THE 2016 FORUM
of Marine Protected Areas
in the Mediterranean

MID-TERM EVALUATION (2016) OF THE
MEDITERRANEAN MPA ROADMAP 2012-2020
AND RECOMMENDATIONS FOR 2020
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# Mid-term Evaluation of the Mediterranean MPA Roadmap 2012-2020, and recommendations for 2020

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<tr>
<td>ABNJ</td>
<td>Areas Beyond National Jurisdiction</td>
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<td>ACCOBAMS</td>
<td>Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea</td>
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<td>EBSA</td>
<td>Ecologically or Biologically Significant Area</td>
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<td>European Commission</td>
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<td>FAO</td>
<td>Food and Agriculture Organisation of the United Nations</td>
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<td>FRA</td>
<td>Fisheries Restricted Area designated by the GFCM</td>
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<td>GF CM</td>
<td>General Fisheries Commission for the Mediterranean</td>
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<td>HELCOM</td>
<td>Convention on the Protection of the Marine Environment of the Baltic Sea</td>
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<td>HLPF</td>
<td>High Level Political Forum (UN)</td>
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<td>IUCN</td>
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<td>International Maritime Organisation</td>
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<td>MAP</td>
<td>Mediterranean Action Plan</td>
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<td>Mediterranean MPA managers network</td>
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<td>MSP</td>
<td>Marine Spatial Planning</td>
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<td>Mediterranean Strategy for Sustainable Development 2016-2025</td>
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<td>RAMPAO</td>
<td>West African Network of MPAs</td>
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<td>SAP/BIO</td>
<td>Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region</td>
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<td>SBSTTA</td>
<td>Subsidiary body on scientific, technical and technological advice</td>
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<td>United Nations Agenda 2030 Sustainable Development Goals</td>
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<td>Specially Protected Area of Mediterranean Importance</td>
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<td>The United Nations Convention on the Law of the Sea</td>
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<td>United Nations Framework Convention on Climate Change</td>
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<td>UN REDD+</td>
<td>United Nations programme Reducing Emissions from Deforestation and Forest Degradation</td>
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<td>World Wide Fund for Nature</td>
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SUMMARY

The first Mediterranean MPA Forum (Antalya, Turkey, 2012), responding to the international commitments in the CBD Aichi Target 11, issued a “Roadmap towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean Marine Protected Areas by 2020”. The Roadmap determines 4 Strategic Objectives and 66 concrete Actions at the local, national and regional levels.

In preparation of the second Mediterranean MPA Forum in 2016 (Tangier, Morocco), the RAC/SPA-UNEP/MAP, MedPAN and their partners engaged a mid-term evaluation of the implementation of the Roadmap, identifying the progress achieved, the gaps to be addressed, and providing a set of recommendations to reach the Aichi Target 11 by 2020.

PROGRESS OVERVIEW

The evaluation was based on an extensive documental review and the analysis of 242 questionnaires received from national MPA authorities, MPA managers, scientists, regional experts and specialized NGOs from all the 21 Mediterranean countries, plus the EU and a number of international organizations. In this 2016 mid-term evaluation, the general progress found since 2012 for the whole set of 66 Actions to 2020, can be estimated as a 30%.

During the period, the Strategic Objective 1 (MPA establishment and science) has progressed by means of improved datasets, the first networking activities to monitor global changes, the establishment of new representative MPAs in the Natura 2000 network, and a remarkable 57% increase in protected areas coverage, which today represent a 7.14% of the Mediterranean Sea, suggesting that the region may reach the Aichi Target of 10% by 2020. However, 48% of all this coverage belongs to the Pelagos Sanctuary, while 2/3 of the rest are marine Natura 2000 sites in the EU waters. Also, the current MPA system, mostly covering coastal areas in the northern basin, is not yet representative of the full Mediterranean habitat and ecosystem diversity. Finally, the present figure of 0.04% coverage of strict no-go or no-take-zones in the Mediterranean Sea remains very low.

Concerning the Strategic Objective 2 by which MPAs need to be effectively managed to attain their objectives, the period has provided a moderate progress (29%) after the improvement of the legal and institutional frameworks applicable to MPAs, particularly in Northern African countries, and by the dynamism of training for management capacities, mostly at the regional level. However, management effectiveness remains a significant challenge, as in the Mediterranean Sea the unmanaged MPAs outnumber the rest, and regular monitoring activities are almost restricted to a few MPAs in some EU countries. Resources, either human, material or financial, are often inadequate and cause weak surveillance and control standards. Poor enforcement of regulations is a persistent problem and a serious weakness of MPAs in this region.
The period has left some relevant foundations for the effective integration of MPAs into other sectors, as recalled by Strategic Objective 3, mainly due to the progress in coastal policy integration, inter-institutional agreements, and MPA zoning, in North African countries; and in the EU countries, to the Maritime Spatial Planning Directive and the new Common Fisheries Policy recognizing the importance of MPAs for professional fisheries.

In relation to sustainable MPA financing (Strategic Objective 4), less than 15% of the funding needed to effectively manage the Mediterranean MPAs is today available; governmental funding and continuity are not guaranteed, in part due to the long financial crisis, but also because MPAs continue to be perceived as a cost rather than as an investment. However, the 4 year period has left some important basements for future sustainable funding, particularly the establishment of a trust fund and association for Mediterranean MPAs -already including five countries and supported by the Barcelona Convention COP 19- as well as the progress in some countries –eg. environmental taxation, or MPA self-financing strategies- and the completion of a regional financing assessment, and guides for MPA financing activities.

It must be acknowledged that, in spite of the shortbacks, a real reduction of the gap between the different Mediterranean subregions (North Africa, Eastern Mediterranean, and the EU) has been achieved; here, the support from regional cooperation, by means of the technical or financial assistance from regional organizations, needs to be acknowledged. Countries which were delayed before 2012 have shown the highest drive during the last four-year period, particularly Algeria, Tunisia, Egypt and to a lesser extent also Morocco, in Northern Africa, as well as Albania in the Eastern Mediterranean. Significantly, over 50% of all the MPA case studies illustrating the Roadmap progress come from North African countries, revealing a real field-site dynamism in this subregion. All together, these outcomes yet seem more valuable when compared to the MPA networks in other Regional Seas.

THE ROADMAP SYNERGIES, GAPS AND OPPORTUNITIES

The Aichi Target 11 was already committed by governments since 2010, but the Roadmap has pioneered regional support by creating momentum and inspiration. The most remarkable outcome is the Roadmap adoption by the Barcelona Convention COP 19 Decision “Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean” (COP 19, 2016). During the last four years, concepts such as the ecosystem approach (EcAp), blue growth, marine spatial planning, marine integrated governance, have become common objectives to most international marine initiatives, with which the Antalya Roadmap is coherent and complementary: the UN Sustainable Development Goal 14, the UNEP/MAP MidTerm Strategy 2015-2021, the UNEP/MAP MSSD 2016-2025, the Barcelona Convention Regional Climate Change Adaptation Framework (2016), the GFCM resolution on FRAs/SPAMls (2013). The same concepts inspire the EU Marine Strategy Framework Directive, the Blue Growth Strategy, and the Maritime Spatial Planning Directive, which are binding to all EU member States.

As a fair balance to its pioneering character, the Antalya Roadmap may now update in light of some recent UN developments, namely the UNFCCC and the UN SDG Agenda to 2030. The
latter, for the first time considers the marine environment and the ecosystem approach into an overarching sustainability agenda; its Goal 14 incorporates the Aichi 10% target.

During the period 2012-2016 the political relevance of climate change has mounted and consolidated (Paris 2015; Marrakesh 2016), and recognized as a serious threat to marine ecosystems and coastal communities. The UNFCCC (Art.4.1e) is ready to take the oceans as key elements for mitigation and adaptation; the “Because the Ocean” initiative, launched before UNFCCC COP21 in Paris, is already supported by 22 signatory countries. These agreements have fostered the strong development of mechanisms to finance mitigation and adaptation activities in developing countries. In addition, the Blue Carbon Initiative supported by GEF-5, aims at developing global partnerships to mitigate climate change through the restoration and sustainable use of coastal and marine ecosystems.

The Mediterranean regional is one of the most vulnerable to climate change and expected to receive severe impacts. Since 2012 the Barcelona Convention has adopted the “Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas”; the ICZM Protocol Action Plan 2012-2019 (pointing at climate change and the ecosystem approach); and the UNEP/MAP Mid-Term Strategy 2016-2021 where climate change adaptation is a cross-cutting theme. However, the Antalya Roadmap did not particularly identify the challenge that climate change could mean for MPAs, and the importance they could have for mitigation and adaptation efforts; since 2012 only a few relevant start-up field initiatives took place (these will be displayed as case studies during the 2016 Forum).

RECOMMENDATIONS

In light of the previous background, the Roadmap evaluation presents some recommendations for 2020 (here summarized):

**To Strategic Objective 1** (MPA science and coverage)
- **Increase the coverage of no-take-zones inside existing MPAs, particularly within the Natura 2000 marine sites and the SPAMI network.**
- **Establish new MPAs in the High Seas** following, if needed, the procedures already set after the Pelagos Sanctuary case in 1998.
- **Support the target of 30% marine protection by 2030**, a new challenge for the next decade, as recommended by science and adopted by the World Conservation Congress (2016).
- **Spread the Natura 2000 network into non EU Mediterranean waters**; improving the MPA complementarity and representativity, and creating new North-South cooperation opportunities. Following the experience in the Emerald Network, it may be articulated through the Bern Convention on request of national authorities in non-EU countries.

**To Strategic Objective 2** (MPA effective management)
- **Develop management plans for Natura 2000 marine sites.**
- **Start management planning in every MPA**, through regional coordinated efforts to facilitate cartography, ecological and socioeconomic baselines, fostering MPA planning processes based on local capacities.
- **Support “young” MPAs** by delivering minimum standards for effective management, recommendations for good governance, while promoting exchanges and MPA twinning.
• Consider the challenges of climate change both in MPA management plans and their monitoring activities.

• Progress towards harmonized monitoring systems, providing comparable data sets to facilitate future follow-up of the MPA status at national and regional levels.

To Strategic Objective 3 (MPA integration)

• Make every effort to communicate the relevance of MPAs for multiple purposes aiming at their recognition as demonstration sites of the new environmental policies on ecosystem approach, climate change, and good environmental status of marine waters.

• Build a win-win relation with decision-makers and funding bodies on marine spatial planning, integrated coastal management, blue growth strategies, and sustainable fisheries policies, to deal with pressures beyond the MPA borders, while considering MPAs as management instruments to reach sustainability targets.

• For the recognition of MPAs, consider as opportunities: The 2017 UN HLPF on “Ensuring food security on a safe planet by 2030”; the obligation of EU member states to draw up maritime spatial plans which may include MPAs; the foreseen increased cooperation among EU Member States (and with non-EU countries) for the management of marine N2000 and other MPAs; the “Blue Growth” strategy; and the GFCM comprehensive mid-term strategy (2017-2020) toward the sustainability of Mediterranean and Black Sea fisheries, including the implementation of spatial measures in support of sustainable fisheries.

To Strategic Objective 4 (MPA sustainable funding)

• Encourage the Barcelona Convention Parties to guarantee the basic funding needs for their MPA national networks, consolidating the existing budget lines, and by including MPAs in their national strategies for biodiversity, fisheries, and climate change.

• Invite ODA agencies to consider MPAs as relevant cases of ecosystem based solutions for food security, collaboration for long-term planning, and as live examples of participatory methods, all in the interest of poverty alleviation.

Additionally, some recommendations are put forward to open the institutional framework of the Roadmap beyond the CBD objectives - in line with the new strategic orientations, e.g. in the UNFCCC - underlining the role of MPAs for climate change mitigation and adaptation.

Finally, in light of the Barcelona Convention decision to support the MPA Roadmap, it is suggested that in the future, the MPA Forum follow-up its implementation, foster complementary efforts from “non-Focal Point” stakeholders (managers, scientific community, NGOs, MPA professionals and socio-economic actors), and launch innovative initiatives.

The evaluation acknowledges the Antalya Roadmap as a timely and inspiring initiative, built on the collective effort from many stakeholders, and recognizes the commitment from the leading partners who, during the period, integrated the Roadmap into their own programmes of work.
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**1. INTRODUCTION**

Every 4 years, the Forum of Marine Protected Areas (MPAs) in the Mediterranean triggers a unique process during which managers, policymakers, socio-economic actors, civil society and the scientific community tackle, at all levels, the challenges MPAs face in the region.

During the first Mediterranean MPA Forum held in Antalya in November 2012, these actors identified the necessary actions in order to establish an ecological network of MPAs that is effectively and sustainably managed. A “Roadmap - Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean Marine Protected Areas by 2020” was elaborated in 2012 by MedPAN, RAC/SPA, their partner organizations and the participants to the 2012 Forum on MPAs in the Mediterranean (Antalya, November 2012) together with the Antalya Declaration. The Roadmap determines the steps that Mediterranean countries, relevant organizations and actors might individually and/or jointly undertake in order to achieve by 2020 the targets set for MPAs. The activities proposed by the Roadmap concern all the stakeholders and all the levels of intervention. The Roadmap calls for urgent action to achieve the 2020 targets set by international, European and Mediterranean commitments, specifically the Aichi Target 11: “By 2020, 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are to be conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures”.

In 2013, the Contracting Parties to the Barcelona Convention (Decision of COP 18, Istanbul, December 2013), requested the Secretariat to prepare “a draft roadmap for a comprehensive coherent network of well managed MPAs to achieve Aichi Target 11 in the Mediterranean for consideration by COP 19 with a view to its adoption”, which was drafted in 2015 by RAC/SPA in consultation with relevant regional organizations, producing a “Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean”. which was officially adopted by the Contracting Parties of the Barcelona Convention at their COP 19 (Athens, February 2016).

While the 2012 roadmap identified various target groups (MPA managers, national and local authorities, scientists, stakeholders, donors...) at three levels (local, national and regional), the 2016 Barcelona Convention roadmap focused on most of the same Actions of the 2012 roadmap, but targeting the Contracting Parties and regional and international organizations.

At this point, the 2016 edition of the Mediterranean MPA Forum (Tangier, Morocco, 28 November-1 December 2016) is expected to be a key milestone in view of the 2020 deadline of the CBD Aichi targets. In preparation of this event, MedPAN, RAC/SPA and their partners

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1 “Other effective area-based conservation measures” (OECMs): So far, the CBD has not provided final criteria for defining OECM but it can help include all the designations that are not seen as classical MPAs, such as Ramsar sites, World Heritage Sites, or Biosphere Reserves.
engaged to produce a mid-term evaluation of the implementation of the 2012-2020 roadmap, the findings of which will be shared on the occasion of the 2016 Forum. This evaluation process aims at identifying the progress made and the gaps to be addressed in the roadmap implementation, and provides a set of recommendations to reach the Aichi Target 11 by 2020, to be reflected in the Tangier Declaration.

In order to ensure consistency with the Forum sessions, the Roadmap evaluation process has been combined with the preparation of the Forum’s programme, built around the 4 strategic objectives of the roadmap: presentations and success stories that will be showcased during the Forum should illustrate the contributions of MPAs, countries and organisations to the progress made in the roadmap implementation. A special attention is paid to case studies and presentations related to climate change issues, knowing that the Tangier Declaration is expected to be an opportunity to open the institutional framework of the roadmap beyond the CBD objectives, in line with strategic orientations of related international initiatives like the UNFCCC in particular (MedCOP22 and COP22, both hosted by the Moroccan Government, which is also co-organizing the 2016 MPA Forum).

