA) and Natura 2000-reated evaluation procedures. In July 2012, Cyprus Council of Ministers established a Working Group on MSP then extended to ICZM in October 2013. In the same country, the recently approved (late September 2017) MSP Bill establishes the MSP Committee involving a number of ministries, departments and services of Cyprus Government and being in charge of the preparation of the MSP plan. As far as MSP is concerned, this Committee will replace the above-mentioned Working Group on MSP and ICZM, which however will remain in place for issues dealing with integrated coastal zone management. In Greece, consultation on spatial planning with sectoral Ministries, regional authorities and stakeholders in general can be ensured by the National Spatial Planning Council.

Moreover, countries are concretely developing other MSP-related activities, as:

- Setting out of guidelines;
- Development of MSP methodologies;
- Data collection and structuring, including analysis of data availability and gaps;
- Stocktaking of maritime uses and activities;
- Elaboration of overarching vision/strategic elements, as for example the vision „Sustainable use and development of the seas of Cyprus" part of the „Strategy of Cyprus for a national integrated maritime policy" approved in August 2014 or the Slovenian Spatial Development Strategy currently being revised also to include more maritime aspects; and/or
- Identification of the number of expected MSP plans and related geographic scope. At the current stage of MSP implementation, the number and extent of plans that might be developed is not known for all the Eastern Mediterranean EU countries. The following plans can be expected for some of these countries: three MSP plans for Italy: Western Mediterranean, Adriatic Sea, Ionian and Central Mediterranean; one national strategic spatial plan for Slovenia in line with the Spatial Planning Act; three plans for Croatia, as defined by the recently amended Physical Planning Act transposing the EU MSP Directive: State Level Spatial Development, Spatial Plan of the continental belt, Spatial plan of the Ecological and Fisheries Protection Zone.

However, MSP initiatives and projects are still unbalanced between the EU and non-EU countries, and in particular between the northern and the eastern-southern shores of the Eastern Mediterranean. Initial actions have been also taken in some non-EU countries, as for example the Israel Marine Plan elaborated by a group of researchers and planners at the Centre for Urban and Regional Studies at the Faculty of Architecture and Town Planning of Technion – Israel Institute of Technology[4] (Portman, 2015) or the design and testing of a methodology for marine vulnerability assessment, based on the Ecosystem Approach (EcAp), to be potentially used within an MSP process in Bokakotorska Bay (Montenegro)[5].

Moreover, several Eastern Mediterranean countries (although mainly European ones) have been involved so far in a number of projects (e.g. PlanCoast, SHAPE, ADRIPLAN, THAL-CHOR), most of them

[4] http://msp-israel.net.technion.ac.il/en; accessed on 10.11.2017

[5] http://msp-platform.eu/practices/ecap-base-marine-vulnerability-assessment-basis-msp-montenegro; accessed on 10.11.2017

funded by the EU, which have developed customized MSP methodologies, practices, tools and services. Some of these and experience from the UNESCO-IOC on MSP have been used in pilot cases to test them in Mediterranean conditions (e.g. UN Environment/MAP – PAP/RAC „Paving the road to MSP in the Mediterranean"). Uptake of projects' results by formal MSP processes should be increased to foster MSP implementation in the Eastern Mediterranean, also in a cross-border perspective. The specific experience of the Adriatic-Ionian region points out the importance of progressively building on previous projects' results (from PlanCoast to SHAPE to ADRIPLAN to SUPREME) to deliver tools and practices ready usable by the statutory MSP process.

Although MSP can be seen primarily as a country-based process, that therefore needs to focus on national priorities, cross-border cooperation is essential to ensure that MSP plans (and ICZM processes) are coherent and coordinated across the coastal zones and the marine regions, as also required by art. 11 of the EU MSP Directive as far as EU Member States are concerned (and article 12 for Cooperation with third countries). Eastern Mediterranean countries are expected to work together across borders to deal with some common environmental, social and economic challenges, starting from their specific identification, in line with the objectives and minimum requirements set out in the Directive 2014/89/EU, as to:

i) support sustainable development and growth in the maritime sector, contributing among else to sustainable energy at sea, maritime transport, fisheries and aquaculture, and tourism, applying an ecosystem- based approach;
ii) contribute to the preservation, protection and improvement of the environment, including resilience to climate change impacts; and
iii) promote the coexistence of relevant activities and uses.

Some cross-border aspects related to these general challenges are clearly MSP-related and already identified, in one or the other way, in the context of the Barcelona Convention system as calling for coordinated action. At the very preliminary level, examples of possible common challenges can be identified, based also on the analysis conducted for the elaboration of the „Background document – The way to a regional framework for ICZM in the Mediterranean 2017 – 2021" used to underpin the elaboration of the Common Regional Framework for ICZM and the Conceptual Framework for MSP as well as SUPREME Initial Assessment (see par. 4.9.3) e.g.:

- Reduction of overfishing and improvement of sustainable management of fishery and fish resources[6];
- Achievement of Good Environmental Status (GES) targets to ensure proper environmental protection and allow its sustainable use;
- Management of maritime traffic specifically in congested or strategically important areas (e.g. the Adriatic Sea, the Aegean Sea and the connection to the Black Sea, the routes connecting to

[6] According to the indicator of exploitation status (F/FMSY), the majority of 78 examined (86%) stocks are harvested above the level that can ensure the stock sustainably, while only a minority (14%) of stocks are exploited sustainably in the Mediterranean (UN Environment/MAP, 2017).

the Suez channel), including further reduction of risk of ship collisions and environmental accidents[7];

- Management of conflicts that might arise from the exploitation of submarine natural gas and oil resources[8];
- Increase cross-border collaborative and coordinated approach to increase the resilience of the Mediterranean marine and coastal natural and socioeconomic systems to the impacts of climate change[9].

[7] Although ship accidents rates have gone down globally and regionally, several studies, based on the daily traffic crossing the Istanbul Strait and the Bosphorus, identified the East Mediterranean / Black Sea area as one of the top areas presenting the greatest probability of a shipping accident occurring (UN Environment/MAP, 2017).

[8] 44% of the Mediterranean is either contracted or designated for oil & gas exploration – this poses a risk that those zones, especially the ones in the Eastern Mediterranean, may be explored at one point, potentially leading to increased pollution (UN Environment/MAP, 2017).

[9] The IPCC AR5 considers the Mediterranean Region as „highly vulnerable to climate change" and states that it „will suffer multiple stresses and systemic failures due to climate changes". At the same time, responses to climate-related pressures and hazards in the region are often limited to short-term and reactive local emergency measures. Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (UN Environment/MAP, 2017a).

3. MSP under the Barcelona Convention

3.1 Legal and policy frame

The Mediterranean Action Plan (MAP) has come a long way since its approval in 1975. Its main policy achievement is, in the context of the Regional Seas Programme, the adoption of a framework Convention for the Protection of the Marine Environment against Pollution (**Barcelona Convention, BC,** signed in 1976), renamed later as Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (as amended in 1995), and its related seven legal Protocols[10], embracing all 21 Countries bordering the Mediterranean Sea together with the European Union. The **Barcelona Convention,** with its related Protocols, is the only regional multilateral legal framework for the protection of the Mediterranean marine and coastal environment, setting the obligations „*to prevent, abate, combat and to the fullest extent possible eliminate pollution of the Mediterranean Sea Area*" and „*to protect and enhance the marine environment in that area so as to contribute towards its sustainable development*" (BC, Art 4).

MAP therefore contributed in setting out a **legal and institutional framework for cooperation in addressing common challenges of marine environmental degradation**, while MAP secretariat (including its Regional Activity Centres – RACs) remains the **technical** mechanism, assisting the Mediterranean Governments in their efforts to implement their respective commitments for the protection of the marine and coastal environment in the Region, multilaterally or unilaterally.

While MSP is a relatively new term within the Barcelona Convention frame, several BC Protocols regulate key maritime sectors. This particularly refers to: the Protocol for the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (**Offshore Protocol**); the Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (**Dumping Protocol**); the Protocol concerning cooperation in preventing pollution from ships and, in cases of emergency, combating pollution of the Mediterranean Sea (**Prevention and Emergency Protocol**) and the Protocol concerning the prevention of pollution of the Mediterranean Sea by transboundary movements of hazardous wastes and their disposal (**Hazardous Wastes Protocol**).

[10] Protocol for the protection of the Mediterranean Sea against pollution from land-based sources and activities (LBS Protocol, adopted in 1996 and entered into force 11 May 2008); Protocol concerning the prevention of pollution of the Mediterranean Sea by transboundary movements of hazardous wastes and their disposal (Hazardous Wastes Protocol, adopted in 1996 entered into force 19 January 2008); Protocol concerning cooperation in preventing pollution from ships and, in cases of emergency, combating pollution of the Mediterranean Sea (Prevention and Emergency Protocol, adopted in 2002 and entered into force 17 March 2004); Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (Dumping Protocol, adopted in 1995 but not yet in force. It is in force since 1978 the 1976 Dumping Protocol), Protocol for the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (Offshore Protocol, adopted in 1994 entered into force 24 March 2011); Protocol concerning specially protected areas and biological diversity in the Mediterranean (SPA/BD Protocol, adopted in 1995 entered into force 12 December 1999); Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol).

In addition, planning of the marine space is a concept already taken on board by the ICZM Protocol. Spatial planning of the coastal zone is regarded as an essential instrument of the implementation of the same Protocol. One of the main objectives of ICZM is to *„facilitate, through the rational **planning of activities**, the sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development*" (**ICZM Protocol**, Art. 5). Planning is recalled also in other parts of the Protocol, as in the case of articles dealing with the protection of wetlands, estuaries and marine habitats (Art. 10) or the protection of coastal landscape (Art. 11).

According to Art. 3, the area to which the Protocol applies (i.e. the coastal zone) is the area between:

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

The geographical scope of the Protocol (see Box 1) includes both the land and the sea and it follows that **planning should be equally applied to both components of the coastal zones**.

It has also to be considered that the ICZM Protocol is part of the European legal system, due to its ratification by the European Union with Decision 2010/631/EU of 13 September 2010[11].

In this perspective, **MSP can be considered as the integrative part of the implementation of ICZM in the marine part of the coastal zone** – corresponding to the external limit of the territorial sea of Parties – and specifically for its sustainable planning and management. Land-sea interactions could be regarded as part of the definitions given in Art. 2 and are the basis of the principles outlined in Art. 6.

Box 1: Geographical scope of MSP

Geographical scope of MSP in:

- Directive 2014/89/EU ➔ marine waters, meaning the waters, the seabed and subsoil located on the seaward side up to the boundaries of the area of application of Member State jurisdictional rights, corresponding to the continental shelf, the declared Economic Exclusive Zone EEZ, Fishery Protection Zone FPZ, Ecological Protection Zone EPZ, Protected Ecological-Fishery Zone PEFZ and including the coastal waters and its seabed and subsoil (that are the surface waters on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured), extending where appropriate up to the outer limit of the transitional waters.
- ICZM Protocol (*by means of interpretation*) ➔ the marine waters within the seaward limit of the coastal zone, meaning the waters, the seabed and subsoil within the external limit of the territorial sea of Parties and including the internal waters and the transitional waters.

[11] Council Decision of 13 September 2010 concerning the conclusion, on behalf of the European Union, of the Protocol on Integrated Coastal Zone Management in the Mediterranean of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.

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

In addition to the Protocols, several specific Action Plans, related to the marine environment, have been elaborated and approved by the Contracting Parties (see Box 2).

Since the aforementioned Action Plans provide for concrete targets, actions and measures that have an impact on the activities undertaken on or affecting the coastal and marine areas, these should be taken into full consideration when developing and applying MSP.

Taking into consideration all the above, the Contracting Parties to the Barcelona Convention and its Protocols, at their nineteenth Ordinary Meeting (COP 19, Athens 2016), recommended to strengthen MAP activities in the field of MSP in order to contribute to GES of the Mediterranean Sea and Coasts, investigate in more detail connections between land and sea areas and propose coherent and sustainable land and sea-use planning frameworks relating with key economic sectors and activities that may affect the coastal and marine resources. The elaboration of a Conceptual Framework (CF) for MSP as an emerging issue in the entire Mediterranean Region, **interlinked with ICZM and the related Protocol**, was envisaged by the UN Environment/MAP Programme of Work (PoW) approved for 2016-2017. **Its main aim is to introduce MSP within the Barcelona Convention**, as the main tool/process for the implementation of ICZM in the marine part of the coastal zone and specifically for planning and managing maritime human activities in line with the Ecological Objectives and GES and related targets adopted by the Barcelona Convention Contracting Parties, thus contributing to the balance between environmental, social and economic dimensions of sustainable development. The 20th Meeting of the Contracting Parties to the Barcelona Convention (COP 20 – Tirana, Albania 2017) adopted the Conceptual Framework for Marine Spatial Planning as a guiding document to facilitate the introduction of this management tool into the Barcelona Convention framework (see Chapter 3.5).