The present mid-term Evaluation is included within the project “Towards an ecologically representative and efficiently managed network of Mediterranean Marine Protected Areas” (MedMPA network project), whose general objective is to contribute to achieving a connected, ecologically representative, effectively managed and monitored network of Marine Protected Areas (MPAs) in the Mediterranean ensuring the long term conservation of key elements of the marine biodiversity and providing support to the sustainable development of the region. This 30-month (2016-2018) sub-regional project is executed and managed by UNEP/MAP, co-executed by RAC/SPA, WWF-MedPO and MedPAN, and financially supported by the EC. It builds on the achievements of the MedPartnership project and ensures continuity to its activities at regional and national level. It provides important support to the implementation of the Barcelona Convention and its Specially Protected Areas and Biological Diversity (SPA/BD) Protocol and to the strengthening of biodiversity conservation in the Mediterranean.
2. OBJECTIVES

The general objective of this Roadmap Evaluation is to assess the progress made and what’s left ahead according to the MPA roadmap developed at the 2012 Forum and now adopted by the Barcelona Convention. It aims at answering what should still be done to conserve, through effectively managed MPAs and other area-based conservation measures, at least 10% of the Mediterranean Sea by 2020, and how to address MPA issues, especially those related to climate change, with a long-term and integrated vision.

The consultant’s ToR also include to support RAC/SPA, MedPAN and their partners to:

- Identify presentations and case studies to be showcased during the 2016 Forum and assist the Forum Steering Committee in their selection;
- Feed the MAPAMED cartography of on-going projects on MPA; and,
- Provide recommendations to be brought to the 2016 Mediterranean MPA Forum, and draft the Tangier Declaration.

3. METHODOLOGY

3.1. Scope of the Evaluation:

Given the high number of possible actions related to Mediterranean MPAs along the last 4 years, there is a risk of dispersion into relatively non-significant results; the Evaluation will assess the progress achieved during the period 2012-2016 along two main streams:

a) The Roadmap has influenced new policies, agreements, and funding sources.

b) The Roadmap has fostered new field projects: such as new MPAs, improved planning, management and capacities, data sources and monitoring.

Given the nature of the Roadmap’s Strategic Objectives, we may expect it had its most significant influence at a) the Regional level, including regional organizations and regional donors; and b) at the National level, mostly through the Barcelona Convention focal points. Influence at the Local level would be more related to the Roadmap “Actions” and expected at the MPA level.

Other influence at the international level (away from the Mediterranean region) would not be expected, except perhaps in other Regional Agreements and Programmes (e.g. OSPAR, HELCOM, Black Sea) and MPA networks of managers (CAMPAM, MAIA, Rampao) that might have adopted some of the Roadmap strategies or be inspired in working their own roadmaps.

The Roadmap was prepared as a Mediterranean contribution supporting the existing commitment of Governments to the Aichi target 11. Thus, the Evaluation will assess the
perceived Roadmap progress 2012-2016, regardless of whether it might be attributed to the commitments to Aichi or to the Roadmap itself.

3.2. The Roadmap has influenced new policies, agreements, funding sources...

Coherence and synergies were sought between the Roadmap and the strategies and programmes of the main international, regional and national initiatives since 2012. The following list is indicative:


- **United Nations**: Sustainable Development Goals 2030 (Goal 14 on Oceans) / UNFCC, its COP 21 and the last IPCC which underlines the consideration of the oceans as carbon sinks / The UNCLOS (2018) MPAs in BD-BNJ (BBNJ) / The Ocean Sanctuary Alliance.

- **FAO**: GFCM / Fisheries Restricted Areas (FRAs) in the Mediterranean / FAO Vulnerable Marine Ecosystems (VMEs).

- **Barcelona Convention**: developments of the SPA-BD Protocol, e.g. the Roadmap 2016, and the National activities reports by the Parties / Developments of the ICZM Protocol / the UNEP/MAP Mediterranean strategies, and on climate change issues.

- **European Union**:
  - EU Directives: Birds and Habitats / Maritime Spatial Planning / Marine Strategy Framework
  - EU Strategies and policies: Biodiversity / Common Fisheries Policy / Adriatic-Ionian
  - Mediterranean Ministerial Conference Blue Economy Declaration

- **Other relevant organizations**:
  - Other Regional Seas, such as in OSPAR, HELCOM, Black Sea Convention.
  - UNESCO MaB Programme and WHS.
  - Mediterranean initiatives in ACCOBAMS, Bern and Ramsar Conventions (MedWet initiative).
  - Other regional specialized institutions/organizations such as ATEN, WWF-MedPO, OCEANA, Birdlife.
  - IUCN Promise of Sydney / Nature based solutions in the Med / Panorama

- **Relevant donor organizations interested in MPAs**:
  - GEF, EU, National ODA Agencies (AFD, AECID, KfW), and OECD reviews
  - FFEM, Fundación Biodiversidad, MAVA, Critical Ecosystem Partnership Fund, Total Foundation, Prince Albert II of Monaco Foundation, OAK Foundation.
3.3. The Roadmap has fostered new Actions, more and better quality MPA projects:

The Evaluation will follow the Actions in the Roadmap: new MPAs, improved legal coverage, institutional settings, improved planning, management, capacities, data sources and monitoring.

Given the number of possible variables and the relatively limited time available, the Evaluation will be highly focused. The nature of the Actions is heterogeneous and the information is dispersed between organizations at all levels (international, regional, national and local), either governmental or non-governmental, and in many different countries. So, the Evaluation will take advantage of every recent study or regional assessments, avoiding the duplication of efforts and trying to cross-check and to synthesize results.

Indeed, this Evaluation cannot be an assessment of MPA progress 2012-2016; the key source here is the “MPA Status 2016” in preparation by MedPAN and its partners, specially the Specific Attributes of MPAs (governance, management, staff, budget, regulations, data on habitats and species).

Other recent Regional assessments participated by RAC/SPA, MedPAN and partners (most of them also based on region-wide questionnaires) are also relevant to assess the MPA progress, e.g. the thematic Regional Workshops (Tourism; Enforcement; Climate Change); the Evaluation (2015) of the Barcelona Convention regional MPA PoW 2009; and the National Reports in the Barcelona Convention COP 19 (2016). There are many other sources of information listed in the enclosed Annex 1.

3.4. Indicators of progress

The Roadmap does not provide indicators but for the purposes of the mid-term evaluation these can be tailored responding to its Vision, 4 Strategic Objectives, and Actions.

A preliminary list provides well over 100 possible “questions”. However, many of these are qualitative, or just interpretations about the influence the Roadmap may have had in other policies and programmes. Such strategic descriptors can be cross-checked in a correlation matrix, allowing for an acceptable objectivity and further interpretation.

Also needed is the reduction of the many heterogeneous Actions into a limited number of significant indicators that can provide a reliable basis for this Evaluation. Most of those at Regional and National level are in fact qualitative descriptors, not quantifiable, hard to monitor categorical variables; or ambiguous to assess, or just ideas or recommendations for improved practice (e.g. “Where possible and appropriate encourage the equitable sharing of social and economic benefits…”, or “Highlight the natural and cultural heritage, including sustainable traditional practices and local knowledge”, or “To understand and integrate better the sustainable socio-economic activities the whole Mediterranean”.

Mid-term evaluation (2016) of the Mediterranean MPA Roadmap 2012-2020 and recommendations for 2020
In this concern and additional to the “strategic descriptors” mentioned before, 68 preliminary questions that will help to address the progress of the Roadmap Actions were selected. The answers to these questions are not necessarily quantitative nor meant for a statistical analysis.

Of these 68 “Action questions” only 17 are at the Local level; the majority are either at National (30) or Regional (21) levels. Note that in reviewing the available literature (Annex 2), datasets and the preliminary results of the MPA Status 2016, it was found that almost every “Local” question is already answered in the existing assessments (mainly by MedPAN) but only 3 National and 6 Regional questions can be readily found in the literature and available datasets.

Annex 2 presents the descriptors inspiring these 68 questions:

- **In black Font (25)** those already documented in the most recent bibliography;
- **In red Font (20)** those inexistent in literature, must be included into the questionnaire;
- **In blue Font (23)** those for which we already have some information but still need to be complemented through the questionnaire.

Finally, 35 synthetic questions (10 Regional and 25 National) were answered through a new questionnaires. Eight additional questions treat about other objectives (case studies, ongoing projects, synergies with climate change, and reflections for 2020). These questions were fully worded after the comments from the Evaluation Steering Committee to the previous draft.

### 3.5. Sampling method: questionnaires, and other sources of data and information

There is a broad number of recent publications, data bases, internal reports and other grey literature providing information. Annex 1 presents the main sources of information foreseen to cover the variables in this Evaluation. Many of these sources have been already reviewed or listed, in a drafted outlook with 107 summarized documental sources (Annex 3) which have been constantly updated as the Evaluation work developed.

Two different questionnaires were produced, for National and for Regional purposes. Both try to be short, with unambiguous questions addressing the information gaps, focusing on the 43 uncovered questions in Annex 2. They also ask about relevant case studies, about ongoing projects, and about reflections on how to achieve more Roadmap goals by 2020. In general terms, the recipients to which the questionnaires were addressed are:

**Regional questionnaire:**

- Regional MPA governmental and non-governmental organizations
- Regional MPA donors
- Relevant regional specialized organizations (such as WWF, OCEANA, Vertigo)
- Selected regional MPA Experts.

**National questionnaire:**
• National MPA authorities and SPA-BD Focal Points in the Barcelona Convention
• Relevant MPA national specialized organizations and experts.
• Selected MPA managers.

The MedPAN files today contain 4,050 contacts, of which 1239 have been earmarked by RAC/SPA and MedPAN to receive the questionnaires (454 at Regional level; 785 at National level). Given this broad sample arising from the MedPAN files, and the well tested mechanism - as in many other regional surveys by MedPAN and RAC/SPA, who circulated and received the questionnaires, while the consultant computed the responses and added results, keeping a close communication with the RAC/SPA and MedPAN teams throughout the process. Out of these 1239 addresses, 40 key recipients, those considered unavoidable or priority answers, were earmarked in an Excel table and individually contacted on several occasions, as needed, to ensure their answers.

3.6. Other objectives (1): Cartography of on-going projects

A list of relevant projects (including some key information on each project) was provided to be integrated into the MAPAMED “Database of MPAs in the Mediterranean”. This information is due to be updated every 4 years (the Med MPA Forum frequency).

The aim is not a full project census because at present there must be well over a thousand projects and heterogeneous activities related to Mediterranean MPAs, but a wide sample of the most relevant for the Roadmap strategic objectives and actions. Criteria for their selection are: MPA ongoing projects (must be in MPAs); either participatory, innovating and in general responding to, and integrating, as many Roadmap Actions as possible; those with a wide scale or a regional significance will be specially considered. The main sources of information will be those proposed in the questionnaires, those advised by the Steering Committee, those found through the broad literature review in Annex 2, and any other as known by the consultant. A list of projects will be submitted to MedPAN and RAC/SPA for their inclusion in the MAPAMED database, including when possible name, country, location (MPA), ecoregion, topic, dates, project description, coordinator and partners.

3.7. Other objectives (2): Case Studies

A representative number of case studies (35-50), to illustrate the best practices in the Roadmap application, were shortly described and introduced into a grid presented during a Steering Committee meeting in Marseille (12th July, 2016) for their selection. The list was shortened to some 20 cases meant to be showcased during the Forum.

The case studies are sought not only at the level of classical nationally designated MPAs but also at the National and Regional levels. Many case studies can be identified within the Natura 2000 network at sea, in Biosphere Reserves, Ramsar sites, World Heritage sites, GFCM Fisheries Restricted Areas, and in the network of SPAMIs.

The selection criteria are:
• All the cases are in MPAs and post 2012
• The cases are success stories or best practices illustrating the contributions of MPAs, countries and organizations to the progress made in the Roadmap implementation.
• Inclusive: different governmental sectors coordinated; multi-stakeholder field management; traditional knowledge.
• Innovating: Science based monitoring; ecosystem services documented; climate change objectives, particularly Adaptation; capacity building activities; co-management practices; diversified funding sources.
• Exemplary management e.g. in professional fishing, diving, sport fishing.
• Other: existing monitoring system; good enforcement records; social acceptance; continuity; adaptability or upscaling potential.
• Collaborations between Conventions.
• And in general, responding to, and integrating, as many of these criteria as possible.

Other than the Questionnaires, the main sources for the identification of case studies are the Steering Committee member organizations, the MPA Status Assessment 2016, the WWF-MedPO, the IUCN-Med Office, and the regional experts.

Concerning IUCN, the “Nature Based Solutions” initiative (launched at the last World Parks Congress in Sydney) is also registering innovative case studies; these are showcased in the “Panorama” website (http://panorama.solutions). In the Mediterranean basin, the IUCN-Med Office is ready to launch a process to identify and select cases. The criteria they are using to identify the case studies differ from ours, being more focused on ecosystem based solutions, rather than in all of the Roadmap objectives; its timing is a bit delayed in respect to ours. Anyway, from the start the consultant has kept coordination with this initiative.

3.8. Other objectives (3): Climate Change

The synergies of the Roadmap with the UNFCCC should be sought and underlined as a key opportunity for Mediterranean MPAs. In the past few years the political relevance of climate change has mounted and consolidated (Paris 2015), fostering, between other, the strong development of mechanisms to finance mitigation and adaptation activities in developing countries. Regionally, the EU in particular claims to be one of the leading Parties.

The role of MPAs in combating the effects of climate change has been already discussed in a dedicated MedPAN and RAC/SPA workshop (2014), pointing out their value as biodiversity refuges, climate change sentinels (research and control samples), life examples of ecological adaptation (adaptive management plans), and of the much needed coherence (shared governance), public awareness, and capacity building (as climate change “schools”).

The importance of MPAs for CC mitigation has also been underlined. The UN REDD+ programme is leading CO2 compensations worldwide; the concept includes “avoided deforestation”, to which the standing seagrass meadows may apply as carbon sinks for CC mitigation. IUCN (2016) has also launched a document on mitigation from coastal wetlands. Other international opportunities, as Blue Carbon, also need to be assessed.
Sources of information were the Questionnaires; the UNFCC and its present developments, mainly in COP 21 and the last IPCC panel Meeting; the UN Blue Carbon initiative which can support the establishment and management of MPAs; the Monaco Blue Initiative; the Blue Growth and the Blue Economy Ministerial declaration, both from the EU; the Blue Solutions (IUCN); the IUCN Mediterranean Guide on CC and their new marine initiative on the topic; and Mediterranean experiences such as Blue4Good (Vertigo Lab), the LIFEBlue Natura in Andalucia, the CC early detection and monitoring systems (TMedNetwork in MPAs), the MedBioNet campaign with the Conservatoire du Littoral, the MedPAN small project in Montenegro, the web search, and any other as recommended by the SC.

3.9. Other objectives (5): Tangier Declaration.

Based on the recommendations from the Evaluation report, and the comments received from the Evaluation Steering Committee, the Tangier Declaration will be drafted. As stated in the ToR “it is not meant to replace the Antalya Declaration, but to complement and adjust it with the aim of reaching the 2020 targets”.

Following the analysis of international initiatives and opportunities -as detailed in the previous sections- the Declaration will open to be in line with relevant strategic orientations beyond the CBD, mostly UNFCCC, MSSD, MPA Roadmap adopted by Barcelona Convention COP 19, the GFCM Mid-term Strategy 2017-2020, Ramsar/MedWet Framework 2016-2030, Mediterranean EBSAs, ACCOBAMS MOP 6. The final version of the Tangier Declaration will be prepared during the Forum sessions in Tangier.

The final version of the “Evaluation of the 2012 roadmap and cartography of projects” will be ready for its presentation in Tangier, including a PowerPoint presentation.
4. RESULTS ON THE SELECTION OF CASE STUDIES

The full results on the case studies were enclosed to RAC/SPA and MedPAN on July 4th and presented to the Forum Steering Committee in Marseille (July 12th 2016). Here a short summary is presented:

Through the questionnaires, 145 proposals of case studies were received, showing a relative good balance by:

- Mediterranean subregions: North Africa (21), East Med (21), UE (57)
- Roadmap Strategic Objective: 1(34) / 2(36) / 3(7) / 4(7). This difference is understandable as SO1 and SO2 are the most accessible Objectives. In addition, we received two extra cases for “Climate Change”.
- Respondent type: IGO (8); GO (34); NGO (22); Science (55); Consultancy (15).

Another 85 cases were pre-identified and proposed by the Steering Committee members, by RAC/SPA and/or MedPAN, totalling 230 case studies.

4.1. Criteria for the selection of the case studies:

The criteria for the selection of the case studies were discussed in depth with the technical teams of RAC/SPA and MedPAN, and then discussed and finally approved by the SC.

First screening from 230 to 130 - The eliminated cases were:

- Dated before 2012
- Not in MPAs (e.g. general fisheries policies)
- Projects planned or just starting
- Too general to be considered a concrete case: may have just been ideas or recommendations
- Basic information on the case study was missing.

Second screening from 130 to 90

- 32 repeated by different respondents were consolidated into 10.
- Out of 38 proposals from 3 NGOs, only 10 remain: some were either duplicating, other were proposals in the same sites, or either non-applicant.

Final screening from 90 to 55

The list of 90 was arranged by Strategic Objective and by Topic (Annex 4) and the following criteria applied (max 14 points):

- Complying with the 4 different Strategic Objectives: max 8 points
- Climate change bonus (+2)
- Replicability: max 2 points
  - 0 if very specific and difficult to replicate
  - 1 if potentially replicable
  - 2 if replication is effective or an objective
- Geographic bonus: France = 0 / EU (except France) = 1 / non EU, or Med = 2

See Table 1, ahead

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>CASE STUDY SELECTION CRITERIA</th>
<th>WHY?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roadmap Obj 1. NEW MPAs + SCIENCE + MONITORING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New MPAs and/or Ecological relevance</td>
<td>Healthy ecosystem; improves coverage, representativity, connectivity, ABNJ...</td>
<td></td>
</tr>
<tr>
<td>Improves planning &amp; monitoring systems</td>
<td>Data bases (biology, ecosystems, socio-economic), Monitoring systems, MPA networks and system planning</td>
<td></td>
</tr>
<tr>
<td><strong>Roadmap Obj 2 MANAGEMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance and capacity example</td>
<td>Improved governance and capacities, specially in weak governance situations; good management planning and adaptation; participatory practices</td>
<td></td>
</tr>
<tr>
<td>Improves ONE TOPIC: Enforcement, sustainable Tourism, Fishing...</td>
<td>Highlight concrete best practices</td>
<td></td>
</tr>
<tr>
<td>Comprehensive</td>
<td>More than one, or several, topics integrated</td>
<td></td>
</tr>
<tr>
<td><strong>Roadmap Obj 3 INTEGRATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-MPA actors on board</td>
<td>Non-MPA institutions and/or economic sectors integrated (through MSP, zoning, agreements, shared management tasks, new taxes, subsidies, ecosystem valuations...)</td>
<td></td>
</tr>
<tr>
<td>Social acceptance and relevance</td>
<td>Solutions to social demands, social-cultural integration, communications, employment...</td>
<td></td>
</tr>
<tr>
<td><strong>Roadmap Obj 4 SUSTAINABLE FUNDING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improves funding</td>
<td>New funding opportunities, diversification of sources...</td>
<td></td>
</tr>
<tr>
<td>Capacity building and Networking</td>
<td>Improves staff and management capacities in other MPAs, either National or Regional levels</td>
<td></td>
</tr>
</tbody>
</table>
4.2. Final selection

Being 14 points the maximum score, this exercise found that around 15% of the cases scored >10 and other 15% <5. The first were selected and the latter were initially discarded. However, 70% of the cases remained with intermediate scores 5 to 9. Here a more human arbitration was used to balance:

- Networking partners
- Good examples for just ONE Strategic Objective
- Balancing topics
- Balancing countries and recognising the efforts done in a context of funding, capacity, or governance weaknesses.

Finally, there were a few cases acknowledging the whole management of one particular MPA (e.g. in Albania, Algeria, Tunisia).

The country representation within the 55 pre-selected cases is:

- Regional or Subregional cases → 25 cases
- EU protagonism → 5 cases
- Global → 3 cases
- National and Local → 22 cases from 14 countries

Countries with more than 1 case: Albania (2), Egypt (2), France (2), Morocco (3), Tunisia (2).

Note that some other relevant case studies may still be considered in adjusting cases and examples into the Forum sessions. The final list of selected case studies is found in Annex 4, an Excel table including the 55 selected cases, plus other 25 as second priority which, if needed, may still be used as substitutors. A second sheet in the same Annex presents the remaining 50 cases which were discarded during the selection process.

5. DATA TREATMENT AND RELIABILITY

5.1. Answers to the questionnaires

167 questionnaire responses were received from all the 21 countries, plus the EC and other international and local organizations (National Q = 93; Regional Q = 74). Additionally, 75 questionnaires were used from the database of the “MPA Status 2016 survey” in prep. by MedPAN, RAC/SPA and other partners, as these represent the local level perceptions which may be added to some specific Roadmap assessments.

About the “Green List” of 40 respondents, 31 answers were received (19 Nat, 12 Reg, including 2 answers consolidated by their institutional colleagues); 3 failed respondents were out of office during the period, while another 6 did not provide any answer even after insisting.
Noteworthy is that 48% of the National responses came from North Africa (plus 32% from the EU and 20% from the Eastern Mediterranean countries). The countries with higher number of responses were France (32), Tunisia (26), Spain (14), Algeria (11), Turkey (9) and Albania (7).

5.2. Sample size

167 questionnaire responses were received (National Q = 93; Regional Q = 74). Additionally, 75 questionnaires were used from the database of the “MPA Status 2016” survey in prep. by MedPAN, RAC/SPA and other partners. In total, 242 questionnaires were computed.

However, we found that the Local questionnaires were biassed to the best MPAs, 75 answers from which 63 were coming from EU countries. Because of this bias, the results from the Local questionnaires were not computed for Regional results, nor when comparing progress between countries; their information was added, however, to reinforce some of the Subregional analyses on:

- The Roadmap progress by subregion (the 4 Strategic Objectives);
- The most advanced and most delayed Roadmap Actions at the Mediterranean level.

5.3. Scoring the responses

Respondents were asked to score most of the questions in the range 0-3, plus the option “I don’t know”. When the answer was either 2 or 3, the respondents were asked to explain why, in a short sentence, and/or adding a reference. The Consultant reviewed one by one all of these answers to check the scoring adequacy; most were reasonably scored, but a few needed to be adjusted against the corresponding text explanations or attached documents.

Other questions were to be answered as YES/NO/I don’t know. To obtain a comparable data set, the answer NO was scored as “cero”, and YES as 1-3, after checking the explanations attached by the respondents. The Consultant reviewed all the YES references and assigned -to his subjective but expert consideration- whether the YES deserved a 1, 2 or even a 3.

All the “I don’t know” responses were counted, just to have an estimate of the knowledge level about each variable, but were thereafter considered as null answers for every purpose. The results, in mean 0-3 values (see Excel tables in Annex 5) were transformed into percentage values (being 3=100%) for the purposes of building graphics.

5.4. Roadmap knowledge

The general knowledge of the respondents about the Roadmap was evaluated based on two different variables; first, they were directly asked to rank it 0-3 (see scoring options in footnote 2). As a result, the mean Roadmap knowledge for the Region is of 60%, with very small

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2 0 = I ignored / 1= I know some details but haven’t really used it / 2 = I have an average knowledge / 3= I have a good knowledge and familiarity
subregional differences and also small differences between the national and the regional (experts) respondents (Graph.1).

Counting the responses “I don’t know” informs about the general knowledge for each Strategic Objective (Graphic 2a). The respondents were better informed about the progress in Str.Obj. 1 (Science) and 2 (Management), than they were in Str.Objs. 3 (Integration) and 4 (Funding).

The same data sorted by subregions shows that the regional experts were not necessarily better informed than the national respondents.

Following the same idea, we analysed the roadmap Actions for which there was a higher and a smaller knowledge (Graphic 2c n=2795), finding that the Actions better and worse known are, at the national and regional levels (Table 2):

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>BETTER KNOWN RESULTS</th>
<th>WORSLY KNOWN RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIONAL LEVEL</td>
<td>3.14. Blue Economy</td>
<td>1.3. ABNJ</td>
</tr>
<tr>
<td></td>
<td>4.3. Training for finance</td>
<td>2.13. Communications</td>
</tr>
<tr>
<td>REGIONAL LEVEL</td>
<td>4.9. Trust Funds</td>
<td>1.11/13. ABNJ</td>
</tr>
<tr>
<td></td>
<td>3.18. Blue Economy</td>
<td>2.16. Lessons learned</td>
</tr>
</tbody>
</table>
The knowledge about the Results (previous Table 2 and Graph 2c) is independent of the progress achieved for these same Actions.

5.5. Reliability

Some cross checks were performed to assess the reliability of the answers received from the different countries and different groups of respondents.

a) The most “optimistic” answers came from the International Governmental Organizations, ranking general progress in 29.1% in contrast with the NGOs who assigned a general progress of just 16.4%. The other 3 groups (Science, Consultants and Governmental Organizations) ranked similarly to each other (Graph 3a, n = 2292).
b) The standard deviation in the scoring of all answers, which indicates the variability of the responses, was by far greater in the EU countries, indicating the different perception of progress within the different EU countries (Graph 3b).

![Graph 3b. Standard deviation of scores in the 3 subregions](image)

3b. Standard deviation of scores in the 3 subregions

c) Finally, the standard deviation within each country shows the variability of the answers between different responses from the same country. Remarkable facts are Malta being first and doubling the next country (Albania, however with 7 responses), while France (32) Tunisia (26) and Algeria (11), even having a relatively large number of responded questionnaires, show a good rate of coincidence between the different respondents. Other 9 countries, on the right side of Graphic 3c, do not show any variance as there is only one questionnaire from each of them.

![Graph 3c. Standard deviation within country responses](image)

3c. Standard deviation within country responses  n=6260
6. RESULTS ON THE ROADMAP PROGRESS

Most of the analysis was done either by Strategic Objective, or by Subregion; in some cases we analysed the development of the Roadmap by country, but only by Strategic Objective, or else, underlining the Actions which were more developed or more delayed. Most intermediate results about specific Actions are not brought to graphics or to the general text, as there are 66 Actions and 21 countries (= 1386 variables). This detailed information needs to be sought for in Annex 6 or in the enclosed Excel sheets.

6.1. Limitations and reliability of the data sets

The sample size is convincing, 240 questionnaires received from the 21 countries, plus the EU and the main international organizations. However, the reliability of the data may be limiting some quantitative conclusions:

- Many of the 66 Roadmap Actions are generalistic and may overlap with each other. Particularly at the Regional and National levels there are many qualitative descriptors, not quantifiable and hard to monitor categorical variables; or just recommendations for improved practice. Some outputs are difficult to assess because of their generalistic character, pertaining several topics (e.g. 3.11. Where possible and appropriate encourage the equitable sharing of social and economic benefits); or may be difficult to weigh and compare with the very concrete nature of other Actions (e.g. 4.14. Encourage the creation of income-generating activities based on mobile technology to inform and guide the public).

- The Roadmap only provides some indicators of progress, so for the purposes of this mid-term evaluation other were tailored responding to its 4 Strategic Objectives and 66 Actions. Some results were found in literature (review of 107 relevant publications, data bases, international reports and grey literature from the past 4 years, Annex 3), but almost 65% of all the Actions did not find an answer within these materials. Thus, at the very beginning of this Evaluation, and based on the expertise of the technical team and Steering Committee members, the many heterogeneous Actions were reduced into a limited number of indicators and questions that could provide a reliable basis for the assessment of progress.

- International Governmental Organizations ranked the general Roadmap progress 56% higher than the less optimistic NGOs (while national organizations, scientists and consultants ranked in between). Also, the standard deviation analyses found differences between answers from the same country, as discussed ahead.
In spite of the methodological limitations, all together the present assessment is based on a broad dataset and shows coherence between the results from literature and questionnaires. Although the quantitative results must be taken as estimates, they clearly show the tendencies and allow for an acceptable objectivity in interpreting the Roadmap progress.

6.2. Progress on Strategic Objective 1 (New MPAs, Science, Monitoring)

The SO-1 gets the best results, with a regional mean of 34.8% (Graphic 4a). It must be considered that these results are loaded by some of the variables with the lowest progress in the whole Roadmap: “Connectivity” (Actions 1.3. / 1.8. / 1.9.) and “Areas beyond national jurisdiction” (Actions 1.11. and 1.13.),

![Graph 4a. Objective 1: Progress by sub-Region](image)

The most advanced Roadmap Actions in Strategic Objective 1 are:

- 1.5. The establishment of new MPAs (57% progress),
- 1.3. Biological datasets (43% progress), and
- 1.4. Ecosystem Gap analyses (34%).

The most relevant result for the period 2012-2016 is a 57% growth in the cumulative coverage of recorded MPAs and OECMs. This raises the overall marine surface under a conservation designation from 4.56% in 2012 to 7.14% in 2016 (Table 3). It is to be noted that some designations were not analysed in 2012 yet some sites were designated long before 2012; as such, the increase in coverage is not all due to the designation of new sites between 2012 and 2016.

To reach the coverage target of 10% MPAs and OECMs by 2020, still a 2.86% is missing (about 71 900 km²). If the rate of protected areas declaration during the period 2012-2016 continues another four years, the 10% MPA and OECM coverage part of the Aichi target 11 may be reached by 2020 (not the qualitative part of the target “effectively and equitably managed”).
These results are indicative and need be taken with care, for a number of reasons:

- The data are still preliminary, belonging to the first drafts of the 2016 “Status of MPAs in the Mediterranean”, in preparation by MedPAN, RAC/SPA and other partners, and due for early 2017;
- The extraordinary growth of the Natura 2000 marine network in the EU country waters (about 43 630 km² were designated since 2012) accounts for over 40% of the new MPA & OECM coverage;
- The Pelagos Sanctuary for marine mammals, subject to soft regulations, accounts for half of the whole surface covered by designated areas.

<table>
<thead>
<tr>
<th>TABLE 3. Regional MPA and OECM coverage preliminary data, MPA Status 2016 (MedPAN and RAC/SPA 2017 in prep)</th>
<th>2008</th>
<th>2012</th>
<th>2016</th>
<th>% increase in coverage³</th>
</tr>
</thead>
<tbody>
<tr>
<td>National MPAs</td>
<td>0.40%</td>
<td>1.08%</td>
<td>1.60%</td>
<td>+48%</td>
</tr>
<tr>
<td>No Take Zones (within MPAs)</td>
<td>0.01%</td>
<td>0.01%</td>
<td>0.04%</td>
<td>+300%</td>
</tr>
<tr>
<td>PMIBB (Int’l Marine Park, Strait of Bonifacio)</td>
<td>-</td>
<td>-</td>
<td>0.07%</td>
<td>-</td>
</tr>
<tr>
<td>Natura 2000 marine network</td>
<td>-</td>
<td>1.18</td>
<td>2.37</td>
<td>+101%</td>
</tr>
<tr>
<td>FRAs targeting biodiversity conservation objectives (Fisheries Restricted Areas, GFCM)</td>
<td>-</td>
<td>-0.62⁴</td>
<td>0.62%</td>
<td>-</td>
</tr>
<tr>
<td>PSSA (Particularly Sensitive Marine Areas)</td>
<td>-</td>
<td>-</td>
<td>0.44%</td>
<td>-</td>
</tr>
<tr>
<td>Pelagos Sanctuary for cetaceans</td>
<td>3.47%</td>
<td>3.47%</td>
<td>3.47%</td>
<td>-</td>
</tr>
<tr>
<td>Ramsar sites</td>
<td>-</td>
<td>-</td>
<td>0.13%</td>
<td>-</td>
</tr>
<tr>
<td>World Heritage sites</td>
<td>-</td>
<td>-</td>
<td>0.01%</td>
<td>-</td>
</tr>
<tr>
<td>Biosphere Reserves</td>
<td>-</td>
<td>-</td>
<td>0.06%</td>
<td>-</td>
</tr>
<tr>
<td>SPAMIs</td>
<td>-</td>
<td>-</td>
<td>3.57%</td>
<td>-</td>
</tr>
<tr>
<td>All conservation driven designations</td>
<td>3.87%</td>
<td>4.56%</td>
<td>7.14%</td>
<td>+57%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other fisheries driven designations</th>
<th>2012</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRAs targeting exploited fish stocks (GFCM)</td>
<td>-</td>
<td>0.08%</td>
</tr>
<tr>
<td>FRA banning trawling beyond 1000m depth</td>
<td>-</td>
<td>58.33%</td>
</tr>
<tr>
<td>National fisheries restricted areas (permanent)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

³ Percentage increase in coverage based on MAPAMED content between 2012 and 2016
⁴ In 2012, the 4 FRAs were considered in the figures. However, one of them (Gulf du Lion) has been removed from 2016 data because it specifically targets the management of exploited fish stocks.
The total coverages and percentages in Table 3 take account of overlaps between different conservation designations (eg. an MPA can also be a Natura 2000 site).