Implementation of MSP in EU Member States falls under the EU legislation. In addition to the EU Directive 2014/89/EU, establishing a framework for maritime spatial planning, the principle of the duty of sincere co-operation is fundamental for the implementation of MSP. Since the Treaty of Lisbon, this principle that can be found in Article 4 (3) TEU, according to which the Union and the Member States shall, in full mutual respect, assist each other in carrying out tasks which flow from the Treaties, take any appropriate measure, general or particular, to ensure fulfilment of the obligations arising out of the Treaties or resulting from the acts of the institutions of the Union, facilitate the achievement of the Union's tasks and refrain from any measure, which could jeopardise the attainment of the Union's objectives.

Box 2: Relevant Action Plans that need to be taken into account for the implementation of MSP by the CPs. Source: www.unep.org/unepmap/action-plans.

Pollution

- Mediterranean Offshore Protocol Plan
- Regional Plans adopted in the framework of the LBS Protocol on the reduction or elimination of substances or their inputs:
  - Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene
  - Regional Plan on the phasing out of DDT
  - Regional Plan on reduction of BOD5 from urban waste water
  - Regional Plan on the reduction of inputs of Mercury
  - Regional Plan on the reduction of BOD5 in the food sector
  - Regional Plan on the phasing out of Hexabromodiphenyl ether, Heptabromodiphenyl ether, Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Phasing out of Lindane and Endosulfan; Phasing out of Perfluorooctane sulfonyl acid, its salts and Perfluorooctane sulfonyl fluoride
  - Elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene
  - Regional Plan on Marine Litter Management in the Mediterranean

Specially Protected Areas and Biological Diversity

- Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean Sea including the High Sea
- Action Plan for the conservation of Cartilaginous Fish (Chondricthyans) in the Mediterranean
- Action Plan for the conservation of marine vegetation in the Mediterranean Sea for the period 2012-2017
- Action Plan for the conservation of Mediterranean Marine Turtles in the Mediterranean Sea for the period 2014-2019
- Action Plan for the conservation of Bird species listed in Annex II to the SPA/BD Protocol in the Mediterranean for the period 2014-2019
- Action Plan for the conservation of Cartilaginous Fishes in the Mediterranean Sea for the period 2014-2019
- Action Plan for the conservation of Habitats and Species associated with seamounts, underwater caves and canyons, aphotic engineering benthic invertebrates and chemo-synthetic phenomena, in the Mediterranean Sea
- Roadmap towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean Marine Protected Areas by 2020

Integrated Coastal Zone Management

- Action Plan for the implementation of the ICZM Protocol 2012-2019

Sustainable Consumption and Production

- Action Plan on Sustainable Consumption and Production

Climate Change adaptation

- Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas

Also in the light of the duty of sincere co-operation and in accordance with the provisions of the EU Treaties (Article 3 et seq.), according to which the EU ensures compliance with and the proper implementation of international treaties in promoting their development, MSP can only be applied consistently and in the light of the principles and objectives of the BC System, as they have been developed and implemented over the years in their continuous evolution, also through the adoption and implementation of the related seven Protocols enhancing the Convention's overall effectiveness, including the ICZM Protocol.

In order to support and assist Contracting Parties to meet their obligations under the Barcelona Convention and its related Protocols, the **Compliance Committee** of the Barcelona Convention, as a subsidiary body, has been established with the aim to facilitate, promote, monitor and secure compliance with the BC legal framework.

Therefore, the link between the MSP of the EU Directive 2014/89/EU, establishing a framework for maritime spatial planning, and the respective UN Environment/MAP activities is based on the underlined principles of the Barcelona System, designed to achieve the objective of protecting and enhancing the marine environment so as to achieve and/or maintain a Good Environmental Status of the Mediterranean Sea and Coasts and contribute towards the sustainable development of the Mediterranean.

We are thus seeing a rapid evolution of the legal framework that, in a virtuous circle, triggers a process of correct and consistent interpretation and application of all its legal components. The implementation of individual components could facilitate the objective of consistency in the application of the entire legal system (European, Regional with the Regional Seas Conventions and international).

For these reasons, through the implementation of MSP, the underlying principles of the Barcelona Convention System and, in particular, of the ICZM Protocol, shall be fully and completely enforced and implemented within the EU.

3.2 United Nations Convention on the Law of the Sea

The legal framework for MSP, under the BC, in particular in relation to the United Nations Convention on the Law of the Sea (UNCLOS) and Regional Seas Conventions (RSC) provisions, calls for the necessity of a multi-scale approach to acknowledge specificities of the Mediterranean basin and its marine regions, also from a legal point of view.

All EU Member States in the Mediterranean have ratified UNCLOS.

3.2.1 Application of UNCLOS in the Eastern Mediterranean

The **United Nations Convention on the Law of the Sea** identifies several marine spaces between areas within national jurisdiction, i.e. the Territorial Sea, the Continental Shelf, the Exclusive Economic Zone (EEZ) and the related Ecological Protection Zone (EPZ), Ecological and Fisheries Protection Zone (EFPZ), Fisheries Protection Zone (FPZ), as well as areas beyond national jurisdiction. It also provides sectorial approaches and focuses on shipping, fishing, waste dumping and minerals mining, regulating the regime of international Straits and Channels. UNCLOS provides the legal framework for all activities in the oceans and seas, including the conservation and sustainable use of marine biodiversity beyond areas of

national jurisdiction. UNCLOS obliges States to protect and preserve the marine environment (including rare or fragile ecosystems), with particular requirements on co-operation between Parties on a global and regional basis for formulating and elaborating the necessary international rules (UNCLOS, Articles 192, 194 and 197).

Finally, it is worth mentioning that UNCLOS (Part XII, Articles 205 and 206), also provides measures on the so called environmental assessment, in particular by providing that where States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment, including a duty to notify. This duty encompasses planned activities under the jurisdiction or control of States which may cause significant and harmful changes to the marine environment beyond national jurisdiction.

These principles are foreseen in the SEA Directive 2001/42/EC and in the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (SEA Protocol, Kyiv 2003), ratified by the EU on 21 November 2008 and transposed in EU legislation through the SEA Directive.

3.2.2 The Exclusive Economic Zones

Taking into account the objectives of the SUPREME project in the legal context of the European Union, the geographical scope of spatial planning is that specified in Directive 2014/89/ EU, which also includes the **Exclusive Economic Zones** (**EEZ**).

In the Exclusive Economic Zones (EEZ) (UNCLOS, Part V) – an area beyond and adjacent to the Territorial Sea, extending seawards to a distance of no more than 200 nautical miles (370 km) out from its coastal baseline – a coastal State has been given sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources. In the Ecological Protection Zones (EPZ), adopted by some Countries more recently, a coastal State has been given, as a minus, sovereign rights only for the purpose of conserving and managing the natural resources. The coastal State has specific management responsibilities, especially as concerns the living resources of the zone. In the light of these management responsibilities, a coastal State, which has claimed an Exclusive Economic Zone or an Ecological Protection Zone cannot pursue a policy of inaction with respect to its living resources.

Hereinafter, a summarized framework of the situation in the Eastern Mediterranean area, gradually changed, until the proclamation during the last period by the majority of the coastal States of either Exclusive Economic Zones (EEZ) or Fishery Zones (FZ), as well as the recently emerging regime of Ecological Protection Zones (EPZ) and combinations of ecological and fishery zones:

- **Italy** has not established an Exclusive Economic Zone (EEZ), but has adopted law n. 61/**2006**, which provides for an **Ecological Protection Zone** beyond the outer limit of the territorial sea for the protection and preservation of marine environment and archaeological and historical heritage. In **2011** was adopted a first implementing Presidential Decree (n. 209/2011) for the establishment of an Ecological Protection Zone, covering the North-West Mediterranean Sea, Ligurian and Tyrrhenian Seas. In this defined area are to be applied, also with respect to foreign flagged ships and to foreign nationals within the EPZ, the rules of international, European and national laws related to prevention, response and control of all kinds of marine pollution,

including pollution from ships and ballast tanks, pollution by dumping of waste; pollution as a result of exploration and exploitation of the sea-bed and subsoil (the so called „offshore activities"); pollution of atmospheric origin; protection of biodiversity and in particular marine mammals.

- The **Ecological Protection Zone and Continental** Shelf was declared by the Republic of **Slovenia** with Act 22 October **2005**;
- **Croatia** adopted a decision to establish a **Protected Ecological-Fishery Zone,** for both fishing and ecological purposes, in **2003**, which implementation was postponed with regard to Member States of the European Union;
- **Egypt** in 1983, **Syria** in 2003, **Cyprus** in 2004, **Lebanon** in 2011 declared an Exclusive Economic Zone (**EEZ**).

While **Fishing Zone** or **Ecological Protection Zone** are not mentioned in the UNCLOS, they are compatible with international law, also on the basis of the general principle that the right to do less is implied in the right to do more (*in maiore stat minus*); encompassing only some of the rights that can be exercised within the EEZ.

UNCLOS is complemented by **other international related legal instruments**, on the context of United Nations specialized agencies, organizations and programmes and of intergovernmental organizations, including the ones given in the **Box 3** (see below).

Another important issue to be addressed is the **EEZ/FZ/EPZ/PEFZ** within the MAP **Barcelona Convention system**. It is interesting to underline the rules concerning the application of Contracting Parties' laws on environmental protection also beyond the outer limit of the territorial sea. In particular:

- **Article 1 of the Barcelona Convention**, stating that „*the geographical coverage of the Convention is the Mediterranean Sea Area as the maritime waters of the Mediterranean Sea proper*."
- **Article 1, letter k** of the Protocol concerning the prevention of pollution of the Mediterranean Sea by transboundary movements of hazardous wastes and their disposal (**Hazardous Wastes Protocol**), which states that area under the national jurisdiction of a State (referred for example to Art. 5) means also marine area within which State exercises administrative and regulatory responsibilities in accordance with international law in regard to the protection of human health or the environment.
- **Article 2** of the Protocol concerning cooperation in preventing pollution from ships and, in cases of emergency, combating pollution of the Mediterranean Sea (**Prevention and Emergency Protocol**) specifying that the geographical coverage to which the Protocol applies is the Mediterranean Sea Area.
- **Article 2** of the Protocol for the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (**Offshore Protocol**) on the geographical coverage to which the Protocol applies, specifying that is the Mediterranean Sea Area including the continental shelf and the seabed and its subsoil.
- **Articles 2 and 5** of the Protocol concerning specially protected areas and biological diversity in the Mediterranean (**SPA/BD Protocol**), specifying the geographical coverage which applies in *„the area of the Mediterranean Sea as delimited in Article 1 of the Convention",* including the seabed and its subsoil (Art. 2) and enabling establishment of Specially Protected Areas (Art. 5) in the marine and coastal zones subject to the sovereignty or jurisdiction of the Parties (*included EEZ/FZ/EPZ/EFPZ*) (Art. 5a) and in the zones partly or wholly on the high seas (5b).

Box 3: Legal instruments complementary to UNCLOS

The **International Seabed Authority (ISA)** is an autonomous international organization established under the UNCLOS and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea, with the role regarding marine scientific research and the protection of the marine environment. The Authority is the organization through which States Parties to the Convention shall, in accordance with the regime for the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction (the Area) established in Part XI and the Agreement organize and control activities in the Area, particularly with a view to administering the resources of the Area[12].

ISA guidelines provide for **Areas of Particular Environmental Interest (APEIs)**, which, in particular, stipulate that prior to the issuance of test-mining and exploitation permits, preservation reference areas will be delineated „in which no mining will occur to ensure representative and stable biota of the seabed in order to assess any changes in the flora and fauna of the marine environment" (ISBA/4/C/4/Rev.1, annex 4, sect. 5.6). „The preservation reference zone[s] should be carefully located and large enough so as not to be affected by the natural variations of local environmental conditions. The zone[s] should have species composition comparable to that of the test mining area[s]. It should be located upstream of the test mining area[s] and should be outside of test mining area[s] and areas influenced by the plume" (International Seabed Authority 1999, p. 226).

Hence, the full range of habitat and community types, potentially found in mining claim areas, must be represented in preservation reference areas, and the scale of preservation reference areas must be large enough that these community types are „stable", i.e., sustainable. Furthermore, the interests of all stakeholders (including the ISA, signatories to the UNCLOS, nodule mining, claim holders, non-governmental organizations, and the science community) will be incorporated into the design process. In addition, preservation reference areas should be established as soon as possible so that sound, ecosystem-based management principles can be incorporated into mining strategies and into the positioning of future claim areas.