Independently of MPAs and “Other effective area-based conservation measures” (OECMs) in Table 3 we display “Other fisheries driven designations” in the Mediterranean Sea; for example, the overall area subject to fishing restrictions has increased since 2012 by a 75% as per recent GFCM decisions; nonetheless, these new FRAs are not considered here as MPAs or OECMs because their objectives aim at the recovery or upkeep of exploited species of fish that are commercially extracted as food resources (ie. and therefore not for conservation of biodiversity, even if there are de facto benefits). Neither can the areas declared as « 1000m deep trawling ban », covering a 58.33 % of the Mediterranean Sea, be considered an MPA or OECM, because while they will protect deep sea features, all other biodiversity in the water column and in any deeper sea bottoms are not protected, while all other pressures are allowed, which leaves a lot of room for degradation.

Concerning strict conservation areas, such as “No-go”, “No-take” or “No-fishing” (usually called NTZ), the very last estimate of coverage (MedPAN and RAC/SPA, 2017 in prep) provides an area of 975.68 km², that is to say 0.04 % of the Mediterranean Sea.

The most delayed Roadmap Actions in SO-1 concern 1.3. Connectivity; 1.3. and 1.4. Representativity; and 1.11. and 1.14. Areas Beyond National Jurisdiction. The new MPAs have not necessarily been established in unrepresented marine ecosystems, except for sites under the Natura 2000 network. While the knowledge of ecological connectivity between MPAs is still in its first methodological steps and being discussed at the scientific level (otolith chemistry, genetics, climate change scenarios…); a literature review is in progress by MedPAN.

Concerning the progress done by country, again, some countries more delayed 5 years ago, during the period 2012-2016 have done the best efforts to catch up with Science, Monitoring, and the creation of new MPAs, e.g. Albania, Algeria, Malta and Morocco (Graphic 4b).

The progress achieved for other Actions by each country can be checked in Annex 6: Improved legal framework / National MPA systems / New MPAs / Monitoring systems / Sentinels of climate change. Plus the local data on Improved Legal basis / and Baseline datasets.
6.3. Progress on Strategic Objective 2 *(Effective MPA management)*

Overall, the SO-2 appears to be the second most advanced (28.9%), after SO-1 (Graphic 5a). This regional mean of 28.9% is loaded by the lower appreciation of progress by the regional experts (10.2%). Good news is that the 3 subregions got almost the same progress on MPA management, with North Africa slightly ahead (30.7%).

Concerning progress on specific Actions, the following may be noted (Graphic 5b, n=816):

- The highest scores belong to 2.12. *Improved legal and institutional frameworks*; 2.13. *Communications at the national level*; and 2.11. *Capacity building at the National level*.

- The most delayed Actions are those related to 2.18. *Capacity building activities at the regional level*, and 2.16. on *capitalizing lessons learnt* at the Regional level.

Following the national questionnaires, progress on “management plans” would be of around 18%. Independently, the local assessment (MedPAN and RAC/SPA 2017 *in prep*) shows that 53% of the 80 MPAs answering the questionnaires have a management plan which is at least partially implemented; the local data may not be representative of the regional situation as local answers come from the 80 presumably most advanced MPAs in the Mediterranean.
Other Roadmap Actions missing from Graphic 5b are in Annex 6: National assessments / Surveillance improved / More staff / Improved finance. Also the local data on Management Plans endorsed / Participation quality / Surveillance / Enough staff / Monitoring activities.

When considering progress at the country level (Graphic 5c, n= 747) it is again noteworthy that some countries which were delayed 5 years ago, have done important efforts on MPA management during the past four years, e.g. Albania, Algeria, Cyprus, Malta and Tunisia.

6.4. Progress on Strategic Objective 3 (MPA integration)

Following the questionnaires, we may consider that the Strategic Objective 3 is also relatively well advanced (28.1%) (Graphic 6a). The EU shows more progress (31.5%). Again the Mediterranean mean is loaded by the lower appreciation of progress by the regional experts (18.4%).

Concerning progress on specific Actions, the following may be noted (Graphic 6b, n=927):
- The highest score belongs to Action 3.9. “Integration of policies”. Also the Assessment of social benefits and of Ecosystem services from MPAs had a reasonable progress.
- Most delayed are those Actions concerning the integration of MPAs into economic policies, e.g. 3.14. The consideration of MPAs into the Blue Economy concept at the national level, and in consequence, the development of 3.13. New incentives for MPAs, such as subsidies or taxation.

At the country level (Graphic 6c, n= 747) once again the same countries which were delayed 5 years ago, have done important efforts on MPA integration during the past four years: Albania, Algeria, Malta, Morocco and Tunisia. Also Croatia is always between the countries having achieved more progress during the period 2012-2016, together with France.

The progress achieved by each country on the Actions which do not appear in Graphic 6b can be checked in Annex 1: Institutional Agreements / MPAs in MSP and ICZM / Governance improved / MPAs in Nat’l Adaptation Strategy; plus the local data on MPAs considered in
local planning / Zoning / Integration of socioeconomic activities. However, the Local data may not be representative of the Mediterranean situation as these answers come from the 75 presumably most advanced MPAs in the Region.

6.5. Progress on Strategic Objective 4 (MPA sustainable funding)

The SO-4 is overall the less developed (15.2%) (Graphic 7a). The 3 subregions got almost the same progress on MPA sustainable funding, again with North Africa slightly ahead (17%); once again the Mediterranean mean is loaded by the lower appreciation of progress by the regional experts (12.5%); when not considering this input, but that from the National questionnaires and the MPA managers at the local level (Graph 7b) the Mediterranean mean raises to 17.7%.

Even this one may seem a modest progress, consider that only four years ago, during the Roadmap preparation Forum in Antalya (2012) a first assessment of the weak financial situation in the Mediterranean MPAs was presented by the organizers (through this same Consultant) as a first appeal for the reaction of the participant organizations to this crucial issue. It is noteworthy that during this period the basements for future sustainable funding of MPAs have been set, mostly the detailed Regional assessment of the financing situation (MedPAN, RAC/SPA, WWF 2015) and the establishment of the Mediterranean trust fund for MPAs (2013) which has later received support from the Barcelona Convention COP19 (2016).

At the country level (Graphic 7b) the scores are topped by Egypt, because of its national policies on environmental taxation; and Croatia, due to its business planning and self-financing in MPAs.
Again some countries which were delayed have done important efforts on MPA sustainable funding during the past four years: Albania, Algeria, Malta and Tunisia. Croatia and France are between the countries having achieved more progress during the period 2012-2016.

Concerning progress on specific Actions, the following in Graphic 7c may be noted:

The progress achieved on the other Actions in SO-4 can be checked in Annex 6: A National MPA financing strategy / and at local level, the diversity of funding sources. There has been quite a progress in Actions 4.4. Assessing national financing mechanisms and 4.5. and 4.10 on developing innovative financing mechanisms, both at the national and regional levels, including the new Mediterranean Trust Fund (Action 4.9.) put in place by France, Monaco and Tunisia.
6.6. General Roadmap progress at the Mediterranean level

Based on the results from the questionnaires, the overall Mediterranean progress is, in 2016, of 26.9 %. As already seen, the best score responds to Strategic Objective 1 (35%).

These Regional results need be taken with care given that:

- As a mid-term evaluation, the maximum progress expected would be of 50%.
- The first stages of any process are slower and yield proportionally lower results.
- In processes including sustainable development and cooperation, the plans and programmes, strategies, or international targets, are worded over desired long term objectives, aimed at pointing to the right direction, but are very seldom, if ever, completely achieved. A very close example is the 10% MPA coverage target, initially set for 2012, and later and more realistically delayed to 2020. Also, AID programmes against poverty seldom get over a 30% of real results, which is considered an acceptable outcome in such complex situations; moreover in the already complex Mediterranean context.

6.7. Progress at the country level

The general progress by country (Graph.8b) shows some countries with a better progress in the period 2012-2016, however were between the most delayed before this period, such as Albania, Algeria, Malta and Morocco.
The 10 most developed and the 10 less developed Actions for the whole Mediterranean are shown in the following graphics (9a and 9b):
The less developed Actions are mostly related to Strategic Objective 4 “Sustainable Funding”, particularly 4.3. National training for sustainable funding, 4.13. Donor coordination, and 4.2. Diversification of local funds (Graphic 9b):

Five countries (Table 5 in the next page) have progressed over 2/3 of the maximum expected results (which would be of 50% by 2016).

It must be underlined that countries which used to be delayed before 2012, have raised to the top ranking during the last four year period, most significantly the non-EU countries of Algeria, Tunisia, Egypt and to a lesser extent also Morocco, in Northern Africa; and also Albania in the Eastern Mediterranean, together with the efforts done by Montenegro and Bosnia & Herzegovina in the first stages establishing MPAs.

Within the EU countries the performance of Malta is very remarkable, topping the regional scores in MPA progress during the last 4 years, and it is most noteworthy that other EU countries which were already advanced have continued progressing significantly, as it is the case of France, Italy and Croatia.

Other Mediterranean countries, nowadays under extremely conflicting situations, such as Syria, Libya and the Palestinian Territories have also shown progress in MPA which is very remarkable.

The specific progress of each country for each Roadmap Action can be found both in Annex 6 and in the general Excel datasets.
<table>
<thead>
<tr>
<th>TABLE 5. Progress by country and Roadmap Strategic Objective (in %)</th>
<th>% SO-1</th>
<th>% SO-2</th>
<th>% SO-3</th>
<th>% SO-4</th>
<th>% Roadmap Progress</th>
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Finally, we segregated the Roadmap Actions which in 2012 were planned to be accomplished by 2015, 2016, and 2017. Table 6 displays these 14 Actions against the countries:

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</table>

The results are similar to the general results foreseen to 2020, with slightly more progress in the Actions to 2015-16-17 than to those for 2020, and also very similar ranking by countries (Graph 10a):
Regardless of the countries, the specific Actions planned for 2015-16-17 which had a better progress are: MPA Zoning / the data sets on habitats and species / the improvement of the legal and institutional frameworks for MPAs / the integration of policies at the national level / the improvement of the MPA staff skills, and / the participatory practices (Graph 10b):

10b. The 6 more advanced Actions planned for 2015-16-17

General Regional mean 28.5% (n=2694)
# PART II

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10. Assessment of donors and funding opportunities ............... 73
7. INFLUENCE AND SYNERGIES OF THE ROADMAP

7.1. Knowledge of Roadmap

The questionnaires asked the respondents to score their personal knowledge of the Roadmap in 0, 1, 2, or 3. The result is of 60% knowledge, with very small subregional differences. The respondents were better informed about the progress in Str.Obj. 1 (Science) and 2 (Management), than they were in Str.Objs. 3 (Integration) and 4 (Funding).

A Google search for “Mediterranean Forum MPA Roadmap 2012-2020” had 4,570 results but when mentioning the Aichi target as “Mediterranean MPA Aichi target 2020” it had 56,700 results, 12 times as much.

7.2. Mentions in other Conventions or Action Plans

There are a few specific mentions and recognitions to the Antalya MPA Roadmap 2012-2020:

- The Int’l Marine Protected Areas Congress (IMPAC3, France, Oct. 2013) workshop on “Regional MPA networks contribution to Aichi Target: Linking Mediterranean Experiences with Other Regional Seas” organized by MedPAN with CBD, RAC/SPA, IUCN Med, Adriapan, WWF, Conservatoire du Littoral, APAL, French MPA Agency, Union for the Mediterranean, Plan Bleu, Center for Mediterranean Integration, ACCOBAMS, GFCM. The recommendations from this task force almost match the Strategic Objectives and Actions in the Antalya MPA Roadmap (see reference 65).
- The Mediterranean Regional Workshop to “Facilitate the Description of Ecologically or Biologically Significant marine Areas (EBSAs)” (Malaga, Spain, April 2014);
- The 6th IUCN World Parks Congress (Sidney, Australia, November 2014) (ref.69);
- The Barcelona Convention “Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean” (ref.5) which almost completely matches the Antalya MPA Roadmap 2012-2020 “and even slightly improves it, as it also takes into account the outcomes of relevant initiatives at global and regional levels, in particular the decisions adopted by international (e.g. CBD, Ramsar, UNCLOS, UNESCO) and regional (e.g. ACCOBAMS, GFCM)” (taken from Rais and Nottarbartolo, 2015) (ref.7).
- In turn, the Barcelona Convention Roadmap is recalled by the UNEP/MAP Mid-term Strategy 2016-2021 (ref.10).
- The IMPANA (Int’l MPA Network, from IUCN), presented as “the roadmap for marine protected areas used in the Global Marine and Polar Programme of IUCN”, however does not mention the Mediterranean Roadmap (ref.68).
7.3. General synergies with the main international initiatives

The coincidences on the Roadmap Vision and of its 4 Strategic Objectives has been sought for in most of the regional and international initiatives dealing with MPA establishment, management, integration and funding. Annex 7 presents a summarized Table-Grid comparing all these items for the United Nations system, the Barcelona Convention developments, other Regional Seas Conventions and networks, the European Union Directives and Strategies, and other important international conventions, agreements and actors such as ACCOBAMS, RAMSAR, IUCN and the main international and regional environmental NGOs. A summary of Annex 7, in a color code (without texts) is presented in Table 7.

The coincidence in vision and strategic objectives is complete with the Barcelona Convention Roadmap, and is almost full (e.g. 70-80%) with:

- The United Nations Sustainable Development Goal 14; and the UN Ocean Sanctuary Alliance initiative;
- The UNEP/MAP Mid Term Strategy 2016-2021
- The Convention on Biological Diversity EBSAs; and the SOI Action Plan 2015-2020
- Other Regional Seas MPA action plans (mostly Black Sea and Caribbean)
- The UfM Blue Economy Ministerial Declaration
- The EUSAIR Adriatic-Ionian Blue Growth programme
- IUCN’s Promise of Sydney; and IMPANA (International MPA Network)
- WWF’s marine policies and strategies.

Other international initiatives also have a strong coincidence, but may have not ranked so high in our exercise given there are no objectives specific enough (or we have not found them) to be compared and added; these are initiatives such as ACCOBAMS, other Regional Seas action plans, the UNEP/MAP MSSD 2016-2025, GFCM/FAO and a few other as shown in Table 7.

However, the Vision (or the General Objective) in most of these initiatives remain comparable. In fact, overall, the highest matching occurs with the Roadmap Vision (68% taking the whole international sample as a reference, which is really high).

Table 7 summarizes the specific synergies for most of the actors and initiatives. Further details can be found in Annex 7. Table 7 allows a scoring exercise to rank the coincidence of our Roadmap with the specific objectives in other international initiatives:

- Overall we find a 60% matching for SO-1, which means that the overall international community highly shares the Aichi target;
- A sound and effective management for the MPA systems is also shared by a very high number of initiatives (over 50%);
- Coincidence is limited as the strategic objectives become more specific to the concrete MPA needs (integration and funding), probably because some of these international initiatives are not as detailed or tailored to the specific Mediterranean needs.
- The synergies with the Roadmap between international specialised organizations such as MedPAN, WWF, Birdlife, Oceana and Greenpeace are almost complete (refs.74-87).
Table 7: Coindicence of the 2012-2020 Roadmap with the specific objectives in other international initiatives

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<th>Initiative</th>
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<td>MSPD Spatial Planning</td>
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Score: max 81 58 56 52 33 28
Specific MPA objectives with almost complete coincidence = 3

** Coincident objectives, but non-specific for MPAs = 2

Strong synergies but not specific to the field of environment = 1

7.4. The Barcelona Convention system

a) The Barcelona Convention COP 19 Decision “Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean” (ref.5).

Completely matches the Antalya Roadmap 2012-2020 and even slightly improves it. The almost complete coincidence between both MPA Roadmaps in their Vision, Strategic Objectives, and even Actions, can be consulted in Annex 7 (and in Reference 5 in Annex 3, a summary of which follows):

SO-1 is still more concrete when stating to “Strengthen networks of protected areas at national and Mediterranean levels, including in the high seas and in ABNJ”, and to “Identify and propose area-based conservation / management measures or candidate MPAs for listing in the regionally and globally recognized area-based management classifications, including, in particular, SPAMIs, GFCM Fisheries Restricted Areas (FRAs), UNESCO’s Biosphere Reserves and World Heritage Sites”. As considered in Rais and Nottarbartolo di Sciara (2016; reference 8) the Roadmap (Barcelona Convention) includes 4 novel concepts:

- The addition of the areas of particular importance for ecosystem services (EBSAs-SPAMIs);
- The notion of equity;
- The notion of “other effective area-based conservation measures”; and
- The notion of “integration into the wider landscapes and seascapes”.

The same authors (ref.8) consider that “The Barcelona Convention MPA Roadmap is not intended as a new binding document under the Convention, but it rather includes recommended actions that are fully in line with the orientations set in the main strategic documents of the MAP system”.

b) The UNEP/MAP Mid-Term Strategy 2016-2021 (ref.10).

Its Vision builds on the same concepts as the Antalya Roadmap, although not specifically mentioning MPAs: “A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse contributing to sustainable development for the benefit of present and future generations”. However, its “Biodiversity and Ecosystems” core theme focuses on supporting the implementation of “Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean Sea including the High Sea”, and in supporting the Barcelona Convention “Roadmap for a Comprehensive, Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean” in close collaboration with competent regional and national organisations as well as NGOs and relevant
stakeholders, specifically indicating a list of potential partners (all of them considered in the present assessment).

The UNEP/MAP MTS 2016-2021 also comes to detail in support to MPAs as “To Protect, preserve and manage in a sustainable and environmentally sound way areas of particular natural or cultural value notably by the establishment of specially protected areas”, with some concrete Actions as close to the Roadmap as “3.5.1. Capacity management of marine and coastal protected areas, to the conservation and monitoring of endangered and threatened coastal and marine species and key habitats, and monitoring issues dealing with climate change and biodiversity developed and implemented, including pilot MPA/SPAMIs establishment and implementation” and “3.4. Monitoring, inventory and assessment of biodiversity with focus on endangered and threatened species, non-indigenous species and key habitats”. Other Objectives about governance also resemble those in the Roadmap:

- To strengthen capacity for the implementation of and compliance with the Barcelona Convention, its Protocols and the adopted Strategies and Action Plans;
- To strengthen synergies, complementarities, and collaboration among international and regional partners and organizations in the Mediterranean region;
- To enhance stakeholders' participation and outreach;
- To mobilize resources

c) Recent Barcelona Convention developments (refs. 9, 12, 13)

- The Mediterranean Strategy for Sustainable Development 2016-2025 “Investing in environmental sustainability to achieve social and economic development” (ref. 12) - Was adopted by the COP 19 to the Barcelona Convention (Athens, February 2016). It focuses sharply on climate change issues (see ahead) and also stresses the need that “Putting in place adequate institutional structures is a key priority in providing for effective implementation of the Strategy”. It underlines Governance as one of its main Objectives “Improving governance in support of sustainable development Governance is a crosscutting objective and concerns the inclusion of non-state actors in decision-making processes, using new forms of cooperation arrangements”. Resembling the Roadmap Strategic Objectives 3 and 4, it mentions that “Regional challenges for environmental governance include fragmentation of responsibility, uncoordinated and non-results based planning and implementation, as well as weak human and financial resources in the public sector, particularly at the local level.”

operational management mechanism for implementing and reaching the objectives of both UNEP/MAP processes. ICZM meets the Roadmap concerns and tools when supporting marine spatial planning, in which MPAs can be neatly integrated.

- The Barcelona Convention Decision IG.22/6 on Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (ref.13). Presents Objectives, Actions and recommendations in line with the MPA Roadmap (see full table-grid in Annex 7, and also ahead in the Climate Change section), by which MPAs could be considered as pilot sites for climate change monitoring, long-term planning, improved governance, and institutional integration.

7.5. The Convention on Biological Diversity (CBD):

Being one based on the other, there is a full coherence between the Mediterranean Roadmap and the Aichi target 11: “By 2020, 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are to be conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures.” As such, the Mediterranean Roadmap can be considered an innovative regional instrument for the implementation of Aichi Target 11. The CBD has developed this target in several ways:

a) The CBD AICHI Indicators for the strategic plan for biodiversity 2011-2020 (ref.15).

In November 2015, the CBD SBSTTA/19/5 listed over 100 indicators for the 20 biodiversity targets of Aichi 2020. In Target 11, those relevant for the Mediterranean Roadmap are:

- Coverage of marine and coastal protected areas covered (proposed indicator for SDG target 14.5)
- Protected area coverage of Key Biodiversity Areas (including Important Bird and Biodiversity Areas, Alliance for Zero Extinction sites)
- Protected Area Representativeness, and Connectedness, Indexes
- Management effectiveness of protected areas
- Trends in protected area funding.

b) CBD- EBSAs (Ecologically or Biologically Significant Marine Areas) (refs. 18, 19, 20).

Through the last 10 years the EBSA concept and definition (CBD COPs in 2006 and 2008) and criteria (CBD COP 2010) have been developed by the CBD. At its 18th COP (Istanbul 2013), the Contracting Parties to the Barcelona Convention adopted decision IG.21/5, “Identification and Conservation of sites of particular ecological interest in the Mediterranean” requesting the assistance of the RAC/SPA to cooperate with the CBD Secretariat in organizing what finally was the Mediterranean Regional Workshop to Facilitate the Description of EBSAs (Malaga, 2014).
The region meets almost all of the EBSA criteria: uniqueness, naturalness, vulnerability, fragility and sensitivity, which can be found at many scales throughout the Mediterranean. Fifteen EBSAs with a high juridical heterogeneity were identified under the 7 scientifically agreed ecological criteria, some of them through the inclusion of the marine mammal element in conservation considerations.

Fifteen Mediterranean EBSAs have been identified and included in the CBD EBSA repository. They are based on a scientific agreement, recognised by the CBD for some important species or habitats for which conservation measures would be needed, so all together represent appropriate grounds for the identification of new MPAs. Interestingly for the Mediterranean, as an exception the EBSAs in this Sea may reach to the coastline.

The 34 SPAMIs make a particular input although only one, the Pelagos Sanctuary includes the pelagic domain. The Barcelona Convention Roadmap SO-1 mentions “d) Make use amongst other sources, of the scientific information regarding the description of areas meeting EBSA criteria including the information in the EBSA repository and information-sharing”. EBSAs are not MPAs but constitute interesting areas where to establish new MPAs, as they are preceeded by scientific and political agreements. It is an important starting point for a future long-term continuous assessment as further scientific information becomes available.

c) **SBSTTA 19** and the **Sustainable Ocean Initiative (SOI) - CBD Action Plan 2015-2020** (refs. 16 and 17).

The SBSTTA-19 Recommendation XIX/3 (2/5 Nov.2015 - Montreal, Canada) recommends the COP that “in order to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020, encourage Parties to undertake evaluations, document this experience -including the methodologies applied- identify lessons learned, and to provide this information to the Executive Secretary”. In this concern, the Mediterranean Roadmap is certainly ready to provide such type of recommendations and lessons learned in the application of the Aichi Target 11.

From its side, and based on the CBD COP10, the Sustainable Ocean Initiative (ref.16) aims to provide a global platform to build partnerships and enhance capacity to achieve the Aichi Biodiversity Targets related to marine and coastal biodiversity in a holistic manner, by:

- Enhancing communication among global policy, science and local stakeholders;
- Creating partnerships that can provide targeted capacity-building and technical assistance in support of on-the-ground implementation priorities;
- Facilitating the exchange of knowledge, information, experiences and practices;
- Monitoring progress on Target 11 and other related to marine and coastal biodiversity;
- Developing partnerships among different sectors and stakeholders at local, regional and global scales;
- Achieving a balance between the conservation and sustainable use of marine biodiversity, and promoting flexible and diverse approaches towards this end.
7.6. The United Nations system

a) **UNCLOS** (refs.23 and 24)

The **Biodiversity Beyond National Jurisdictions (BBNJ)** implementing agreement under the UN Convention on the Law of the Sea should be adopted by the UN General Assembly in 2018. A specific indent on this issue is found in the next Section 8.

b) **UN Transforming our World: The 2030 Agenda for Sustainable Development** (ref.28)

The new global development agenda for the period 2015-2030 was adopted in New York on 26 September 2015. It includes 17 Sustainable Development Goals, of which SDG 14 relates to the oceans, totalling 169 associated targets, which are deemed integrated and indivisible. The proposed indicators of follow-up for SDG 14, include the Aichi 10% target and other indicators relevant for the Roadmap such as those pertaining the EcAp, resilience, subsidies, artisanal fisheries (ref.29), and the UN monitoring framework to track SD Goals progress at the global level (ref.30). As detailed in the table-grid in Annex 7, many of the SDG 14 provisions match with the Roadmap Strategic Objectives. In general, the synergies with SDG-14 are discussed ahead in Section 9.1.

c) **GFCM and FRAs** (General Fisheries Commission for the Mediterranean) Refs. 33 to 37

Established under the umbrella of the UN Food and Agriculture Organization (FAO), is the competent regional body for recommending, adopting, and implementing, as necessary, measures to achieve the sustainability of fisheries and aquaculture activities while taking into account negative impacts on marine ecosystems. In 2005 GFCM prohibited all type of towed gears beyond 1000 m depth in the Mediterranean. Particularly relevant for MPAs are the GFCM efforts on setting up spatial based measures that ban the activity of certain fishing gears in delimited areas (Fisheries Restricted Areas - FRAs). In 2006, three FRAs were created with the main objective to protect the deep sea sensitive habitats. In 2009 and in 2016, other 4 FRAs were established with the main objective of preserving essential fish habitats (EFH) of important exploited fish species. Since 2013 the GFCM has been promoting the legal consideration and use of MPAs as management tools, by integrating the establishment of FRAs (temporal and/or permanent), within the adopted multi-annual management plans for fisheries both in the Adriatic Sea and in the Strait of Sicily. Details on these initiatives can be found in references 33 to 37.

In 2013, Resolution GFCM/37/2013/1 established that FRAs would be designated by GFCM, including where they overlap with the UNEP/MAP SPAMI designation (ref 37) and prompts both organizations to cooperate and coordinate and, as necessary, with other competent regional organizations. To this end, and at the request of its CPCs (Contracting and Cooperating non-Contracting Parties), the GFCM created a specific technical working group on MPAs (WGMPA) that meets in collaboration with other partner organizations. GFCM and FAO-FIRA...
also participate in the IUCN project on Interaction between MPAs and Aquaculture (funded by the Prince Albert II of Monaco Foundation).

FAO/GFCM and UNEP/MAP adopted a memorandum of understanding to promote cooperation, including harmonizing existing respective criteria to identify FRAs and SPAMIs for the cases where their location may be coincident, in particular if located partially or wholly on the Areas Beyond National Jurisdiction. Resolution GFCM/37/2013/1 recalls the cooperation established between the GFCM Secretariat and the Pelagos Secretariat on the exchange of data related to the Pelagos SPAMI and the collaboration with ACCOBAMS.

UNEP/MAP-RAC/SPA, the GFCM-FAO, and ACCOBAMS discussed at the second meeting of the GFCM WGMPA (Tunis, June 2015) about spatial base management measures for marine conservation and sustainable development, in particular MPAs, and agreed in promoting FRAs at both national and international level as an appropriate tool for the conservation and management of the Mediterranean ABNJ, especially for the open seas, where to anchor additional protection layers such as MPAs or SPAMIs. A Joint cooperation strategy on spatial-based protection and management measures for marine biodiversity is under preparation between the UNEP/MAP-RAC/SPA, ACCOBAMS, GFCM Secretariats, with the collaboration of IUCN-Med and MedPAN. The engagement of the Contracting Parties to the Barcelona Convention in developing such strategy will be sought during their COP 20 (end of 2017).

d) The Vulnerable Marine Ecosystem (VME) (ref. 38)

The VMEs are a central part of the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas. Adopted in August 2008, the VME criteria aim to facilitate and encourage the efforts of States and Regional Fisheries Management Organizations / Agreements towards sustainable use of marine living resources, and the prevention of significant adverse impacts on deep-sea. The similarities between the scientific and technical knowledge required for both the EBSA and VME processes has led to increased collaboration between the FAO and the CBD Secretariat on deep sea issues. There are strong complementarities between the VME criteria and the EBSA criteria, and also some key differences as the VME criteria are designed to be used specifically in the context of fisheries management, and are embedded in a management process, while the application of EBSA criteria is a scientific and technical exercise without prescriptive management implications.

e) UNESCO (UN Educational, Scientific and Cultural Organization - ref.39)

UNESCO is involved in Mediterranean marine conservation through its World Heritage Programme and its Man and the Biosphere programme. As mentioned by Rais and Notarbartolo di Sciara (2015) in the Mediterranean Sea there are three World Heritage Sites that include marine areas (Ichkeul, Ibiza, and Scandola). However, in the Mediterranean countries (not so in Mexico, for example) both UNESCO categories are not legal conservation categories, but international acknowledgements to existing protected areas. In the Mediterranean the MAB Programme under UNESCO auspices aims at being a model for scientific cooperation between both North and South and has established a centre in Spain to act as a platform for training and transferring knowledge on environmental and societal issues
between Mediterranean countries, particularly facilitating joint programmes between biospheres reserves.

f) The Ocean Sanctuary Alliance (OSA) (ref.40)

OSA is a partnership of UN Member States and leaders from across disciplines. Its mission is to restore and sustain the world's ocean by securing national commitments to establish science-based marine sanctuaries. They have been instrumental in calling for a "stand alone" oceans SDG (SDG-14) and the target to protect at least 10 percent of marine areas within national jurisdiction by the year 2020. Italy sponsored a conclave of prominent marine scientists and diplomats from around the world (Rome, March 2016) to take the first steps in making a science-based marine sanctuary network a global reality. The coalition is growing, and OSA country supporters to date include the Republic of Italy, the Republic of Poland, the Bahamas, the Netherlands, Monaco, Papua New Guinea, the Republic of Maldives, European Union, Israel, Iceland, Sweden, Australia, Nauru, Republic of Palau and Marshall Islands.