International Maritime Organization (IMO), 1948 UN Agency, has the role to adopt legislation in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships, including the designation of Particularly Sensitive Sea Area (PSSA).

The 1973/1978 the International **Convention for the Prevention of Pollution from Ships (Marpol Convention)** was developed by IMO to minimize pollution of the oceans and seas, including dumping, oil and air pollution. The objective of this Convention is to preserve the marine environment in an attempt to completely eliminate pollution by oil and other harmful substances and to minimize accidental spillage of such substances.

The 1945 **United Nations Educational, Scientific and Cultural Organization (UNESCO), its Man and the Biosphere Programme (MAB)** and the 1972 **World Heritage Convention** identify sites of outstanding cultural or natural importance to the common heritage of humanity. The **Intergovernmental Oceanographic Commission (IOC)**, in particular the **Ocean Biogeographic Information System**, is important for the preservation of the ocean environment. The World Conservation Monitoring Centre of the United Nations Environment Programme (**UN Environment-WCMC**) and the Global Ocean Biodiversity Initiative (**GOBI**) have the key role to establish a repository for scientific and technical information and experience related to the application of the scientific criteria on the identification of ecologically or biologically significant marine areas (EBSAs), and to develop an information-sharing mechanism with similar initiatives, such as FAO's work on vulnerable marine ecosystems (VMEs). In **1997**, the **Methodological Guide to Integrated Coastal Zone Management** was adopted.

[12] http://www.isa.org.jm

Besides the UN Fish Stocks Agreement, the **United Nations Food and Agriculture Organization (FAO)** in collaboration with relevant international and regional organizations, including **Regional Fisheries Management Organizations (RFMOs)**, has the task to guarantee the sustainability of fisheries, by managing the impacts of fisheries on species and the wider throughout implementing the ecosystem approach, eliminating illegal, unreported and unregulated (IUU) fishing; minimizing the detrimental impacts of fishing practices; mitigating and managing by-catches sustainably and reducing discards, in order to attain a sustainable exploitation level of marine fishery resources and thereby contributing to a good environmental status in marine waters.

The creation of marine protected areas (MPAs) in particular areas closed to certain fishing activities could constitute valuable means to reduce the impact of fishing on vulnerable marine habitats and species.

Under the same umbrella are:

- 1995 FAO Code of Conduct for Responsible Fisheries
- In 2005 the **ICCAT Recommendation** 04-12 on management measures concerning recreational fishery in the Mediterranean (GFCM, 2005)

The **United Nations General Assembly Resolution 64/72**, paragraphs 113 through 130, on responsible fisheries in the marine ecosystem, address the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, in areas beyond national jurisdiction, calling on States and/or regional fisheries management organizations (RFMOs), consistent with the FAO Guidelines for the Management of Fisheries and consistent with the precautionary approach, to conduct impact assessments, conduct further marine scientific research and use the best scientific and technical information available to identify areas where vulnerable marine ecosystems are known or likely to occur, either adopt conservation and management measures to prevent significant adverse impacts on such ecosystems or close such areas to fishing, and adopt measures to ensure the long-term sustainability of deep-sea fish stocks (both target- and non-target stocks), and not to authorize bottom-fishing activities until such measures have been adopted and implemented (*see also* CBD COP 10, Decision X/29).

The 1991 **Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)**, entered into force in 1997, which sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning; to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries.

Under the UN Environment umbrella, the 1992 **Convention on Biological Diversity (CBD)** has a fundamental role in contributing to international action on the protection of sensitive and representative ecosystems, including through the establishment of **MPAs**, and in supporting the identification of **Ecologically or Biologically Significant Marine Areas (EBSAs)** and, in general, global cooperation. It contains a specific requirement under Article 14(1)(a) and (d), to conduct EIAs for activities under a Contracting Party's jurisdiction or control which are likely to have significant adverse effects on biodiversity – both terrestrial and marine – and for areas within and beyond national jurisdiction.

Under the same umbrella are:

- 1995 Jakarta Mandate on Marine and Coastal Biological Diversity (Decision II/10) 1998 (Decision IV/5)
- Integrated Marine and Coastal Area Management (IMCAM) approaches for implementing the Convention on biological diversity
- Decision X/29 on marine and coastal biodiversity, adopted by COP 10 (Nagoya, Japan, 18-29 October 2010)
- „Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their utilization to the Convention on Biological Diversity" (the ABS Nagoya Protocol, 2010), worth it to manage marine genetic resources.

The 1996 **Accobams Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area** to preserve all species of cetaceans and their habitats within the geographical Agreement area by the enforcement of more stringent measures.

The 1971 **Ramsar Convention on wetlands**, the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Taking into account that the Mediterranean region is unique because of its special type of climate and its very long history of human use, in 1991 was established the **Mediterranean Wetlands Regional Initiative (MedWet)**, which brings together 26 Mediterranean and peri-Mediterranean Countries that are Parties to the Convention on Wetlands. The MedWet Mission is to ensure and support the effective conservation of the functions and values of Mediterranean wetlands and the sustainable use of their resources and services.

The **Mediterranean Wetland Observatory (MWO**) was established in 2008, with the main objective to act as a wetland management tool serving the MedWet Initiative's countries, and therefore to help to improve political decisions regarding the conservation and sustainable management of wetlands, particularly in terms of legislation, governance and best practices.

The 1979 **Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention)**[13] aims to conserve migratory species, their habitats and migration routes on a global scale throughout their range, complementing and cooperating with a number of other international organizations, especially promoting concerted action among the Range States of many of these species.

A number of legally binding Agreements have been concluded to date under the auspices of CMS, inter alia with the aim to conserve Cetaceans of the Mediterranean Sea.

Important Marine Mammal Areas (IMMAs), defined as discrete portions of habitat, important to marine mammal species, that have the potential to be delineated and managed for conservation, recognized by CMS to address the needs of Migratory Species.

The 2000 **Adriatic and Ionian Initiative (AII)** between Albania, Bosnia-Herzegovina, Croatia, Greece, Italy, Montenegro, Serbia and Slovenia.

In **2012**, the European Council requested the **European Commission to present a new EU Strategy for the Adriatic and Ionian Region** (EUSAIR), adopting a specific Communication and a related Action Plan on 17 June 2014.

The **EUSAIR** is a joint Initiative involving several European, national, regional and stakeholders, policies and funding programmes, a macroregional multilevel and focused cooperation as an innovative mode of territorial cooperation among regions and nations, with balanced and sustainable development as a shared goal.

EUSAIR aims to promote sustainable economic and social prosperity of the Region through growth and jobs creation, by improving its attractiveness, competitiveness and connectivity, while preserving the environment and ensuring a healthy and balanced marine and coastal ecosystems, contributing to the EU integration of the participating Western Balkan candidate and potential candidate countries, by bringing together countries with much shared history and geography.

The EUSAIR builds on the already existing Maritime Strategy for the Adriatic and Ionian Seas as an integral part of the new broader macro-regional strategy.

[13] See http://www.cms.int/

The specific Round Table on Blue Growth, in coordination with the EUSAIR parallel Pillar, promotes the participation of civil society involved in this sector with the aim to promote maritime and marine growth in the Adriatic and Ionian Region by fostering sustainable economic development and job creation as well as business opportunities.

In **2016**, during Dubrovnik meeting, the highest political body of the AII was reformed, foreseen „Adriatic and Ionian Council / EUSAIR Ministerial Meeting" held within the EUSAIR Forum to avoid duplications and pooling resources.

The **Council of Europe Landscape Convention**, adopted in 2000 and entered into force in 2004, promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues.

In 2004, the International Convention for the Control and Management of Ships' Ballast Water and Sediments (**entered into force on 8 September 2017**) was adopted to prevent the spread of harmful aquatic organisms from one region to another, by establishing standards and procedures for the management and control of ships' ballast water and sediments.

The 2009 **FAO Agreement on Port State Measures to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU)**. The United Nations Food and Agriculture Organization (FAO), in collaboration with relevant international and regional organizations, including Regional Fisheries Management Organizations (RFMOs) and the General Fisheries Commission for the Mediterranean (GFCM), which has the task to guarantee the sustainability of fisheries, by managing the impacts of fisheries on species and the wider throughout implementing the ecosystem approach, eliminating illegal, unreported and unregulated (IUU) fishing; minimizing the detrimental impacts of fishing practices; mitigating and managing by-catches sustainably and reducing discards, in order to attain a sustainable exploitation level of marine fishery resources and thereby contributing to a good environmental status in marine waters.

The 2009 **Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships,** aimed at ensuring that ships, when being recycled after reaching the end of their operational lives, do not pose any unnecessary risk to human health and safety or to the environment.

Under the same umbrella:

- Resolution MEPC.196(62), adopted on 15 July 2011, Guidelines for the development of the ship recycling plan
- Resolution MEPC.210(63), adopted on 2 March 2012, Guidelines for safe and environmentally sound ship recycling

The 2016 **IUCN Global Standard for the Identification of Key Biodiversity Areas (KBAs)**, sets out globally agreed criteria for the identification of KBAs worldwide.

Summing up, all the provisions of the Barcelona Convention and its related Protocols – which regulate in detail each activity for protection of the environment and prevention of pollution – shall be applied and implemented also in the established EEZ/FZ/EPZ/EFPZ. Therefore, the establishment of these zones by Contracting Parties constitutes an enhancement of the management of the Mediterranean in achieving the BC objectives, enlarging the marine areas where the national jurisdiction powers are applied and implemented. However, it should be underlined that provisions of the BC apply, regardless of the EEZ, even for the activities beyond national jurisdiction.

3.3 Current policy initiatives regarding MSP in the framework of BC

The most relevant current activities regarding MSP in the framework of BC are the Common Regional Framework for ICZM and Conceptual Framework for MSP.

The preparation of a **Common Regional Framework** (CRF) for ICZM in the Mediterranean is foreseen by the ICZM Protocol (Art. 17 and 18). More recently, UN Environment/MAP Mid-Term Strategy (MTS) 2016-2021, in the Decision IG.22/1 of the 19th Meeting of the Contracting Parties (COP 19) (Athens, Greece, 9-12 February 2016), indicates the definition of the CRF for ICZM as one of its key outputs. In addition, UN Environment/MAP Programme of Work (PoW) approved for 2016-2017 envisages the preparation of a **Conceptual Framework (CP) for Marine Spatial Planning** (MSP) as an emerging issue in the entire Mediterranean Region. **Both outputs are interlinked**, which makes it necessary to clarify their relationship and establish a clear hierarchy between them.

Following these commitments, an in-depth study of the existing general context for the implementation of ICZM in the Mediterranean Region was carried out during a Workshop to discuss the First Draft of the Regional Framework for ICZM and MSP, organised in Athens, Greece, on 5-6 April 2017, with participation of nominated experts from thirteen Mediterranean countries in order to provide initial comments to the first draft of the document. The organisation of the workshop was supported by the Italian Ministry of the Environment and for the Protection of Land and Sea. The main outputs of the PAP/RAC National Focal Points (NFPs) meeting, which was organised at the PAP/RAC premises in Split, Croatia, on 3-4 May 2017, were the definition of a „General Structure and Elements of the Common Regional Framework for ICZM“, in order to set up the „Annotated Contents of the Common Regional Framework (CRF) for ICZM“, and the Conceptual Framework for MSP. An Extraordinary Meeting of PAP/RAC NFPs, supported by the Italian Ministry of the Environment and for the Protection of Land and Sea, was organised in Athens, Greece, on 28-29 June 2017, and its main outcome was the approval of both the Annotated Structure of the CRF for ICZM and of the Conceptual Framework for MSP. The process of finalization of these two documents also took into consideration a background document prepared by PAP/RAC experts („The Way to RF for ICZM in the Mediterranean“), which includes an assessment and an evaluation of the current situation, the obstacles in implementation, the needs for the future and first recommendations, in order to provide a point of view for supporting the Contracting Parties. These recommendations were putting emphasis mostly on strengthening the enabling environment for implementation (legislation/institutions, governance, knowledge) of CRF for ICZM.

As a result of an extensive consultation process with the CPs, it was felt that the development of the full text of such a complex and comprehensive document as the CRF for ICZM is needing more time, resources and consultation opportunities than initially envisaged by the relevant COP 19 Decision. Thus, the PAP/RAC NFPs preferred to adopt a step-wise approach and to propose solely an Annotated Structure of the CRF for ICZM as a basis for the development of the full document during the next biennium. This Annotated Structure (see Figure 2) provides guidance on the contents of the individual parts of the CRF aligned with the ICZM Protocol provisions as well as for their full development. The Annotated Structure as a guiding document for the preparation of a CRF for ICZM in the Mediterranean was submitted for adoption to the 20th Meeting of the Contracting Parties to the Barcelona Convention (COP 20 – Tirana, Albania, 2017).