7.7. The European Union

a) Marine Strategy Framework Directive (ref. 42)

The MSFD pursues the Good Environmental Status (GES) of marine waters by 2020. It builds on the Strategic Environment Assessment (SEA) Directive requiring an environmental assessment for certain plans and programmes, consultation provisions (including cross-border), assessment of alternatives, and measures to prevent and/or mitigate adverse effects; also the Environmental Impact Assessment Directive establishes similar requirements for projects. The MSFD also requires member states to consider various climate-related factors, such as changes in sea temperature and ice cover and ocean acidification, mitigation role, as carbon sinks, and also address adaptation to climate. The MSFD ensures that international agreements are taken into account at all stages of the development of marine strategies, obligations to prevent and eliminate pollution from sea-based and land-based sources, explicit commitments to adopt an ecosystem-based approach, and to conserve marine resources. It assesses some relations with Regional Seas Conventions, including the Barcelona Convention ICZM Protocol.

b) Birds and Habitats Directives and Natura 2000 network

Birds and Habitats Directives are the cornerstone of Europe’s nature conservation policy. They establish the EU wide ecological network of protected areas - Natura 2000 - to ensure the long-term survival of Europe’s most valuable and threatened species and habitats. Under the Habitats Directive, EU Member States designate Special Areas of Conservation (SACs) to ensure the favourable conservation status of each habitat type and species throughout their range in the EU (the Directive lists nine marine habitat types and 16 species). Under the Birds Directive, the network must include Special Protection Areas (SPAs), among other birds also for 60 seabirds. More than 3000 marine Natura 2000 sites have been designated so far, which cover
more than 6% of the total EU marine area (over 300,000 km\(^2\)). Its growth in the Mediterranean Sea has increased its coverage by 132% in the last four years and already represents a 2.37% of the Mediterranean Sea, which means a 33% of all the protected areas in this sea.

b) **Directive establishing a framework for Maritime Spatial Planning** (ref.47)

It is binding to all member States and builds on the Habitats Directive, requiring an assessment of plans or projects that may significantly impact a Natura 2000 site. Cooperation across borders is deemed necessary to ensure coherence of plans across ecosystems; some organisations such as HELCOM have already started this work. The MSP mentions the Mediterranean as the first region to adopt a Management Plan (MAP 1975) and the ICZM Protocol to establish a common framework for integrated coastal management. The MSP operates within three dimensions, addressing activities (a) on the sea bed; (b) in the water column; and (c) on the surface. This allows the same space to be used by different purposes, but might also raise the issue of the appropriate administrative framework for MSP. For the time being, in the same way that terrestrial planning set up a legally binding framework for the management of land, MSP should be legally addressed if it is to be effective.

c) **Blue Growth** (ref. 43)

Is a long term strategy to unlock the potential of Europe’s seas and coastal areas. It covers topics as blue energy, aquaculture, maritime, coastal and cruise tourism, maritime mineral resources and blue biotechnology. Its pillars are:

- Training and better coordination of planning activities for better marine governance. Significantly, each year a Mediterranean Coast Guard Functions Forum (a voluntary, independent and non-political body) brings together administrations, institutions and agencies working on coast guard issues from all EU Mediterranean countries.
- Environmental quality, to address cooperation at regional level in ensuring a good environmental status of the marine environment and helping to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020. It also aims at improving the marine environment information on small scale fisheries, illegal fishing gear, and monitoring and enforcement, which are insufficient.
- Ecosystem-based coordination of activities promoted by increasing maritime spatial planning, ICZM and implementation of the marine framework strategy Directive; enhancing the trans-border, open-water network of marine protected areas; exchanging best practices among managing authorities of marine protected areas;
- A Blue Growth pillar will promote innovative maritime and marine growth in the Adriatic and Ionian Region (ref.45).

d) **Other related**

- The Union for the Mediterranean Ministerial Conference on Blue Economy – Declaration (2015, ref.48) (and the associated UfM WG on Blue Economy), promoting the application of cross-cutting policy tools, such as maritime spatial planning and
integrated coastal zone management, taking into account land-sea interactions through an ecosystem based approach and the importance to accelerate efforts in taking necessary measures to develop a coherent and well-managed network of marine protected areas to meet the objectives of the Mediterranean Action Plan.

- The **Emerald Network** (ref 51), launched in 1998 by the Council of Europe as part of its work under the Bern Convention, is based on the same principles as Natura 2000, and represents its *de facto* extension to non-EU countries. Areas of Special Conservation Interest (ASCIs) are established in Europe and North Africa, set up by the contracting parties to the Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats). The aim of the ASCIs is to ensure the conservation and protection of those habitats and species listed under Appendixes I and II of the Bern Convention. Its development in North Africa, at the request of the national authorities, has started with the implementation of pilot projects in Morocco, and is likely to be also launched in Tunisia. Thirty-nine marine habitats are listed under Annex I (1996, adopted 2010).

- The new **EU Common Fisheries Policy** does not mention much about protected areas, but opens a wide slot when aiming at reducing the negative environmental impacts of the fishing activity, taking decisions based on solid science, supporting MPA networks, improving the data quality, the selectivity of the fishing gears, fisheries co-management practices, and general support to artisanal fisheries.

- The **Conference of Peripheral Maritime Regions of Europe** (CRPM, ref.85), a bit fuzzy melting of regions and sub-strategies, meets about 150 EU Regions in a global Integrated Macro-Regional Mediterranean Strategy to be developed in the mid-long term perspective - EUSMED (Global draft action plan by 2017 during the Maltese presidency, to be updated every 3 years starting from 2020) that should include three interconnected strategies for the Adriatic-Ionian (ongoing since 2014), the Western Mediterranean (Action plan by 2016), and the Eastern Mediterranean (Action plan by 2020) all of which could work as pilot coordination for the governance level.

### 7.8. Other specialized international organizations

a) **IUCN Centre for Mediterranean Cooperation** (refs. 66 and 67) mandate includes MPA identification, selection, declaration and management. In collaboration with all Mediterranean partners involved in MPAs, the activities in the past 10 years have been orientated to the definition of coherent and representative networks, to the legal and institutional analysis and assessment of the MPA networks, and to the proper definition of MPAs criteria and on new governance models. The Centre has pioneered research on the effects of climate change in the Mediterranean Sea, and developed activities with most of the Regional partners (RAC/SPA within the framework of the MedOpenSeas project; with ACCOBAMS through the scientific committee; with GFCM through its participation in the scientific Advisory Committee and the Working Group on MPA; and other collaborations with MedPAN and with Oceana. IUCN has fostered numerous MPA initiatives around the world. Some of the most relevant to the MPA Roadmap development are:
- The recent analysis about the international and regional instruments to categorize MPAs (Brossard, J. and J. de Grissac, 2015 – ref.104) finding that many MPAs have been established under “soft law” while other labels such as FRAs, PSSA (particularly Sensitive Sea Areas, IMO) World Heritage Sites and even Biosphere Reserves are found to be either more legally binding and/or appropriate for marine conservation purposes in the Mediterranean region.

- The Promise of Sydney (ref.69) arising from the 6th IUCN World Parks Congress again underlines most of the Strategic Objectives and Actions in the Roadmap as shown in the table-grid in Annex 7.

- The Key Biodiversity Areas (KBAs, ref.70) are “places of international importance for the conservation of biodiversity through protected areas and other governance mechanisms. They are identified nationally using quantitative (threshold) criteria, based on their importance in maintaining species and populations. As building blocks for designing the ecosystem approach and maintaining effective ecological networks, KBAs can be considered a starting point for conservation planning at landscape level” (Rais and Notarbartolo di Sciara, 2015).

- Blue Solutions (ref.71) is a web tool providing links and information between interested managers and experts, to enhance evidence of MPAs addressing both human needs and conserving nature. This platform for sharing and exchange, aims at supporting decision makers and MPA practitioners in applying “solutions” and achieving the Marine and Coastal Aichi Targets.

- The Panorama (ref.72) is an effort to collate protected area case studies that showcase how protected areas provide solutions to some of the world’s challenges, allowing practitioners to share and learn about how others have tackled problems related to Protected Areas across the globe. The case studies are being documented using a standard format that identifies the key success factors, and are published on the web platform.

b) Specialized international NGOs (refs.75-87) such as WWF, Birdlife, Greenpeace and Oceana, show almost complete synergies with the MPA Roadmap. The following must be underlined:

- WWF’s recent global campaign Reviving the Ocean Economy: The case for action (2015, ref.77) underlines how the value of the ocean’s riches rivals the size of the world’s leading economies, and how its resources are rapidly eroding; it presents an eight-point action plan that would restore ocean resources to their full potential, the first of which focuses on the UN SDG-14; other goals completely match the Roadmap’s strategic objectives, however, at the global level (Annex 7). The World Wide Fund for Nature (refs.75 to 79) has been active in the Mediterranean region for over 20 years, operating in over 18 countries; it participated in the development of the SPA Protocol on Biodiversity in 1995 and since then is no doubt the most active NGO contributing to its implementation, in close collaboration with RAC/SPA, MedPAN (see ref.74) and most of the MPA regional actors. The high number of WWF projects following the Roadmap Actions can only be compared with those of MedPAN and of the RAC/SPA itself.
The BirdLife (refs. 80, 81, 82) Strategy 2013-2020 is linked to and fully supportive of the CBD Strategic Plan for Biodiversity, with whom Birdlife holds a Memorandum Of Understanding to coordinate activities in support of the Aichi Targets, particularly to push and identify EBSAs. Birdlife has used seabird data to describe EBSAs and has 18 partners or national chapters working in most of the Mediterranean countries, developing a network of people and organisations to look after avian Mediterranean migratory guests. Birdlife also works closely with FAO in their International Plan of Action for reducing incidental catch of seabirds in longline fisheries (IPOA-Seabirds) (FAO 1998) encouraging countries to implement National Plans of Action (NPOAs) which Birdlife supports nationally.

The Oceana MedNet (ref.86) is a MPA Network Proposal for the Mediterranean Sea. Biological and geomorphological data were compiled through GIS generating a complex of 385 priority sites, out of which 100 priority areas constitute Oceanas proposal for a MPA network with a list of 30 sites as priority areas. Oceans research of the sea beds has been instrumental for the identification and declaration of N2000 marine sites in Spain (INDEMARES Project), responsible of an spectacular MPA coverage increase in this country (up to 8% of the EEZ waters).

Greenpeace (ref.87) produced a proposal for a Mediterranean network of marine reserves, with “areas of high ecological importance based on spatial data relating to the region’s biological diversity and physical oceanography. Data layers used in mapping the network included distribution of species, important areas for marine species, important habitats, sites previously identified as priorities for protection, such as SPAMI and Natura 2000 sites” (taken from Micheli et al. 2013).

7.9. Other relevant initiatives and studies:

- The CoCoNet “Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential” aims at developing a holistic approach integrating the Mediterranean and Black Seas scientific communities producing guidelines to design, manage and monitor a network of MPAs. The topics under working commissions are: management; habitat mapping, state of knowledge and data integration; species assemblages, dispersal and connectivity; scenarios of environmental change (natural and human induced); role and response of the MPAs; training and capacity building; data management and synthesis; and pilot projects (for the Black Sea and for the Mediterranean).

- The CIESM (International Commission for the Scientific Exploration of the Mediterranean Sea) recommends marine “peace parks”, straddling both open sea and coastal waters through the creation of cross-border marine parks. Based on the criteria set, eight large marine areas characterized by key hydrodynamic, biological and geological features have been selected.
8. 

8.1. UNCLOS and Areas beyond national jurisdiction (ABNJ)

The UN General Assembly has expressed its concern at the adverse impacts on the marine environment and biodiversity, and reaffirmed its role relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction; SDG 14.c calls to “Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources”.

However, there is currently no international governance framework for regulating and coordinating MPAs in the High Seas despite the scientific duty in the United Nations Law of the Sea Convention to protect and preserve rare or fragile ecosystems and the habitat of depleted, threatened or endangered species and other forms of marine life (see Hart 2008 in ref.23).

In order to achieve Aichi target 11 -namely the legal protection of a 10% of the Mediterranean Sea by 2020- the concerned parties need to expand their protection willingness into the open seas and ABNJ. The following opportunities have emerged in the last four year period:

- The UN Resolution 69/292, adopted by the UN General Assembly on 19 June 2015, related to the “Development of an international legally binding instrument under the UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction”.

- Over the years, the UN General Assembly has called for a number of specific measures to strengthen, in a manner consistent with international law, in particular UNCLOS, the conservation and management of marine biodiversity and ecosystems, and national policies in relation to MPAs, developing and facilitating the use of the
ecosystem approach, the elimination of destructive fishing practices, the 
establishment of MPAs consistent with international law and based on scientific 
information (ref.25).

- The Sustainable Development Goals to 2030 include “14.c Enhance the conservation 
and sustainable use of oceans and their resources by implementing international law 
as reflected in UNCLOS, which provides the legal framework for the conservation and 
sustainable use of oceans and their resources, as recalled in paragraph 158 of The 
Future We Want”.

- The Barcelona Convention COP 19 (2016) launched the MPA Roadmap; its Strategic 
Objective 1b) the MPA “ecological representativity, through the selection of marine 
protected areas based on scientific information, which are to be identified within all 
marine areas, including within ABNJ”. The concerned Barcelona Convention COP 19 
“requests the Secretariat to strengthen links with relevant international and regional 
organizations in order to promote sustainable management of marine areas through 
appropriate area-based conservation measures, including on the high seas, as 
appropriate”.

- The UNEP/MAP Mid Term Strategy 2016-2021 also mentions: “3.7.1. Coordination 
with the ongoing process of an Implementing Agreement on ABNJ marine genetic 
resources and marine protected areas BNJ”.

- The 7 criteria approved by the CBD to establish EBSAs are complemented by another 5 
scientific criteria for representative networks of marine protected areas that include 
open ocean waters and deep-sea habitats. This development provides a landmark 
opportunity to begin the process of planning and implementing open seas MPAs.

- The Vulnerable Marine Ecosystem (VME) (ref. 38) is a central part of the FAO 
Adopted in 2008, the VME criteria aim to facilitate and encourage the efforts of States 
and Regional Fisheries Management Organizations / Agreements towards sustainable 
use of marine living resources, and the prevention of adverse impacts on deep-sea.

- FAO/GFCM and UNEP/MAP adopted a memorandum of understanding to promote 
cooperation, including harmonizing existing respective criteria to identify FRAs and 
SPAMIs for the cases where their location may be coincident, in particular if located 
partially or wholly on the Areas Beyond National Jurisdiction (ABNJ).

- Other non-binding instruments (ref.26) also provide policy guidance of relevance to 
marine Biodiversity in areas beyond national jurisdiction. These include the Rio 
Declaration and Chapter 17 of Agenda 21 adopted at the 1992 United Nations 
Conference on Environment and Development, the Johannesburg Plan of 
Implementation (in particular its paragraphs 30-36) adopted in 2002 at the World 
Summit on Sustainable Development, the outcome document of the 2012 United
Mid-term evaluation (2016) of the Mediterranean MPA Roadmap 2012-2020 and recommendations for 2020

Nations Conference on Sustainable Development, i.e. The future we want (in particular its paragraphs 158-177), and the resolutions of the General Assembly on oceans and the law of the sea and on sustainable fisheries.

b) MPAs in ABNJ, focus and opportunities:

The high seas are open to all States, who enjoy freedom of navigation, fishing and scientific research as stated in UNCLOS. The effectiveness of any regulatory measure on the High Seas is contingent on the cooperation of all States because they cannot exercise jurisdiction action against non-flag vessels. This is why there is a discussion on the need of a new agreement to implement and develop the conservation provisions of UNCLOS.

- The Biodiversity Beyond National Jurisdictions (BBNJ) (ref.22) implementing agreement under the UN Convention on the Law of the Sea should be adopted by the UN General Assembly in 2018. The first UN Preparatory Committee sessions concluded on a positive note on April 8, 2016 identifying key elements for a new treaty to better protect and sustain the marine environment and marine life in the two thirds of the ocean beyond national boundaries and adopted a roadmap for the path ahead. Recommendations for draft elements for a new agreement under the 1982 UNCLOS are to be delivered to the UN General Assembly by the end of 2017. It is widely hoped that a decision to launch formal negotiations to draft the text of a new treaty based on the PrepCom’s recommendations will be taken by 2018. Experts note that, in case the agreement is not reached in 2018, it should be by 2022 (the UNCLOS 40th Anniversary).

- The UN-GA encourages to take action immediately, individually and through regional fisheries management organizations and arrangements, and consistent with the precautionary approach and ecosystem approaches, to implement the 2008 FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas in order to sustainably manage fish stocks and protect vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold water corals, from destructive fishing practices, recognizing the immense importance and value of deep sea ecosystems and the biodiversity they contain.

- The OSPAR Convention sustains the Aichi target and aims at creating an MPA network covering 10% percent of the OSPAR area by 2020. Noteworthy was the establishment in 2010 of six protected areas beyond national jurisdiction, a total of 290,384 Km2 where participating countries impose separately but consistently among them restrictions on all ships flying their flag, and also formally apply to all international agreements and organizations governing the sea, to support in line with their respective competences, the protection of these areas for all ships around the world, regardless of their flags. This solution, however imperfect, is novel and shows that despite legal constraints, things can be pursued when there is political will.

- In particular for the Mediterranean Sea, the Barcelona Convention Biodiversity Protocol applies to all the maritime waters of the Mediterranean, irrespective of their legal condition (be they maritime internal waters, historical waters, territorial seas,
exclusive economic zones, fishing zones, ecological zones, open seas), to the seabed and its subsoil and to the terrestrial coastal areas designated by each of the Parties. Regarding areas located partly or wholly on the High Seas, the proposal must be made "by two or more neighbouring parties concerned" and the decision to include the area in the SPAMI List is taken by consensus by the contracting parties who agree "to recognize the particular importance of these areas for the Mediterranean" and "to comply with the measures applicable to the SPAMIs and not to authorize nor undertake any activities that might be contrary to the objectives for which the SPAMIs were established" (Art. 8, para. 3).

- Concerning fisheries, FAO recalls the designation of Fisheries Restricted Areas (FRAs) for the conservation and management of fisheries resources within an ecosystem approach to fisheries management, including for the cases where their location may be totally or partially coincident with that of SPAMIs.

- In 2005, the General Fisheries Commission for the Mediterranean (GFCM) adopted a recommendation requiring CPCs to prohibit the use of towed dredges and trawl net fisheries at depths greater than 1000 metres. In 2006, three specific areas have been declared FRAs to protect corals, cold hydrocarbon seeps and seamounts. In 2009 and in 2016, other 4 FRAs were established with the main objective of preserving essential fish habitats (EFH) of important exploited fish species. Still, in 2016, the Commission officially declared the 1000 m area management area a FRA.

- In particular for areas in the High Seas, the declaration of FRAs is done by GFCM based on sound scientific and technical identification by the Scientific Advisory Committee (SAC), based inter-alia on proposals by Cooperative Non-Contracting Party, Party Organizations, scientific institutions and observers. The GFCM also established a Working Group on Marine Protected Areas (WGMPA) which has met twice since 2013 (Montenegro, 03 February 2014; and Gammarth, Tunisia, 09-12 June 2015) as regional forum to discuss marine protection in its wider sense.

- GFCM has also participated in the GEF-FAO program on Sustainable fisheries management and biodiversity conservation of deep-sea living marine resources and ecosystems in the ABNJ; and with the FAO-FIRA in the IUCN project on Interaction between Marine Protected Areas and Aquaculture.

- FAO/GFCM and UNEP-Mediterranean Action Plan (MAP) adopted a memorandum of understanding to promote cooperation between these two organizations, including harmonizing existing respective criteria to identify FRAs and SPAMIs for the cases where their location may be coincident, in particular those located partially or wholly on the Areas Beyond National Jurisdiction (ABNJ).

- UNEP/MAP-RAC/SPA, the GFCM-FAO, and ACCOBAMS discussed (Tunis, June 2015) about spatial based management measures for marine conservation and sustainable development, in particular MPAs, and agreed in promoting FRAs at both national and international level as appropriate tools for the conservation and management of the Mediterranean ABNJ, especially for the open seas, where to anchor additional protection layers such SPAMIs.
The similarities between the scientific and technical knowledge required for both the EBSA and VME processes has led to increased collaboration between the FAO and the CBD Secretariat on deep sea issues. There are strong complementarities between the VME criteria and the EBSA criteria.

Related to cetaceans, two areas are proposed by ACCOBAMS as Areas of special importance and diversity for various cetacean species, off the Tunisian and Maltese coasts, and the Strait of Sicily.

The European Union “is participating in preparatory committee meetings to establish a legally binding implementing agreement under UNCLOS for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction”. The European Union financed the EcApMED 2012-2015 project, which paved the way towards the establishment of a joint network of SPAMIs in the open seas (the “Joint Management Action of EC with UNEP/MAP for identifying and creating Specially Protected Areas of Mediterranean Importance (SPAMIs) in the open seas, including the deep seas” project), with the three priority sites in the Alboran Sea, the Adriatic Sea and the Sicily Channel/Tunisian Plateau. Meetings were organized for consultation among the concerned countries, within the framework of the MedOpenSea project coordinated by RAC/SPA and financed by the European Commission.

Related to shipping, the International Maritime Organization (IMO) is mandated to establish a regulatory framework for international shipping that includes environmental concerns. It provides an existing, globally accepted international mechanism for the establishment of protected areas in relation to shipping activities (ref.24). To date, IMO had recognized 12 PSSAs, including the Great Barrier Reef in Australia and the Baltic Sea. No PSSAs have yet been declared in the High Seas, though the tool does allow for use in areas beyond national jurisdiction.

Ten principles for open seas governance were released at the 2008 World Conservation Congress, raising consensus on the importance of ecosystem and precautionary approaches as well as the need for international cooperation, transparent decision-making, and public availability of information.

This issue was raised in the Evaluation questionnaires, finding that a significant number of regional organizations are in one way or another interested or engaged in the declaration of protected areas in ABNJ, suggesting that the issue is mature for a regional coordinated effort.

- The European Union is participating in preparatory committee meetings to establish a legally binding implementing agreement under UNCLOS for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.
- The ABNJ GEF project targeting all the ABNJ to foster the establishment of EBSA/VMEs.
- There is ongoing effort to identify Important Marine Mammal Areas (IMMAs) in the whole Mediterranean Sea.
- The Coconet Project has produced guidelines for establishing a network of Marine Protected Areas, including areas beyond national jurisdiction.
There is a document in prep for the elaboration of an Alliance between ACCOBAMS, CAR/ASP, CGPM, IUCN-Med and MedPAN to foster the creation of MPAs in ABNJ.

- WCPA has a separate Marine Task Force which serves as a platform to promote and foster different initiatives, including for marine waters BNJ (WCPA Marine Task Force).
- Birdlife, Oceana, Greenpeace and other specialized organizations are working on the MPAs in ABNJ issue, and on the identification and establishment of CBD EBSAs. Some experts do recommend to build MPAs in ABNJ on the technical side, using the EBSA agreements.

8.2. Other Regional Seas

The MPA Forum 2016 organizers asked themselves whether other Regional Seas Conventions, and regional seas MPA networks, have adopted any similar specific strategy, roadmap or action plan to achieve the Aichi targets by 2020, or any other analogous initiatives that may inspire the Mediterranean marine conservation community. A web search provides some insight but in fact comparable and updated data from different regional conventions have proven difficult to find.

a) OSPAR:

OSPAR sustains the Aichi target and aims at creating an MPA network covering 10% percent of the OSPAR area by 2020. The progress in OSPAR has been significant with a network of 333 sites (in 2014) collectively covering approximately 700,500 km2 of the North-East Atlantic, which represents 5.2% coverage of the entire Maritime Area. Noteworthy was the establishment in 2010 of six protected areas beyond national jurisdiction, a total of 290,384 Km2 where participating countries impose among them restrictions on all ships flying their flag, and also formally apply to all international agreements and organizations governing the sea to support the protection of these areas for all ships around the world. The OSPAR Convention adopted a Roadmap 2010-2020, not for MPAs but for the implementation of the EU Marine Strategy Framework Directive within the OSPAR Convention. It has some similarities to the MPA Mediterranean Roadmap: as in the EU Directive, the OSPAR Strategy includes an overarching concept of delivering the ecosystem approach to management of human activities for the protection of the marine environment. It takes into account environmental and socio-economic considerations and is implemented through adaptive management.

b) HELCOM:

By mid 2013, the Baltic Sea already had a 11,7% of MPA coverage, although recognized ecologically uneven. Whilst exceeding the 10% target, this hides differences in national efforts as well as an imbalance in favour of nearshore areas when compared to EEZs, so new efforts are in demand to focus on marine areas away from coasts and islands. Representativity is considered in terms of size and coverage of MPAs in different sub-basins but ecological coherence is yet to be achieved. A bit ahead of the Mediterranean, 65% of the HELCOM MPAs have management plans in place. HELCOM adopted a Roadmap 2015-2020, not for MPAs but for Ecosystem Approach. It shows some similarities to the MPA Mediterranean Roadmap,
including action on monitoring, streamlined data management, and indicators, but mainly focused on eutrophication and other water quality pressures. It also includes the development of Assessments, on hazardous substances and on climate change, and 20 specific programmes, mostly on sewage, aquaculture, navigation, noise, and some recommendations on species and habitats. They have a particular “Regional Action Plan for Marine Litter” (planning for implementation) in collaboration with the Barcelona Convention.

c) **Black Sea**

The Parties are asked to produce and commonly agree on a Strategic Action Plan for the Black Sea Biodiversity and Landscape Conservation Protocol, in which, similar to the Mediterranean Roadmap, includes measures for each MPA:

- the development and adoption of management plans
- a comprehensive integrated regional monitoring programme
- the active involvement of local communities in both planning and implementation
- adoption of appropriate financial mechanisms
- the regulation of activities including the issuing of permits
- training of staff as well as the development of appropriate infrastructure.

In their Strategic Action Plan (Black SAP, 2009) the most related Objectives are “to halt losses of currently known threatened species and destruction of their habitats by 2010”, “to increase, where appropriate, protected areas and improve conservation of species, ecosystems and habitats, with particular attention to marine protected area, and manage them in a sustainable and environmentally sound way”. The Convention works closely with ACCOBAMS in the recuperation of cetaceans, included guidelines for stranded individuals and enlarging where appropriate the networks of Black Sea Reserves taking into consideration the most important breeding, feeding and wintering grounds and migration routes of fish, marine mammals and birds. They also recommend to promote the use of economic incentives for management of human activities allowed in protected area and adjacent territories. No recent progress reports have been found; however, notes from mid term results suggest that only small progress has been achieved. “The process of designing protected areas has been carried out mostly in the frame of Natura 2000 in Bulgaria and Romania and Emerald Network and RAMSAR Convention in Turkey. Bulgaria already has 15 marine protected areas, and Romania has 2 marine protected areas, the greatest being the marine part of Danube Delta Biosphere, plus 9 N2000 sites. Turkey proposed 6 RAMSAR sites and deltas on the coast of Black Sea. Incorporating all these protected areas into national law and policy remains a challenge. The gaps identified include deficiencies regarding law enforcement and implementation of management plans, and areas where legislation and policy are missing. Furthermore, the mismatches between the written law/policy and what is being applied in practice by local people are relevant”. In summary, the Black Sea Convention has adopted many of the Specific Objectives of the Mediterranean MPA Roadmap, but as umbrella biodiversity considerations rather than as a concrete MPA strategy; there is not an analogous Roadmap and at the same time, the field progress (creation of MPAs, integration in national policies, MPA management, capacity, and funding) seems to be much delayed as compared to the Mediterranean Sea.
d) **RAMP AO, West African Network of MPAs**

In October 2015, RAMP AO adopted a Roadmap for a Transition Phase of 2 years in order to conduct legal studies pertaining to the autonomous entity, ensuring funding for MPA pilot activities; enhancing RAMP AO’s communication and training activities; and mobilising Member States (Government and Parliament) to register MPA funding in their national budgets. They aim at the participatory development of a five-year programme (2017/2022) of technical actions with MPA managers, in collaboration with line institutions. RAMP AO scientists advised to position on issues related to climate change, and mitigation measures. Overall, the situation is delayed as compared to the Barcelona Convention framework.

e) **CAMPAM**

The Caribbean MPA network, based on the Cartagena Convention, is in many ways analogous to the Mediterranean MPA network. The project "Regional support for the Caribbean Challenge Initiative: Networking, consolidation and regional coordination of MPA management" objectives are analogous to those in the Mediterranean Roadmap. They aim at effectively conserve and manage at least 20 percent of the marine and coastal environment by 2020. UNEP-CEP supports the "Caribbean Challenge, Phase II" whose objectives are close to those of the Mediterranean MPA Roadmap, but not restricted to MPAs. CAMPAM promotes the implementation of ecosystem-based adaptation actions (climate change) by 2020.

f) **ACCOBAMS**

This agreement on the conservation of cetaceans is not specifically directed at the legal requirements for MPAs, but states that developing protected areas for cetaceans should be done within the framework of the Regional Seas Conventions or of other appropriate instruments. Accordingly, and on the basis of several recommendations from its Scientific Committee, 22 areas of special interest for cetaceans have been identified in the ACCOBAMS area. Parties are encouraged to formally promote the national implementation of these areas and to ensure their effective management.

g) **IMPANA**

The International Marine Protected Areas Network (IUCN) aims “To develop a five year marine protected areas operational program (2015-2020) at global, regional and national levels, capitalizing the Ocean+ IMPAC3 outcomes and results, implementing the ministerial Ajaccio Message, and teaming up with, inter alia, the Action Plan of the Sustainable Ocean Initiative* (SOI) of the Secretariat of the Convention of Biological Diversity to generate or federate marine protected areas initiatives and projects”. IMPANA is presented by IUCN as “the roadmap for marine protected areas that we are using in the Global Marine and Polar Programme of IUCN” however it does not mention the Mediterranean Roadmap.
9. SUSTAINABLE DEVELOPMENT GOALS AND CLIMATE CHANGE CONVENTION

9.1. The United Nations Sustainable Development Goals Agenda to 2030

At the UN's Sustainable Development Summit (Sept. 25, 2015), world leaders adopted the 2030 Agenda for Sustainable Development which contains 17 Sustainable Development Goals (SDGs), among them a "stand alone" oceans SDG 14: Conserve and sustainably use the oceans, seas and marine resources.

The Goal-14 target to protect at least 10 percent of marine areas within national jurisdiction by the year 2020 is the only numerical goal in SDG14. In March 2016 the UN Economic and Social Council (refs. 29, 30) proposed other indicators to follow-up SDG 14, pertaining the EcAp, resilience, subsidies, artisanal fisheries, which are relevant for the Mediterranean Roadmap.

Expert’s discussions (refs. 31, 32) hold that most SDG14 targets are not new: Target 14.5 on marine protected areas echoes commitments made as long ago as 2002 at the World Summit on Sustainable Development (WSSD) in Johannesburg and again more recently in Nagoya in 2010 (CBD Target 11). Harmful fishing subsidies (Target 14.6) have been discussed for many years within the World Trade Organization (WTO) and other fora. And countries have already entered into legally-binding commitments to reduce, prevent and abate marine pollution (Target 14.1), some as the Barcelona Convention dating back to the mid 1970s. While the 10% target does not recognise the extreme variation of biodiversity importance over space, and so risk generating the protection of areas which are large at the expense of those which require protection. However, observers hold that SDG14’s main value is to bring a set of key ocean issues under one single umbrella, and give them visibility as a package.