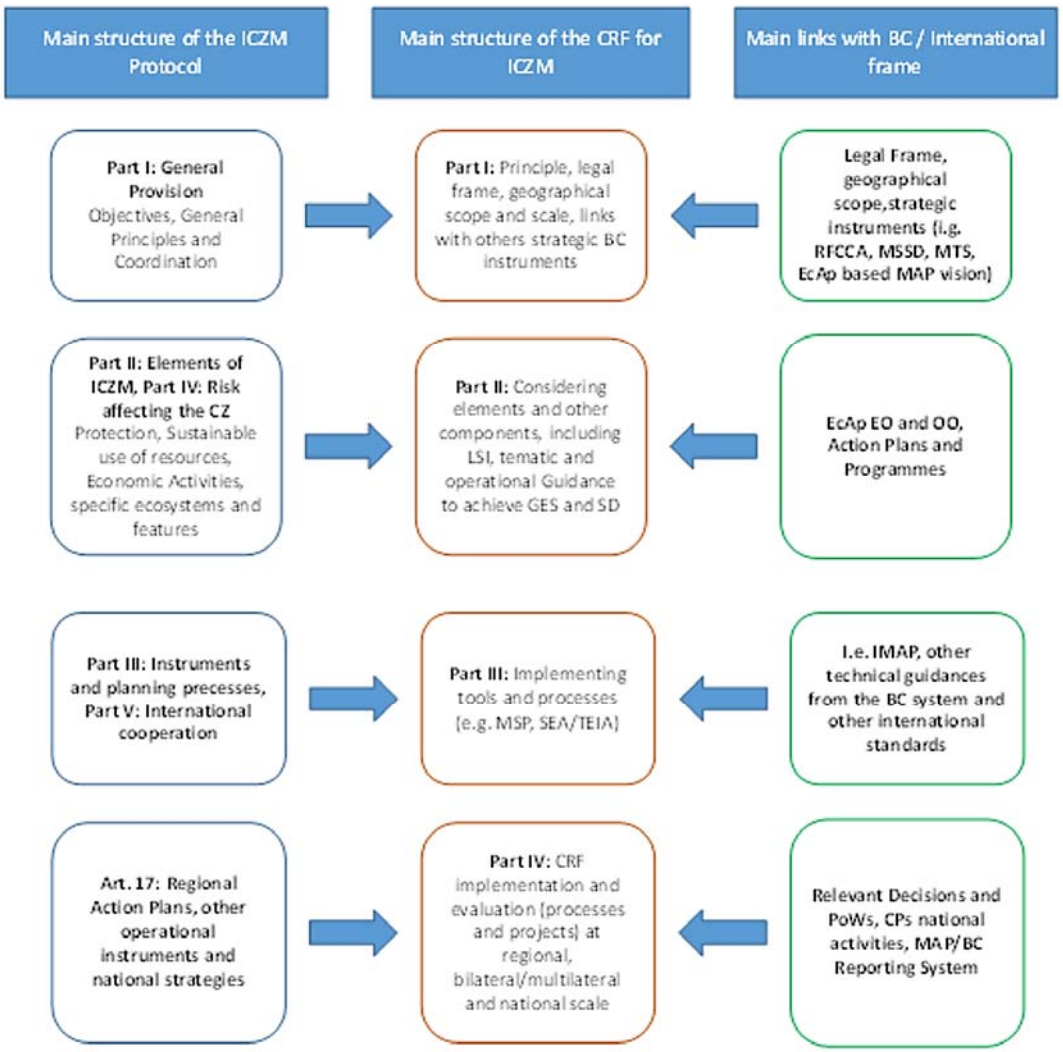

Figure 2: The Annotated Structure of the CRM for ICZM

ICZM offers a unique possibility to implement on the same geographical area all commitments related to different sectorial policies in a coherent, coordinated, complementary, synergetic and therefore integrated way and thus contribute to its sustainable development. The application of MSP within the framework and the geographical scope of the ICZM Protocol can contribute to the goals defined by other Protocols, as in the case of identification, planning and management of protected areas according to the SPA/BD Protocol or the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (the so called Offshore Protocol). Therefore, an implementation of **CRF for ICZM** could have a multiple **added value** at different levels. Among else, it could:

- contribute to GES and ultimately sustainable development of the concrete coastal zones;
- reduce stress on the marine part of a coastal zone originating from its terrestrial part;
- contribute to a better understanding and managing of the LSI at all possible levels and of all possible forms;

- ensure more coherence and complementarity of planning processes regarding the land and the sea parts of coasts;
- facilitate transboundary cooperation on cross-border issues;
- provide policy guidance, tools, methodologies and good practices to non-EU Mediterranean countries, thus contributing to a more effective protection of their coastal and marine environment. This would be beneficial to both their Mediterranean neighbours and the EU-related policies.

The **CF for MSP** is even more directly connected to the current exercise. Contents of the CF have been developed building also on experience from a large number of projects. They can be used as a checklist to verify that needed elements of the MSP process are taken in consideration, referring to above mentioned and other methodologies for specific details. However, in no case such guidelines shall be considered prescriptive, as each MSP process needs to be tailored according to specific characteristics of its geographic scope, objectives and expected results. The challenge is to capitalize available experiences rather than develop new step-by-step methodologies.
The main axes and principles of the CF are as follows:

- Use EcAp as a guiding principle for MSP;
- Apply an adaptive approach;
- Apply a multi-scale approach;
- Ensure integration;
- Take into account land-sea interactions;
- Provide for four dimensions (3 spatial and time);
- Base projects on knowledge;
- Seek suitability and spatial efficiency;
- Facilitate connectivity; and
- Strengthen cross-border cooperation.

The CF for MSP, based on the analysis of existing methodologies, suggests also some concrete steps and sub-steps as a sort of a checklist to facilitate efforts of CPs to develop their own MSP policies, keeping in mind that each MSP process needs to be tailored according to specific characteristics of its geographical scope, objectives and expected results.

3.4 The 2030 Agenda for Sustainable Development and its Sustainable Development Goals

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) were adopted by world leaders in September 2015 at a historic UN Summit held in New York, USA. Over the next fifteen years, with these new Goals that universally apply to all, countries will mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change, while ensuring that no one is left behind. While the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of the 17 Goals. Countries have the primary responsibility for follow-up and review the progress made in implementing the Goals, which will require quality, accessible and timely data collection. Regional follow-up and review will be based on national-level analyses and contribute to follow-up and review at the global level.

In recognition of the growing importance of the role of oceans in sustainable development, SDG **Goal 14** aims to conserve and sustainably use the oceans, seas and marine resources; the UN Environment will play a key role in contributing to the implementation of that goal in coordination with other actors. As the importance of the regional dimension is increasingly recognized for the implementation of global agendas, the Regional Sea Programmes are considered to be the units of marine ecosystems that can functionally provide services to human beings surrounding these seas. Therefore, there will be a close coordination between Mediterranean countries and MAP in support of the implementation and monitoring of relevant SDGs (UNEP/MAP, 2017).

The overarching SDG 14 will orientate MSP implementation in Eastern Mediterranean and more in general in the entire Mediterranean Basin, applying therefore to provisions included in the EU MSP Directives, as well as in the guidelines provided by the CF for MSP developed in the framework of the Barcelona Convention.

3.5 Transboundary cooperation in MSP in the Mediterranean

Cross-border cooperation in MSP is essential at all levels; it is underlined by the EU MSP Directive calling for a maritime planning process to be promoted through the cooperation among Member States, enhancing effective cross-border/transboundary cooperation between Member States (Art. 11) and with neighbouring Third Countries (Art. 12), in accordance with relevant UNCLOS provisions. In fact, the MSP is a process based on coordinated actions through coherent maritime-related policies and relevant international cooperation, to guarantee that maritime spatial plans are coherent and coordinated across the marine region concerned.

The Mediterranean Basin is a **semi-enclosed sea** (**UNCLOS, Part IX**) where the cooperation of the bordering States is highly needed to:

a) coordinate the **management, conservation, exploration and exploitation of the living resources** of the sea;
b) coordinate the implementation of their rights and duties with respect to the **protection and preservation of the marine environment**;
c) coordinate their **scientific research policies** and undertake where appropriate joint programmes of scientific research in the area;
d) invite, as appropriate, **other interested States or international organizations** to cooperate with them in further strengthening such joint actions.

In the context of MSP implementation, the cooperation shall be pursued in particular through existing regional institutional cooperation structures such as Regional Sea Conventions. It is to be pointed out at this stage that – as proved by experience – multilateral cooperation is always easier than bilateral one among countries having unsettled pending issues or even conflicts among them.

Though easy to express such a wish and guidance, one should keep in mind that a major prerequisite for the implementation of such a commitment is mutual **trust**. The long-lasting multilateral cooperation of the Mediterranean countries in the framework of the BC system has paved the way to a certain degree to this end. For more than 40 years, the BC, among others, promotes cooperation between and among CPs in Environmental Impact Assessment (EIA) procedures related to activities under their jurisdiction or

control which are likely to have a significant adverse effect on the marine and coastal environment of other CPs or areas beyond the limits of national jurisdiction, on the basis of notification, exchange of information and consultation (Art.4, para 3, lett. d of the BC). In addition, and in the framework of the ICZM Protocol, international cooperation and scientific data exchange is required for:

- the activity in the field of monitoring and observation (Art. 16), training and research, technical and scientific cooperation (Art. 25-27);
- the development of policies and the adoption of measures for the prevention of natural hazards, prevention and mitigation of the negative impacts of coastal erosion, and response to natural disasters (ICZM Protocol-Part IV, Art. 22-24);
- the implementation of environmental assessments (SEA, TEIA), taking into consideration the cumulative impacts on the coastal zones and their carrying capacities, in particular adopting by means of cooperation guidelines for the determination of procedures for notification, exchange of information and consultation at all stages of the process (Art. 4 para 3, lett. d of BC and Art. 19 and 29 of the ICZM Protocol).

Furthermore, in order to achieve good governance among actors involved in and/or related to coastal zones and to promote consistency and coherence of across marine regions and identified sub-regions, CP have agreed to elaborate a CRF for ICZM (see 3.2), thus **further strengthening** trans-boundary cooperation, in particular between the CPs sharing a marine region. Through the definition of CRF they would jointly elaborate measures to strengthen regional cooperation using coordinated mechanisms for:

- *Processes* to accelerate achievement of results agreed and outcomes/outputs set out;
- *Indicators* as essential tools for tracking progress, supporting policy evaluation and informing the public and decision makers;
- *Methods and practices* to achieve Objectives and the General Principles of the ICZM Protocol.

It should be noted that transboundary cooperation obstacles will be considerably moved away when the continental shelf will be delimitated in all Mediterranean countries and – ultimately – an EEZ will be declared by all. This is not yet the case for some of the Eastern Mediterranean countries, fact that explains why the relevant commitment in the legal texts is accompanied by the phrase „where appropriate" or „to the extent possible".

Overall, **transboundary cooperation among CPs in the framework of the Barcelona Convention is fundamental in order to address MSP in the Mediterranean Sea at strategic level.**

3.6 Ecosystem-based Approach

The ecosystem-based approach can be defined as the integrated management of land, water and living resources that provides sustainable delivery of ecosystem services in an equitable way. It goes beyond examining single issues, species, or ecosystem functions in isolation. Instead, it recognizes ecological systems for what they are: rich mixes of elements that interact with each other continuously. This is particularly important for coasts and seas, where the nature of water keeps systems and functions highly connected.

Directive 2014/89/EU establishing a framework for MSP clearly recalls the importance of applying the requirement of the ecosystem-based approach, both in the preamble and under the article provisions;

i.e. Art. 5 „*When establishing and implementing maritime spatial planning, Member States shall consider economic, social and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses*." Therefore, the ecosystem-based approach must be at the core of the MSP process. At the same time, the ecosystem-based approach is the base of the Marine Strategy Framework Directive (MSFD) which foresees that each Member State develops a strategy for achieving or maintaining the Good Environmental Status (GES) of the Marine Environment by 2020. Achieving the GES is, at the same time, the goal of EcAp – the Mediterranean-wide process adopted by the BC COP 17 Decision IG.20/4, that is fully in coherence with the EU MSFD, and as such is streamlined into all MAP policies.

The ecosystem-based approach also plays a role of a link between MSP and MSFD. It is articulated essentially on two levels:

1) The strategic level, represented by the integration and application of the measures and objectives set out in the MSFD, which represents the Integrated Maritime Policy Environmental Pillar and is therefore the interconnection and interrelationship between different sectoral regulations.
2) The functional – procedural level, consisting of the application of the SEA Directive working tools, as a methodology that can concretely articulate the way the ecosystem-based approach needs to be integrated and used to define the MSP plans.

In the Mediterranean, EcAp is the overarching guiding principle to all policy implementation and development undertaken under the auspices of the UN Environment/MAP Barcelona Convention. EcAp is to be integrated in all of its policies and activities as it makes explicit the link between the status of natural resource systems and services they provide; it seeks to maintain the integrity and functioning of ecosystems as a whole; and recognizes that the impacts of human activities are a matter of social choice.

EcAp refers to a specific process under the UN Environment/MAP Barcelona Convention, as its Contracting Parties have committed to implement the ecosystem-based approach in the Mediterranean with the ultimate objective of achieving the good environmental status (GES) of the Mediterranean Sea and Coast. This process aims to achieve GES through informed management decisions, based on integrated quantitative assessment and monitoring of the marine and coastal environment of the Mediterranean.

Mainstreaming the EcAp process into the work of UN Environment/MAP Barcelona Convention and achieving the GES of the Mediterranean Sea and Coast through the EcAp process have been supported by the EU-funded projects EcAp-Med[14] (2012-2015) and EcAp-Med II[15] (2015-2018).

[14] Implementation of the Ecosystem Approach in the Mediterranean by the Contracting Parties in the Context of the Barcelona Convention for the Protection of the Marine Environment and the Coastal region of the Mediterranean and its Protocols.

[15] Mediterranean implementation of the ecosystem approach, in coherence with the EU MSFD.

Through Decision IG.17/6 the CPs to the Barcelona Convention have committed to progressively apply EcAp to the management of human activities with the goal of effecting a real change in the Mediterranean marine and coastal environment. Decision IG.17/6 outlines a roadmap for the implementation of EcAp, consisting of several subsequent steps, such as the development of ecological objectives, operational objectives and respective indicators, the development of GES descriptors and targets, monitoring programmes, and finally the necessary management measures and programmes to achieve GES.

Decision IG.20/4 on „Implementing the Ecosystem Approach Roadmap", following up on Decision IG.17/6, validated the work done so far regarding the 11 ecological objectives, operational objectives and indicators for the Mediterranean. It also mandated the Secretariat to prepare an EcAp Monitoring Programme, to determine GES and targets and to prepare an in-depth socio-economic analysis of human activities that impact on, or benefit from, the quality and ecological health of coastal and marine ecosystems. Finally, it asked to integrate EcAp in the overall work of UN Environment/MAP Barcelona Convention and mandated the Secretariat to establish an EcAp governance framework.

As most relevant milestone of the 18th Ordinary Meeting of the Contracting Parties (COP 18, Istanbul, 2013), Decision IG.21/3 on the „Ecosystem Approach including adapting definitions of Good Environmental Status (GES) and targets" (the EcAp Decision) expresses the agreement on regionally common targets, lists of indicators to achieve GES in the Mediterranean, and an integrated list of Mediterranean GES, targets and indicators (see Table 3).

Table 3: GES and targets adopted by COP18, UNEP(DEPI)/MED IG.21/9 – Decision IG.21/3. Source: SPA/RAC website.

EO	Indicators	GES definitions	Targets
1. Biodiversity	15	17	30
2. Non indigenous species	4	4	6
5. Eutrophication	5	5	10
7. Hydrography	5	4	4
8. Coast	3	3	3
9. Pollution	6	6	9
10. Marine litter	3	2	3

A specific timeline was adopted in this EcAp Decision on how to develop and implement an Integrated Mediterranean Monitoring and Assessment Programme by the 19th Meeting of the Contracting Parties, following the 6-year EcAp cycles structure (with second EcAp cycle in the Mediterranean of 2016-2021). It was also agreed that after the initial phase of implementation of the Integrated Monitoring and Assessment Programme (2016-2019), the draft Integrated Mediterranean Monitoring and Assessment Programme (IMAP) will be reviewed and in case necessary amended, in light of lessons learnt during the first years of its implementation (see Figure 3).

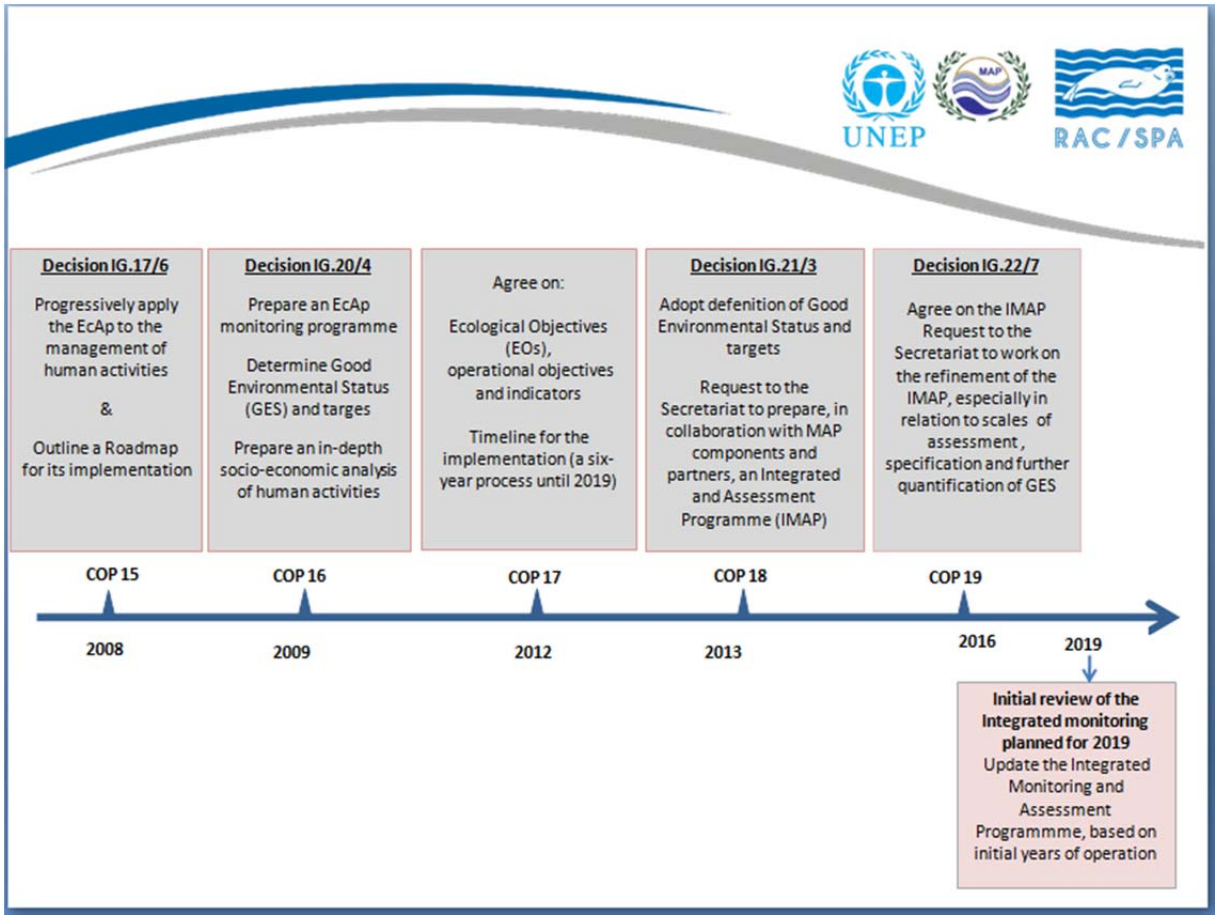

Figure 3: Calendar of the EcAp implementation process. Source: SPA/RAC website.

Furthermore, a considerable number of sectorial policies and related tools have been developed within the BC system addressing pollution, biodiversity, socio-economic aspects, marine litter, key economic sectors, etc., whose implementation contribute to the protection of the coastal zone.

Achieving Ecological Objectives (EOs) and GES requires an integrated approach in order to address combined pressures and cumulative impacts in coastal and marine areas. The ICZM Protocol provides for reaching GES, in particular with regard to the targets such as:

i) negative impacts due to new structure with no influence on the larger scale coastal system;
ii) physical disturbance to sandy coastal areas induced by human activities should be minimized;
iii) natural dynamic nature of coastlines is respected, and coastal areas are in good condition; and
iv) integrity and diversity of coastal ecosystem, landscapes, and their geomorphology are preserved.

In fact, the ICZM Protocol underlines the ecosystem approach as one of its leading principles. Therefore, it is not surprising that the same profound relationship exists between ICZM and the EcAp process. The ICZM Protocol constitutes the ideal instrument to promote and put into practice EcAp in the coastal zones. Achieving EOs and a GES requires an integrated approach in order to address combined pressures

and cumulative impacts in marine and coastal areas. ICZM provides the adequate tools to address these issues in coastal zones and promotes consensus among all parties involved in the use of coastal resources, while MSP does the same for marine areas. They both apply **Strategic Environmental Assessment (SEA)** and **Environmental Impact Assessment (EIA)** and take into account cumulative impacts that cannot be addressed through sectoral approaches and regulations.

The **ecosystem approach** as a concept for the **integrated management of MPAs** ensures a balance between equitable conservation and sustainable use of coastal and marine resources in order to achieve and maintain the connectivity between the terrestrial and marine side of the coastal area and between MPAs and the surrounding coastal and marine area. Successful integration of ICZM-MSP and MPAs depends on sustained management processes and programs that will produce perceived benefits and tangible results from the field that contribute to improved quality of life and ecosystem integrity. To this end, ICZM-MSP is a relevant framework to initiate and maintain an open dialogue, involving all the stakeholders, regarding the identification of threats and opportunities affecting the management of MPAs. Ecologically coherent networks of MPAs within ICZM-MSP approach provide a spatial management tool to prioritize biodiversity conservation and ensure maintenance and enhancement of environmental goods and services, which are essential objectives of ICZM and MSP.

One must stress the fact that ICZM goes beyond the GES of waters (marine or surface) and ecosystems. Therefore, there is a need to **expand the EcAp to include additional objectives** (or just indicators under EO8) that could be focused on achieving GES of the land part of the coastal zone, in a manner corresponding to requirements and/or specific articles of the ICZM Protocol.

Identification of **processes and criteria** for integration of the EcAp, ICZM and MSP is important. As mentioned in the CF for MSP, the relationship between EcAp and MSP is in fact a two-way relation, as the second can contribute to the overall objective of achieving the GES, also through the identification of related spatial measures. Such planning of maritime activity can:

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

4. Key issues important to MSP implementation in the Eastern Mediterranean

MSP aims to prevent, solve, or at least limit, both current and future conflicts caused by human activities as well as to take advantages of co-existence of different maritime activities and opportunities of co-use/multi-use of the same marine area and resources. Conflicts between uses in the Mediterranean Sea are already causing significant environmental problems including overexploitation of fishing resources, habitat degradation, biodiversity loss and in some of its areas environmental pollution.

Main challenges in the Eastern Mediterranean are not that different as compared to those in the Western Mediterranean as regards MSP. Based on Initial assessment performed by the SUPREME project (SUPREME, 2017), **differences** in practice between the two parts of the basin appear mostly for the following reasons characterising the Eastern Mediterranean countries:

- The southern European Mediterranean countries are not all of them members of the EU; therefore, they do not all share the so called *„acquis communautaire*" (the accumulated legislation, legal acts, and Court decisions which constitute the body of the European Union law).
- Eastern Mediterranean EU-MS are much less homogenous than the Western Mediterranean EU-MS as regards their economy and institutions.
- There is not full geographical continuity and/or vicinity that would allow or encourage Eastern Mediterranean countries to take joint ventures for the marine environment and spatial planning. Yet, they have a good and long-standing experience in sharing methodologies and negotiating regional related policies thanks to the Barcelona Convention system as well as EUSAIR.
- The Continental Shelf of most of them is not delimitated by agreements (UNCLOS, Art. 83).
- EEZ has not been declared so far in most of the Eastern Mediterranean countries.
- There are differences among the Eastern Mediterranean countries regarding availability and accessibility of related data.

These differences affect the way that the major issues are experienced in the Eastern Mediterranean and not the issues themselves. The major aspects of MSP that occur in both parts of the Mediterranean are further elaborated in the following chapters.

4.1 UN Environment/MAP's Ecosystem Approach

The Ecosystem Approach (EcAp) is an overarching principle, guiding the implementation of all policies undertaken under the auspices of UN Environment/MAP Barcelona Convention, with the ultimate objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea and Coast. The implementation of the Ecosystem Approach Roadmap, as adopted by the BC COP15 Decision IG.17/6, including through the adoption of eleven ecological objectives and corresponding GES definitions, targets and indicators is in synergy with the EU Marine Strategy Framework Directive (MSFD), as

mentioned already in a previous chapter. Also, the Directive 2014/89/EU establishing a framework for MSP clearly recalls the importance of applying the requirement of the ecosystem-based approach (EBA), both in the preamble and under the article provisions, in line with the goals of the MSFD aiming to achieve the GES of EU marine waters. At the same time, the goals of MSFD and EcAp must be an integral part of the strategic objectives of MSP. MSP can be considered as one of the tools to implement the EcAp/EBA as a strategic approach towards sustainable development in the Mediterranean that integrates all of its three components, i.e. environmental, social and economic sustainability. MSP should guarantee that these components are in balance.

4.2 Links to ICZM

Although MSP is not analytically mentioned in the Protocol on ICZM in the Mediterranean (UN Environment/MAP/PAP, 2008), its concept is somehow recalled by the same document (Art. 2 and 3; also Art. 5, 6, 10 and 11; see also chapter 3). The scope of the ICZM Protocol includes the marine area, within the limits of the territorial sea. Therefore, planning of the sea space can be considered as part of the requirements of the legally binding ICZM Protocol.

ICZM and MSP share common principles, however they can be different processes, which still need to be coherent and complementary. ICZM can be defined as a dynamic, multi-disciplinary and iterative process to implement the sustainable management of coastal zones. It stresses the need for integration/cooperation among different governance bodies and policy sectors dealing with and active on the coast, as well as for informed participation and cooperation of all stakeholders. The same could be applied to MSP as well, as regards the sustainable management of the marine areas. ICZM may result in strategies and management plans, and it usually leads to the allocation of space to specific activities through spatial planning, in the way that MSP does for the sea.

Land-sea interactions were always in the focus of ICZM. However, its activities in the past were focused predominantly (but not exclusively) on the land part of the coasts. By the adoption of the ICZM Protocol, inclusion of the territorial sea in ICZM is compulsory. MSP, on the other hand, does not extend its remit further inland than the high-water mark, although it has to take land-sea interactions into consideration, as well. Both ICZM and MSP need a full range of processes (strategy, planning, management, accompanying measures) and links among themselves to be effective. MSP faces more uncertainties, since we still know less about the seas than about the land where we live, and it is a more complex issue given that it has to provide for three levels/dimensions (surface, water column and sea bed), the time factor being important for both ICZM and MSP.

Starting from the overarching principle of ecosystem-based approach, consistency must be ensured in the implementation of MSP, ICZM and MSFD.

4.3 Adaptive approach

The variety of definitions of the MSP is reflected by the variety of available methodologies; i.e. there is not a single approach fitting to all marine contexts and responding to all strategic objectives. MSP should be shaped and based on the specificities of individual marine areas that are concretely

approached in its implementation. However, there are common steps that are considered in most of MSP initiatives and guiding documents.

It is widely acknowledged that MSP is not only concerned with minimising conflicts between on-going activities in a given maritime space, but is actually designed to avoid such conflicts to happen and develop synergies, in the first instance by anticipating future developments. MSP is clearly a future-oriented process, which must take in consideration potential future options of the evolution in the marine space in question, be they economic, technical or ecological, strategic or externally driven, or short or long term. Moreover, all experiences highlight that MSP is not a linear exercise but (among other because it is a new field with a high degree of uncertainty due to missing knowledge and experience) it is an interactive process aiming to periodically adapt and improve the maritime spatial plans and the process itself, learning from the monitoring and evaluation, understanding pros and cons of the previous steps and cycles, and incorporating in the process new elements and parameters emerging in future stages. This approach must be integrated from the outset in the planning process, paying also due attention to worries expressed on several occasions in the Eastern Mediterranean by stakeholders as regards possible additional uncertainties for investments.

The adaptive approach also enables dealing with the uncertainty related to the future evolution of the considered marine area and the wider context, including the uncertainty of climate change effects.

4.4 Cross-border cooperation and multi-scale approach to MSP

Although MSP can be seen primarily as a country-based process, **cross-border cooperation** is essential to ensure that the plans are coherent and coordinated across the coastal zones and the marine regions and that development initiatives of one country are not jeopardizing sustainable development of neighbouring countries. This implies cooperation at the methodological (common methods, data and information sharing, tools sharing, MSP practices exchange, capacity building), strategic (common vision, shared principles and possible common objectives) and implementation (e.g. planning of marine bordering areas, etc.) levels, to the extent possible.

Moreover, it is well-known that a considerable number of problems and challenges have a transboundary dimension and might require the adoption of a common regional or sub-regional approach. In the Eastern Mediterranean, and in general in the entire Mediterranean Basin, a specific governance framework has yet to be fully developed for promoting and supporting cross-border and cross-sectorial MSP. This must take advantage of existing initiatives, starting from the Barcelona Convention framework for the entire Mediterranean, and also profiting from the existing (EUSAIR) and upcoming regional strategies. For example, MSP is clearly a cross-cutting element of all the 4 pillars (Blue Economy, Connecting the regions, Environmental quality, Sustainable tourism) of the EUSAIR and the related Action Plan.

Different scales require different MSP approaches and processes, in particular in terms of objectives, vision/strategy, levels of analysis (assessment of existing conditions, stocktaking of current maritime uses, development of scenarios, analysis of current and future conflicts and synergies, analysis of current and future impacts, elaboration of the plan, etc.). MSP is, therefore, a typical **multi-scale process,** that needs to take into account specific country needs in its implementation.

4.5 Integration

MSP is a cross-cutting process, involving all sectors dealing with management and use of the sea and its resources, and requiring vertical and horizontal cooperation among different institutions. Eastern Mediterranean EU countries are in the process of defining the institutional and legal framework required for MSP implementation. Although significant steps have been made, planning and management of maritime activities are still sector-based and characterised by fragmented competences and responsibilities. Institutional and legal processes need to be continued and extended in non-EU countries of the sub-basin.

4.6 Stakeholder involvement

Proper and effective stakeholder involvement (and commitment, ultimately) should be considered as a key enabling factor for MSP, in particular in the visioning, strategic, evaluation-revision phases. As it constitutes one of the sensitive points for the implementation of MSP in several Eastern Mediterranean countries (even in some EU-MS), existing initiatives and platforms for stakeholder involvement should be analysed to assess whether they are proper and sufficient models to be applied within the formal MSP process. Strengths and weaknesses should be consequently highlighted. Based on this analysis, existing initiatives and platforms for stakeholder engagement should be reinforced and become a common and institutionalised process. The ultimate goal should go beyond stakeholder involvement and pursue their real engagement.

4.7 Project-based initiatives and MSP practices

The Mediterranean context can benefit from a wide number of cross-border projects focusing on MSP or indirectly dealing with related aspects, even if few of them involve non-European countries. The project-based experience is wide for the Eastern Mediterranean, and in particular for the Adriatic-Ionian region (e.g., SHAPE, PlanCoast, CONSTANCE, PEGASO, ADRIPLAN, Coconet, MESMA, MEDTRENDS, MED-IAMER, CO-EVOLVE, AMARE, SECURESEA, Paving the Road to MSP in the Mediterranean, etc.). However, uptake of projects' results by formal MSP processes is still limited.

4.8 Data availability and accessibility

Data availability is a key enabling element for a knowledge-based, transparent and conscious (e.g. of uncertainty and gaps) MSP process. Several differences in terms of data availability occur between northern and southern Mediterranean countries; geological, oceanographic and ecological features of southern waters are still poorly known. Moreover, in general most knowledge is available for marine areas close to the coastline, while data on offshore areas is limited or very limited. Understanding the real data gaps that might hamper the MSP process is an important issue, not only in terms of spatial coverage but also in relation to time series that are essential to understand evolution of marine and maritime processes.

In addition to data availability *per se*, ensuring transparent and open access to accurate and complete information is certainly important for both, Western and Eastern Mediterranean countries. There is also

an obvious need to improve dissemination of information and cross-sectorial knowledge-based policy and plan-making. Evidence-based MSP requires harmonised and up-to-date marine and maritime data. Indeed, data availability and interoprability are cross-cutting elements which assume relevance for other issues as well, e.g. cross-border cooperation, stakeholder involvement, vertical and horizontal cooperation and coordination within a country.

4.9 Specific issues identified within the Initial Assessment

In addition to the above overall considerations, and though operational experience in MSP in this part of the Basin is still limited, the following **specific key issues for the Eastern Mediterranean** are highlighted in the (provisional) country factsheets of the Initial Assessment (SUPREME, 2017):

4.9.1 Types of conflicts – Potential for synergies

In the Eastern Mediterranean, coastal and marine areas are subject to many pressures because of the high concentration of human activities and land-use types (which are often incompatible with the natural landscape).

Two major types of conflicts are occurring:

- conflicts between human uses and the marine environment (user-environment conflicts), which in some countries are the predominant type; and
- conflicts among human uses (user-user conflicts) claiming the same space or natural resources and seeking profit – in most of the cases, on the expenses of the environment.

This situation highlights the importance of MSP as the appropriate tool to provide sustainable and integrated solutions. It is interesting to note that the legislation of some of the Eastern Mediterranean countries (like Croatia, Greece, Slovenia) foresees already that spatial planning refers to both: land and sea. Spatial plans must take into account regional policies as well trends that might cause potential increases in coastal conflicts due to the development of some key sectors (e.g. aquaculture, coastal tourism and energy) or the decline of others (e.g. intensive fisheries).

At the same time, in Eastern Mediterranean there have been a few cases of reported **synergies**: e.g., fishing for litter & fishing activities (Croatia, Slovenia); timely addressing the potential conflict between mariculture and other coastal sectors in Zadar County by zoning foreseen in a spatial plan (Croatia). The importance of mobilising stakeholders to cooperate among themselves for win-win solutions has been underlined on several occasions.

Additional possibilities of comprehensive solutions at sub-regional level are offered in the context of the Adriatic-Ionian Marco-region Strategy Initiative (EUSAIR).

4.9.2 Governance – Institutional issues

The EU MSP Directive has triggered changes and development in this field. Three Eastern Mediterranean EU MS have already completed the transposition process (Croatia, Cyprus and Italy), one (Slovenia)

considers that the Directive provisions are covered by previously existing national legislation, one more (Greece) has drafted the law needed but it has not yet been approved by their respective Parliament.

Almost all Eastern Mediterranean EU countries have reported in one or the other way that policies applied are fragmentary, as well as the actions of the different sectoral authorities, while there are often bureaucratic behaviours. MSP could provide a platform for long-term strategic visioning, in-time reactions to various MSP related challenges and possible synergies.

Some countries expressed the view that the issues related to the maritime planning should be focused on development of the comprehensive and coherent long term, multi-level and cross-sectoral governance structures. In fact, putting in place appropriate cooperation schemes and consultation/participation processes is a prerequisite to ensure coordination, consensus and synergies.

It is worthy to note that, in the process of transposition, Italy has set out a **Technical Committee**, chaired by the Ministry of Infrastructure and Transport (as a Competent Authority) and composed of representatives of the Ministries involved. It oversees the elaboration of the maritime spatial plans for each marine sub-region, in accordance to the guidelines to be developed by the Inter-Ministerial Coordination Table for Maritime Spatial Planning set out by a Legislative Decree. Maritime spatial plans for each marine sub-region will be approved by the Inter-Ministerial Coordination Table for Maritime Spatial Planning by 31 December 2020. The Inter-Ministerial Coordination Table for Maritime Spatial Planning monitors and evaluates the compatibility and complementarity between:

a) the planning process as defined within the guidelines; and
b) the maritime spatial plans developed by the Technical Committee.

4.9.3 Transboundary cooperation

Main transboundary issues include sectors like maritime tourism, transportation, energy production, fishing activities, and extraction of non-living resources. Also, several transboundary issues are related to administrative and cooperation sector.

The most important trans-boundary issues and concerns for Croatia, Greece, Italy and Slovenia are summarised in Table 4.

Most of the Eastern Mediterranean countries have already agreements signed and experience of cooperation with some or all their neighbours. Yet, there are still in some parts of the sub-region pending issues and sensitive areas causing disputes and calling for solutions. The continental shelf of some countries has not been delimitated by agreements and most of the countries have not yet proclaimed an **EEZ** (see Chapter 3.2.2). With all due respect to the difficulties and fully recognising that these issues are to be resolved in different contexts, one cannot avoid pointing out that a future proclamation of their EEZ by the Eastern Mediterranean countries would facilitate considerably transboundary cooperation on technical issues and implementation of the MSP Directive.

Moreover, although not directly pertinent to MSP, the process of maritime spatial planning in the Mediterranean will have to take into consideration the urgent need for cooperation in the sector of **safety at sea**, having additional characteristics these last years due to the present migration and **refugees' crisis**.

Table 4: Transboundary issues, as reported in the Initial Assessment. Source: (SUPREME, 2017)

Italy Main transboundary issues include sectors like: ▪ maritime tourism; ▪ transportation; ▪ shipping; ▪ energy production; ▪ fishing activities; and ▪ extraction of non-living resources.	**Greece** ▪ Definition of limits/borders (international, national, administrative etc), so that jurisdictions in the marine space can become clear; ▪ Continuity and compatibility of spatial plans in cross border areas; ▪ International energy networks and maritime transportation networks; ▪ Pollution deriving from economic activities (and technological disasters related to them), spreading in an unpredictable way towards all directions, due to the nature of the sea; ▪ Resource overexploitation (of living or non-living organisms) resulting in territorial inequalities among cross border areas and professionals; ▪ Inefficient ecosystem reservation: resulting in great loss of ecosystem services, affecting all sides.
Croatia The most important trans-boundary issues and concerns are environmental effects of: ▪ agriculture; ▪ industry; ▪ shipping; ▪ fisheries; ▪ tourism and transportation of oil vessels.	**Slovenia** ▪ Maritime transport (ballast waters, underwater noise); ▪ Marine litter.

5. SUPREME proposals on the integration of principles of the Barcelona Convention for the MSP implementation

Taking into considerations recent initiatives among CPs within the framework of Barcelona Convention system, it is clear that the MSP activities in the Mediterranean should be implemented in the light of the Barcelona Convention's main objectives, which are to (UN Environment/MAP, 2015):

- ensure sustainable management of natural marine and coastal resources;
- integrate the environment in social and economic development;
- 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;
- protect the natural and cultural heritage;
- strengthen solidarity among Mediterranean coastal States;
- contribute to improvement of the quality of life.

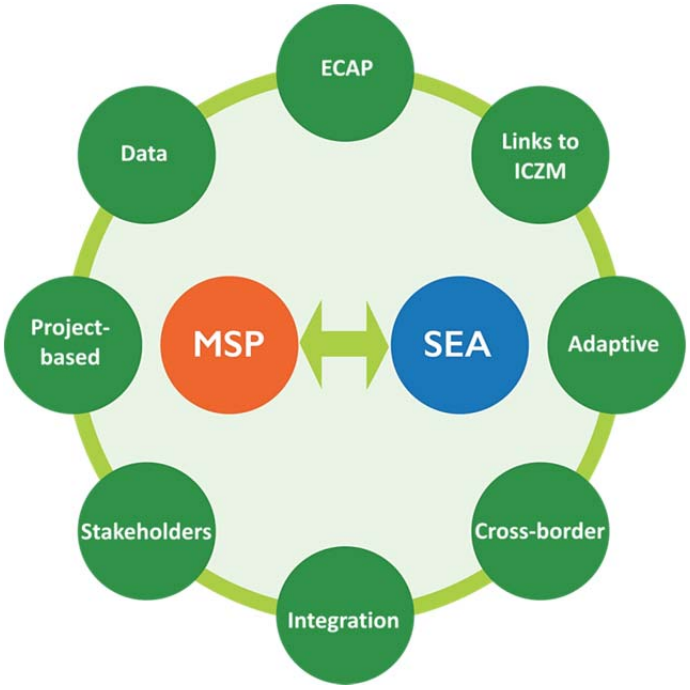

Figure 4: Key issues composing a common frame for MSP implementation in the Eastern Mediterranean sub-basin

Eight key issues relevant for MSP implementation in the Eastern Mediterranean have been identified and described in chapter 4. Proposals for implementation of MSP in the frame of the Barcelona Convention are illustrated below for each of the eight issues. An additional issue dealing with processes and tools for the assessment of environmental effects of the MSP plan is also considered, including specific proposals for its implementation. The entire set of proposals has been developed considering

also the specific input provided by the Initial Assessment performed within the SUPREME project and summarised in paragraph 4.9. These proposals are fully in line with the Conceptual Framework for MSP, adopted at COP 20 (Tirana, 2017). Identified proposals are specifically meant to inform SUPREME project and involved partners on possible approaches towards implementation of MSP in the framework of BC. Although the importance of each specific issue may vary from location to location, all of them are considered relevant for the implementation of MSP in Eastern Mediterranean. Indeed, they are mutually interrelated (Figure 4 above). SUPREME case studies could test a sub-set of the identified proposals, focusing on those applicable at case study scale and more relevant for the specific characteristics of the case study geographic area.

5.1 UN Environment/ MAP's Ecosystem Approach

In the Mediterranean, ecosystem approach (EcAp; or EBA according the language of the MSFD and the MSP Directive) is the overarching guiding principle to all policy implementation and development undertaken under the auspices of UN Environment/MAP Barcelona Convention. Therefore, EcAp/EBA should guide MSP implementation in the Eastern Mediterranean, too.

More pragmatically, EcAp can be reflected in MSP at three stages (Mourmouris A. et al., PAP/RAC, 2016):

- When defining the area to be managed, by ensuring the integrity of ecosystems and the necessary buffer zones and corridors;
- When contributing to GES, by ensuring compatibility of located land and sea uses and limits of allowed pressures, as well as observing the respective GES descriptors and indicators;
- When applying Ecosystem-Based Management (EBM), by respecting ecosystems diversity and connections, evaluating ecosystems services, addressing cumulative impacts, assessing trade-offs, applying adaptive management, networking and using appropriate tools and measures.

To this end, EcAp indicators already approved by the CPs should be used at the appropriate stages.

This can imply the following specific proposals in order to support the MSP implementation:

- Establish clear links between MSP objectives and ecological objectives, targets and indicators defined within EcAp and MSFD implementation processes, also approaching the issue in a cross-border perspective at the scale of the entire Eastern Mediterranean, as far as possible.
- As far as possible, delimit the planning and management area in order to facilitate the assessment and management of the two major types of conflicts identified: conflicts between human uses and the marine environment (user-environment conflicts) and conflicts among human uses (user-user conflicts). Application of EcAp does not stop at sea, it involves land too. Taking EcAp in consideration in the MSP process also implies a strong focus on land-sea interactions (LSI) and in particular on interactions among terrestrial and marine ecosystems, habitats and species.
- Consider in the future MSP plans, the best available scientific knowledge about the ecosystem and its dynamics, and assess major information gaps and related uncertainties.
- Together with maps of maritime uses, produce maps of key descriptors of the ecosystem and environmental status of the sea. Use these maps in the planning process of maritime uses to:

analyse conflicts with environmental protection goals, identify marine areas to be preserved and protected, and optimize space allocation for maritime uses.

- Identify and possibly map (based on data availability) the ecosystem services provided by the marine area and assess how they support maritime activities.
- Evaluate impacts of human activities on the ecosystem, as: direct and indirect, cumulative, short and long-term, permanent and temporary, positive and negative effects, also taking land-sea interaction in consideration.

5.2 Links to ICZM

MSP and ICZM should be linked as much as possible, and in any case should be consistent and complementary, since they both seek to address the problems of fragmented governance in coastal and marine areas and share similar principles, e.g. the sustainable management and development of coastal-marine areas, the sustainable use of marine resources, the importance of stakeholder participation, etc. Coordinated implementation of MSP and ICZM should be ensured, including reference to EcAp. They may work together in addressing common issues as local socio-economic development of coastal communities or nature protection across land-sea.

There is an evident overlapping of the potential geographical scope of ICZM (as defined by the Protocol on ICZM in the Mediterranean) and MSP (as defined by the Directive 2014/89/EU): both include territorial sea. In this perspective, MSP can be considered the main tool/process for the implementation of ICZM in the marine part of the coastal zone, also to avoid this overlapping becoming an obstacle. As argued in chapter 3, it should be stressed again that the application of MSP, within the framework and the geographic scope of the ICZM Protocol, can and should contribute to the goals defined by other Protocols of the Barcelona Convention, as in the case of identification, planning and management of protected areas according to the SPA/BD Protocol. MSP should also consider targets, actions and measures set by Action Plans mentioned in Box 2 that have an impact on the activities undertaken at sea.

Overall it should be highlighted that the considerations on the proper method of integration between ICZM and MSP will be a fundamental part of the activities to be carried out in the biennium 2018-2019, during the process of definition of the Common Regional Framework on ICZM and of the Conceptual Framework for MSP.

Understanding and addressing land-sea interactions (LSI) is crucial to ensure sustainable management and development of coastal areas and coherent planning of land and sea-based activities. LSI should be taken on board when dealing with MSP, taking into consideration the two main typologies of interactions: interactions related to land-sea natural processes and interactions among land and sea uses and activities. Other relevant aspects, which need to be managed and balanced when dealing with LSI, are interactions among people (tradition, culture, expertise, education, etc.) and interactions of planning processes and plans (and responsible institutions) for land and sea areas. Categorization of LSI elements can help in structuring problems understanding, however an integrated perspective is required to address all aspects of LSI. Temporal dynamic of interactions is another important aspect to be taken on board in MSP; this is particularly relevant when dealing with natural processes across the coast interface.

5.3 Adaptive approach

MSP should be a future-oriented process and should be based on an adaptive approach. Analysis of alternative options of future development of the marine area in question and related effects on planning of marine and maritime activities (including minimisation of conflicts and capitalization of synergies) are essential component of the MSP process. Moreover, monitoring, evaluation (also using performance and result indicators) and revision steps should be part of the process since its beginning. This implies the following suggestions for the MSP implementation:

- Promote active adaptive management, which includes the evaluation and comparison of alternative hypothesis (based on forecasts, scenarios, different visions and strategic elements) about the future evolution of the considered marine area. Active adaptive management can be very useful when strategies and plans for future development of sectors affected by MSP are not defined or known, thus enabling to manage uncertainty of the future.
- Develop process (also known as governance) indicators aimed at evaluating the MSP process completeness and efficiency.
- Develop output and impact indicators linked to clear objectives of the MSP process. The indicator development process includes the definition of: sources of information, including the analysis of data coverage and gaps; baselines; and target values. It is important focusing on those indicators whose evolution depends directly on the MSP Plan implementation. Other indicators which do not follow within the direct control of MSP authorities might be useful to depict the overall context.
- In any case, the system of (process, output and impact) indicators underpinning the adaptive approach should be transparent to allow proper stakeholder involvement, also in the evaluation phase of the MSP plan.
- Adopt a medium/long-term perspective to properly deal with the strategic nature of MSP and allow to plan in an anticipatory manner, implement, adapt and plan actions again over a period long enough to get concrete results.
- Climate change and related uncertainties should be considered in the MSP process and mainstreamed in the MSP plans. This implies to take into account:
  i) the assessment of climate change impacts on the marine ecosystem and resources;
  ii) the evaluation of climate change vulnerability of current and future human activities;
  iii) the possible inclusion of mitigation actions into the MSP plan; and
  iv) the identification of specific actions aiming to improve the adaptation capacity of the plan and the specific measures it includes.

5.4 Cross-border cooperation and multi-scale approach to MSP

MSP should be approached at different scales (from the Mediterranean Basin to sub-national level), combining top-down and bottom-up approaches (and a strategic phase with operational applications):

- Mediterranean scale addressing the entire sea basin through cooperation among countries (both the EU and non-EU Member States, to the extent possible) in the frame of the Barcelona Convention to approach the strategic level of MSP, including:
  - Identification of elements for a common vision and related objectives;

- Identification of priority areas (e.g. Northern Adriatic Sea, Southern Adriatic and Otranto channel, Aegean Sea) affected by transboundary problems;
- Identification of problems to be approached also through MSP in a transboundary dimension, for example: management of international maritime transport, sustainable management of fishery activities and fishing resources, biodiversity protection and ecosystem preservation, regulated extraction of non-living resources, marine pollution (deriving from both land- and sea-based sources), reduction of risk of ship collisions and environmental accidents;
- Identification of initiatives (e.g. projects) to address transboundary areas and issues.

Overall, transboundary cooperation among CPs in the framework of the Barcelona Convention is fundamental in order to address MSP in the Mediterranean Sea at strategic level.

- Sub-regional scale – where relevant and possible – approaching transboundary MSP issues (elements for a common vision, objectives, priorities and initiatives) in sub-Mediterranean regions (the entire Eastern Mediterranean or more likely some of its sub-areas: Adriatic, Ionian, Aegean and Levantine Seas), also linking to sub-regional strategies and plans (EUSAIR in particular) for coordinated implementation. Both the Mediterranean and sub-basin are the proper scales to start the possible approaching, planning and management of ABNJ, being aware of the complexity of the issue.
- National scale, fully implementing the MSP process – according to common principles and coherently with the regional and sub-regional approaches – in marine areas falling within national jurisdiction.
- Sub-national and local scales, fostering MSP applications aiming to provide evidence of concrete and visible environmental, social and economic benefits of MSP, also through pilot projects . Activities at the sub-national and/or local scale should also consider focuses on priority (hot-spot) areas, such as: highly vulnerable areas, areas with major conflicts among uses, areas with high potential for synergies among uses and multi-use opportunities.

Multi-scale approach could be reflected in a multi- governance system for MSP, including a coordination mechanism at the Mediterranean level (e.g. using and adapting the experience of the Helcom-VASAB MSP Working Group created for the Baltic Sea), within the frame provided by the Barcelona Convention[16], and, if needed, at the scale of specific sub-regions, as in particular the Adriatic-Ionian Region, taking advantage of the well-established cooperation in the area and profiting from the EUSAIR Initiative.

5.5 Integration

Efforts to identify, strengthen and/or empower mechanisms for horizontal and vertical coordination on MSP at the country level should continue and be improved. Reinforced coordination should consider the following aspects:

- Define clearly responsibilities, as well as the decision making and the consultation/participatory processes. In this respect, it is necessary to map the different (national, sub-national and local) authorities involved in the process and clarify respective competences.

[16] Taking into account that in the Mediterranean not all the countries are Member States of the EU (thus with comparable legislation), but all are Parties of the Barcelona Convention, which is an international legal instrument and therefore less binding than the EU law.

- Support/strengthen establishment of ecosystem-based governance setting, enabling integration of concerns and interests across sectors, governmental levels and stakeholders.
- The integration of sectoral policies and objectives in a single comprehensive integrated MSP process and plan. Integration among sectors is needed to go beyond sector policies, plans and regulations.
- MSP should provide a platform for long-term strategic visioning, which strictly relies on vertical, horizontal and cross-sector integration and is an essential element influencing the entire MSP process.
- Encourage gradual change of behaviour in a win-win perspective, at all levels. Besides within the overall MSP process (see section 5.6), stakeholders could be mobilised to improve cooperation on specific aspects aiming to develop synergies and win-win initiatives, as for example development of sustainable forms of tourism in marine protected areas also providing economic resources for monitoring and environmental protection activities or fishing for litter initiatives involving fishermen.
- Place particular attention to secure integration of planning and management of the sea and land components of the coastal area (land-sea integration).

5.6 Stakeholders involvement

Existing stakeholder involvement initiatives or platform should be reinforced and become common and formalised practices rather than a stand-alone experience. In case of major gaps and weakness, new initiatives should be put in place. Improving stakeholder involvement and encouraging their future engagement should imply:

- Establishment of substantial links to the MSP process;
- Involvement of legitimate stakeholders representing all relevant categories (public authorities at different levels, research institutions, civil society, business sectors, etc.);
- Involvement of key actors of relevant categories that can really contribute to the various steps of the MSP process;
- Visibility of the real added-value of the involvement process;
- Transparent, open and inclusive information sharing;
- Coherence with other involvement processes (e.g. ICZM, SEA, EcAp or MSFD) also to avoid excessive pressure on the same stakeholder arena, or unnecessary overload on the coordinating authorities.

5.7 Project-based initiatives and MSP practices

Uptake of valuable project results by formal MSP processes should be strengthened to capitalize developed knowledge and tools. This can imply:

- Identify knowledge gaps and needs of formal MSP processes in the Eastern Mediterranean to further developing cross-border MSP-related projects, progressively building on previous projects' results as experienced in the Adriatic-Ionian region (PlanCoast, SHAPE, Adriplan, and SUPREME). Use this projects' chain to deliver knowledge, tools, methodologies, and contents useful for the formal MSP processes.
- Improve uptake of project results and outputs by formal MSP processes, e.g. through dedicated workshops, direct support from project to formal MSP processes, identification, description and sharing of MSP practices (tools, guidelines, methodologies, pilot plans, studies, etc.).
- Strengthen links with the EU MSP Platform, aiming to support EU countries in implementing the MSP Directive, primarily by sharing knowledge and practices. Mechanisms to improve transfer of knowledge and practices should be reinforced.
- Improve involvement of non-EU countries in MSP-related projects to strengthen exchanges of good practice and mutual capacity building and to foster MSP processes in such countries.

5.8 Data availability and accessibility

Data availability and accessibility are key enabling elements for a knowledge-based, transparent and conscious process of marine space planning. However, efforts on data gathering should be properly targeted on real MSP needs to avoid the process taking too much time and using too many resources. Suggestions for this issue are:

- Identify the specific gaps that might hamper MSP and that require specific actions. Some specific knowledge areas might merit particular attention, as for example use of socio-economic data in the MSP process that still need improvement, indeed not only in the Eastern Mediterranean. Information gap related to fish stock and fishery impact is another example. The 2017 Mediterranean Quality Status Report can be an important source of information highlighting key data gaps in relation to all the 11 EcAp Ecological Objectives and indicators.
- Focus on the collection of data and information, which are really essential for MSP. Data is crucial. The updating process of the national monitoring and assessment programmes which is in progress, in line with IMAP, will significantly contribute to the collection and reporting of quality -assured and regionally comparable data.
- Take into consideration any form of „good quality" knowledge. This comes primarily from scientific sources and institutionalized monitoring activities and datasets, but should also capitalize private sources of data and, where appropriate, utilisation of citizen science. Quality check of data and information used in the MSP process must be however ensured, in particular regarding the formal MSP process, which required formal and validated data. Data validation could also be required, depending on the context. Involvement of legitimate stakeholder can help in sharing good sources of data.
- Improve transparent access to accurate and complete information. Harmonization and up-dating of relevant data and information are needed, to both supporting cross-border cooperation and vertical-horizontal coordination within countries.

- Move from data and knowledge to information really useful for the planning and decision-making process required by MSP. Spatial-based tools are particularly useful to this end. A number of tools are already available and have been applied in the Mediterranean and other marine regions; their use needs to become more operational and widely diffused among planners involved in formal MSP processes. A closer and interactive collaboration between planners and scientists is required. Other tools should be further developed, also to address future challenges and in order to come against the planning needs of decision makers. For example, regarding future challenges, could be useful the development of tools to select appropriate sites for offshore renewable energy installations or for proper siting of offshore aquaculture farms.
- Create/strengthen platforms (SDI, Web-portal, etc.) to enable data/information/tool sharing and accessibility, i.e. MSP data platforms at the country and basin/sub-basin scale, capitalizing existing experiences at the Mediterranean level (e.g. SDIMED geoportal or PEGASO SDI) or in specific sub-region (SHAPE Atlas and ADRIPLAN data portal for the Adriatic-Ionian region). Marine and maritime data sharing need to be optimised across the two shores of the Eastern Mediterranean sub-basin.
- Ensure that these platforms also contain land data or are integrated with other platforms containing land data, to properly support LSI analysis.

5.9 Tools for Environmental assessment of MSP

Strategic Environmental Assessment (SEA) is an important integral part of the preparation of the MSP plan, providing a mechanism for the strategic consideration of environmental effects of the plan, assessment of different planning alternatives and identification and evaluation of mitigation measures. SEA is an important tool for implementing EcAp in MSP as it provides a framing for the evaluation of effects on species, habitats and ecosystems. It follows that SEA is a process to be implemented in close connection and in parallel to the MSP plan elaboration, as it should be used to ensure the plan environmental sustainability. Indeed, SEA aims to provide clear input to the MSP plan. To this end, the SEA process should start at the very beginning of the MSP process and the two should be implemented in an interactive manner.

The SEA process includes the preparation of an environmental report, the carrying out of public consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision. The following elements should be considered when implementing SEA:

- Actual availability of knowledge and methods of assessment, focusing on really needed information and highlighting critical gaps.
- Availability and actual applicability of operational tools that can support SEA implementation during the MSP process, as for example: cumulative impact tool, conflict analysis tools, checklist toolbox, guidelines, model to analyse spatial distribution of maritime activates and related effects, etc.
- Content and level of detail in the MSP plan, that should enable the level of environmental assessment required.
- Stage in the decision-making process related to the MSP plan.

- Interest of the public, ensuring proper consultation within the SEA process, coherently and in coordination with stakeholder engagement for the MSP plan elaboration.
- Related to previous points, the extent to which certain matters are more appropriately assessed within a more detailed Environmental Impact Assessment (EIA), which is often required for the licensing of specific projects ad activities after a Marine Spatial Plan has entered into force. SEA has an important role in guiding EIAs because the challenges in reconciling issues at the EIA scale require a more strategic approach.

At general level, two more aspects should be stressed:

- A transboundary SEA process, including transboundary consultation, should be activated when the implementation of a MSP plan is expected to have significant trans-boundary environmental effects.
- SEA should not only assess impact on the sea, but consider also impacts of maritime activities on land, based on most relevant LSI identified.

For EU Member States, it is worth pointing out that any MSP plan likely to have a significant effect on a Natura 2000 site shall undergo an appropriate assessment to determine its implications for the site, and specifically the habitats and species it hosts.

Addressing all of the above-mentioned proposals should also be done taking into considerations other methodological guidelines of the SUPREME project, in particular „Methodology for transboundary MSP aspects".

References

Addis D., (2012).The protection and preservation of the marine environment. Under the patronage of I.C.E.F. – International Court for the Environment Foundation.

Addis D., (2014). The Italian EPZ as a tool for the implementation of the Barcelona RSC. Project MARSAFENET IS1105 COST ACTION, EU COST Program.

EUNETMAR (2014). Study to support the development of sea basin cooperation in the Mediterranean, the Adriatic and Ionian and the Black Sea. Report 4. Study carried out on behalf of the European Commission Directorate-General for Maritime Affairs and Fisheries, contract number MARE/2012/07 – Ref. n.2, September 2014.

MedPAN, SPA/RAC (2016). The 2016 status of marine protected areas in the Mediterranean – Main findings. MedPAN and UNEP/MAP-SPA/RAC.

Mourmouris A., Le Visage Ch., Grimes S., Ramieri E. „The way to a Regional Framework for ICZM in the Mediterranean, 2017-2021. Background Document", PAP/RAC, Dec. 2016

Piante C., and D., Ody (2015). Blue Growth in the Mediterranean Sea: The Challenge of Good Environmental Status. MedTrends Project. WWF-France. 192 pages.

Plan Bleu (2014). Economic and social analysis of the uses of the coastal and marine waters in the Mediterranean, characterization and impacts of the Fisheries, Aquaculture, Tourism and recreational activities, Maritime transport and Offshore extraction of oil and gas sectors. Technical Report, Plan Bleu, Valbonne.

SPA/RAC website: www.rac-spa.org.

SUPREME (2017). Summary on the existing knowledge on the Eastern Mediterranean area in its marine aspects relevant for MSP, particularly on cross-border issues.

UNEP/MAP (2012). State of the Mediterranean Marine and Coastal Environment, UNEP/MAP – Barcelona Convention, Athens, 92 pp.

UNEP/MAP (2013). Ecosystem Approach in the Mediterranean under the Barcelona Convention.

UNEP/MAP (2015). Implementation of the Ecosystem Approach in the Mediterranean.

UNEP/MAP (2015). The Mediterranean Action Plan. Barcelona Convention and its Protocols. Overview.

UNEP/MAP (2017). 2017 Mediterranean Quality Status Report. Thematic decision of the 20th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols.

UNEP/MAP (2017a). Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas. UN Environment/Mediterranean Action Plan, Athens, Greece.

Zerkavi (2015). Introducing Maritime Spatial Planning Legislation in the EU: Fishing in Troubled Waters? Maritime Safety and Security Law Journal, 1/2015, pp. 95-114.

This document was prepared by the Priority Actions Programme Regional Activity Centre (PAP/RAC) in the framework of the project “Supporting Maritime Spatial Planning in the Eastern Mediterranean“ (SUPREME).

PAP/RAC is established in 1977 in Split, Croatia, as a part of the UN Environment Mediterranean Action Plan (UN Environment/ MAP). PAP/RAC’s mandate is to provide assistance to support Mediterranean countries in the implementation of the Barcelona Convention and its Protocols, and in particular of the Protocol on Integrated Coastal Zone Management in the Mediterranean. PAP/RAC is oriented towards carrying out the activities contributing to sustainable development of coastal zones and strengthening capacities for their implementation. Thereby, it co-operates with national, regional and local authorities, as well as with a large number of international organisations and institutions.

Following the emerging need to introduce MSP in the entire Mediterranean Region, the 20th Meeting of the Contracting Parties to the Barcelona Convention (COP 20, Tirana, Albania, 2017) adopted the *Conceptual Framework for Marine Spatial Planning.* Therefore, MSP was introduced within the Barcelona Convention System, as the main tool/process for the implementation of ICZM in the marine part of the coastal zone, thus contributing to the balance between environmental, social and economic dimensions of sustainable development.