While the ocean is followed up by at least 6 UN bodies, significantly UNCLOS, UNEP, and FAO, the SDG14 still lacks a natural central institutional home within the UN system. The United Nations General Assembly (UNGA) Resolution A/RES/70/1 adopted on 25 September 2015 acknowledges “the importance of the regional and subregional dimensions (...) in sustainable development” and draws attention to the regional level with regard to the follow-up and review process of the SDGs. As part of their legal obligations, member States often have to report on environmental data and activities to regional organisations’ secretariats; much of this information is regularly reported e.g. by regional seas conventions, as assessment reports on the marine environmental status. Regional organisations have already developed instruments and activities aimed at addressing some of the SDG 14 targets. For example, the UNEP/MAP Sustainable Development Strategy 2016-2025 for the Mediterranean, has already been developed in line with the adaptation of Sustainable Development Goals (SDGs) in the Mediterranean region, and was adopted by the Contracting Parties to the Barcelona Convention, at their 19th meeting (COP19) held in Athens (Febr. 2016).

As highlighted by the 2015 UNGA (UN General Assembly) Resolution, follow up and review at the regional level can “provide useful opportunities for peer learning, including through
voluntary reviews, sharing of best practices and discussion on shared 9 targets”. The recent 2016 Postdam Ocean Governance Workshop (ref. 32) also underlines that the implementation of the SDG14 will fall short of the transformative ambition of the Agenda 2030 without an effective coordination at the regional level.

Marine Protected Areas should promote their benefits regarding the Ecosystem Approach, sound marine governance, and food security. As an opportunity, the SDG14 is planned to be on the agenda of a UN High Level Political Forum (HLPF) in 2017, together with SDG2 (Zero 4 Hunger), SDG13 (Climate), SDG15 (Land ecosystems) and SDG17 (Partnerships), under the theme “Ensuring food security on a safe planet by 2030.”

9.2. Climate change in the Mediterranean Sea

In 2012, the MPA Roadmap did not particularly mention the challenge that climate change could mean for MPAs. However, in the past few years the political relevance of climate change has mounted and consolidated (Paris 2015), fostering, between other, the strong development of mechanisms to finance mitigation and adaptation activities in developing countries. Regionally, the EU in particular claims to be one of the leading Parties.

Recently, the Assessment Report of the Intergovernmental Panel on Climate Change IPCC is asking to consider the oceans as key elements for mitigation and adaptation to climate change. The EU funded "Climate Change and Impact Research: the Mediterranean Environment" (CIRCE) project leads to similar conclusions (refs. 85 and 100). Also the 'Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region' (SAP BIO) was updated on climate change issues. The Mediterranean region is vulnerable and expected to receive one of the most severe impacts from global change. The vulnerability of the Mediterranean region to CC and the evidence of its effects on ecosystems and human life has been extensively documented\(^5\): it poses significant challenges to the Mediterranean countries and is expected to worsen already acute situations present in the region (ref.13). Indeed, the synergies of the Roadmap with the United Nations Framework Convention on Climate Change (UNFCCC) should be sought and underlined as a key opportunity for Mediterranean MPAs.

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\(^5\) Climate variability and change is becoming increasingly evident in the Mediterranean. According to observations and studies referenced in the recent IPCC Fifth Assessment Report (ARS) and in IPCC’s SREX Report, in recent decades, summer heat waves’ intensity, number, and length have increased alongside extreme precipitation events and soil dryness. Major increases have been observed in warm temperature extremes. The shallow waters of the Mediterranean Sea have already warmed by almost 1°C since the 1980s. Trends of decreasing precipitation and discharge indicate a trend toward increased freshwater deficits. The composition of most of the present marine and coastal ecosystems will probably change and there will be a greater risk of extinction of species. Climate change is also expected to amplify biological invasions and proliferation of pathogens and diseases. Changes in the geographical distribution of wild fish stocks can lead to possible decreased catch potential and can also influence where aquaculture is possible, which species are raised, and the efficiency of the production. The Mediterranean also exhibits variability regarding the observed sea level rise. According to the latest EEA indicators assessment Mediterranean Sea there are areas with increases of more than 6 mm/year, and with decreases of more than -4 mm/year. A rise of 0.4-0.5m is projected for most of the Mediterranean under IPCC AR5’s medium-low emission scenario RCP 4.5. The effect of sea level rise due to global warming is more important in most of the Mediterranean Sea where, due to the small tidal range, coastal infrastructure and coastal communities are located closer to mean sea level.
Recent long-term temperature records have demonstrated a warming trend of about 1°C in 30 years in the north-western Mediterranean and a rise in the frequency of extreme events (RAC/SPA, 2008). The temperature of intermediate waters (between 200 and 600 m depth), has also risen. A recent study from Kersting et al 2016 (ref. 100) based on long-term data sets from the Columbretes islands MPA in Spain documents many oceanographic, physicochemical and biological changes, eg, sea warming has triggered recurrent mass mortality events in the Mediterranean during the past 15 years, affecting a high number of benthic invertebrates over hundreds of kilometres of coast, also increased mortality rates of Posidonia oceanica causing widespread changes in species distribution. Seasonality in phytoplankton cycles has been altered, spring and autumn blooms occur earlier and later in the year, respectively; sea level rise will continue throughout this century at a rate of 2 - 5 mm every year and sea warming is expected to continue through this century in the Mediterranean Sea at a rate of 0.2 - 0.3 °C every decade. Although information on many species and processes is still lacking, all evidence points to the future impoverishment of our seas and a reduction in their capacity to absorb CO2. The study recommends the creation and maintenance of Marine Protected Areas, with the objective of increasing resilience to climate change, and adopting an ecosystem approach to fisheries management in order to increase resilience. It discusses the role of MPAs against the effects of climate change, because due to better habitat and species assemblages and higher biodiversity and number of reproductive adults, MPAs increase the sea’s resilience in face of mass mortalities, improve its ability to recuperate adjacent areas, and through MPA connectivity, also increase genetic diversity and the chance of impacted populations to recuperate.

The role MPAs can play both in the mitigation of climate change and in the unavoidable process of adaptation to its consequences has been discussed in a dedicated MedPAN workshop (2014), pointing out their value as biodiversity refuges, climate change sentinels (research and control samples), life examples of ecological adaptation (adaptive management plans), and of the much needed coherence (shared governance), public awareness, and capacity building (as climate change “schools”) (ref.96).

9.3. MPAs and climate change opportunities

On top of the mounting scientific evidence, climate change is officially recognized as serious threat to marine ecosystems and coastal communities by the United Nations Framework Convention on Climate Change UNFCCC (Article 4, paragraph 1e), the 19th Meeting of the Contracting Parties to the Barcelona Convention (ref.14), the Mediterranean Strategy for Sustainable Development (MSSD, ref.85), the 13th Meeting of the Mediterranean Commission on Sustainable Development (Cairo, 2009), the Marrakesh Declaration (2009), the UfM Ministerial Declarations on Environment and Climate Change (Athens, Greece, May 2014) and on Blue Economy (Brussels, Belgium, 17 November 2015); the report of the 16 Meeting of the MCSD (Marrakesh, Morocco, June 2015), and the UNEP/MAP Mid-Term Strategy 2016-2021 (ref.86), which makes climate change adaptation a cross-cutting theme.

The following deserve a short development:
• The Barcelona Convention Decision IG.22/6 on “Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas” (ref.13) commits to 4 Strategic Objectives in line with those in the MPA Roadmap and its specific Actions (see Table 7) such as developing appropriate institutional and policy frameworks, increased awareness and stakeholder engagement, enhanced capacity building and cooperation, monitoring and reviewing progress, plus integrating climate adaptation into local plans for the protection and management of areas of special interest, identifying adaptation needs and exchanging and adopting best practices, fostering access to existing and emerging finance mechanisms relevant to climate change adaptation, better informed decision-making through research and scientific cooperation, and availability and use of reliable data, science-policy interface and accessibility to related knowledge, between others.

• The Mediterranean Strategy for Sustainable Development 2016-2025 “Investing in environmental sustainability to achieve social and economic development” (ref.12), in line with the UN Sustainable Development Goals (SDGs) in the Mediterranean, was adopted by the Barcelona Convention COP 19 in 2016. Within its 6 Objectives, 2 focus on CC:

4. Addressing climate change as a priority issue for the Mediterranean; and
6. Improving governance in support of sustainable development. Addressing climate change as a priority issue for the Mediterranean

It calls “for progress towards a green, low-carbon and climate-resilient Mediterranean region….., recognising and protecting the climate adaptation and mitigation services of natural ecosystems; Leverage existing and emerging climate finance mechanisms, including international and domestic instruments...; Encourage institutional, policy and legal reforms for the effective mainstreaming of climate change responses into national and local development frameworks”. The Strategy is complemented by the UNEP/MAP Regional Climate Change Adaptation Framework.

• The Mid-term Evaluation of the Barcelona Convention Action Plan 2012-2019 for the Implementation of the ICZM Protocol (ref.9) found its place and role in two other major UNEP/MAP processes, namely EcAp and Regional Climate Change Adaptation Framework, underlining that its integrative methods and tools offer the most operational management mechanism for implementing and reaching the objectives of both.

• The Union for the Mediterranean first Ministerial Declaration on Environment and Climate Change was adopted in May 2014, and two associated bodies were created, the UfM Working Group on ENV and CC; and the UfM Expert Group on CC; with the UfM Ministerial Conference on Blue Economy – Declaration – 2015, the UfM WG on Blue Economy was set up. The Ministers:
  • Reaffirm the fundamental value of biological diversity, in particular the marine and coastal ecosystems that provide goods and services essential for sustaining the livelihoods of people across the Mediterranean region;
  • Reaffirm their commitment to achieve the Aichi Targets of the Convention on Biological Diversity and the commitments under the Barcelona Convention, in particular relating
to marine protected areas, the ecosystem approach, and the action plan on ICZM. In this context, Ministers welcome the creation by Monaco, France and Tunisia of a Trust Fund for Marine Protected Areas in the Mediterranean, open to all parties.

- The Blue Carbon International Initiative (ref.97) is a global program coordinated by IUCN, the Intergovernmental Oceanographic Commission of UNESCO, UNEP, Conservation International (CI), and supported by GEF-5. It aims to develop global partnerships to mitigate climate change through the restoration and sustainable use of coastal and marine ecosystems, in order to ensure that their carbon benefits are kept, greenhouse gas emissions avoided, and the full range of ecosystem services and functions is maintained and utilized for human benefits. It currently focuses on mangroves, tidal marshes and seagrasses. The Initiative “can incentivize and support the effective management of existing MPAs or creation of new MPAs, and support them financially to incentivize better management of these systems using a variety of climate change policies and financial incentives”. The Blue Carbon Initiative has formed Science and Policy working groups: the International Blue Carbon Scientific Working Group identifies priority research areas, synthesizes current and emerging blue carbon research and provides the scientific basis for coastal carbon conservation, management and assessment; the International Blue Carbon Policy Working Group supports efforts to integrate blue carbon in existing international policy frameworks such as the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention on Biological Diversity (CBD) among others. Significantly, no project has been launched in the Mediterranean basin.

- REDD+ program: The UN’s Reducing Emissions from Deforestation and Forest Degradation is leading CO2 compensations worldwide; it creates a financial value for the carbon stored in forests, and offers financial incentives for developing nations to foster conservation and enhancement of their forest carbon stocks; the concept includes “avoided deforestation”, to which the standing seagrass meadows may apply as carbon sinks for CC mitigation; certainly, the large seagrass meadows in some parts of the Mediterranean (Gulf of Gabes, Balearic isl..) should apply.

- UNDP - Goal 13 in the SDG to 2030 - “13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible “.

- The EU Marine Strategy Framework Directive requires Member States to consider various climate-related factors: changes in sea temperature and ice cover and ocean acidification, mitigation role, as carbon sinks, and also to address climate adaptation.

- Within the context of COP21, the “Because the Ocean” initiative was launched by Monaco, France and Chile and supported by 22 signatory countries (also Morocco and Spain in the Mediterranean). It focuses on the ocean as a relevant climate regulator and
The conclusions from the recent Monaco Blue Initiative in 2016 deal with ocean and climate change and in particular about the role of MPAs. MPAs are a cost-effective instrument for harnessing the ocean’s role in combating climate change, and crucial to the recovery of ecosystems, services and fisheries. As such, although today MPAs are mostly set up according to biodiversity criteria MPA, their creation should be acknowledged as a significant national effort in the global response to climate change, using MPAs as nature-based solutions to climate change. MPAs could also “serve as control areas to look specifically at climate change, because in unprotected marine environments it is difficult to determine the effect of climate change on fisheries, and to separate its impact from that of irresponsible fishing” (F. Simard, IUCN). Noteworthy, C. Lefebvre (France’s Marine Protected Areas Agency) expressed that “while MPAs can’t halt climate change, they can help greatly with adaptation. As Article 7 of the COP21 accord says, countries must enhance adaptive strategies, strengthen resilience and reduce vulnerability to climate change. We should include the climate change issue as a component of all MPA management plans, which today mainly focus on biodiversity” .... “MPAs are already laboratories contributing to science on climate change, allowing observation of temperature changes and migration of species, for instance.”

9.4. Other recent Mediterranean initiatives on MPAs and CC

- IUCN-Med in the framework of the past European MedPAN North project (2010-2013) in cooperation with the RAC/SPA and MedPAN, focused part of its work to give some guidance to MPA managers on how to measure the impact of climate change on the marine biodiversity of protected areas and how to improve the planning for the mitigation of this important threat. The elaborated guide provides key indicators that can facilitate monitoring in MPAs and lead to an understanding of the impact of climate change on their biodiversity. MedPAN, RAC/SPA and other partners organized a regional training workshop (Cadaqués, 2014) to train MPA managers to use this guide. A brochure to better understand impacts of climate change in MPAs was also produced. A strategy to monitor and manage invasive species in Mediterranean MPAs has also been developed with support from IUCN Med and MedPAN; an alert system related to invasive species monitored by MPAs has been set-up (MedMIS).

- In 2016, the GFCM adopted Resolution GFCM/40/2016/2 for a mid-term strategy (2017-2020) toward the sustainability of Mediterranean and Black Sea fisheries. The strategy is linked to SDG 14 and the FAO Strategic Objective 2 and defines five targets and related outputs and actions. In particular, Target 4 (minimize and mitigate unwanted interactions between fisheries and marine ecosystems and environment) foresees activities to cope
Mid-term evaluation (2016) of the Mediterranean MPA Roadmap 2012-2020
and recommendations for 2020

with potential effects of invasive species and climate change on fisheries and on the identification and establishment of new FRAs to protect priority areas as ecologically or biologically significant marine areas (EBSAs), vulnerable marine ecosystems (VMEs), etc. from significant adverse impacts of fishing activities, especially in international waters.

- During the last four years the linkages between the Mediterranean Sea, its MPAs and climate change have been underlined by a number of specialized organizations, e.g. the Blue4Good Sustaining seagrass protection through blue carbon financing in marine protected areas (Vertigo Lab), the LIFEBlue Natura in Andalucia, the MedBioNet campaign with the Conservatoire du Littoral, the MedPAN small project in Montenegro. Noteworthy is the MedPAN and RAC/SPA Training Workshop on Climate Change 2014 (Cap de Creus & Medes) (ref.91), by which steps for strengthening a regional Observatory network on climate change, including MPA collected data, were agreed.

- The T-MedNet project (www.t-mednet.org/), originally developed by the Scandola Nature Reserve and the Institut de Ciències del Mar in Barcelona, is a collaborative platform later extended to Italy and Turkey to monitor sea water temperatures at different depths and other low cost monitoring records, for the early detection of CC changes, with high resolution data in 21 sites across the Mediterranean.

- Coastal wetlands: Coastal wetlands were recognized long before MPAs for their carbon storage and sequestration value, opening the door for wetland managers to explore funding sources towards climate mitigating efforts. IUCN (2016, ref.95) has launched a Revised guide to supporting coastal wetland programs and projects using climate finance and other financial mechanisms, addressing specific coastal wetland issues for example in the context of Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM). MedWet together with Plan Bleu are evaluating ecosystem services in coastal wetlands (projet MEdEscWet as observatory of coastal wetlands). IUCN has also launched a series of webinars called Climate Adaptation Methodology for Coastal and Marine Protected Areas.

9.5. Results from our questionnaires

The Evaluation questionnaires included three questions about MPAs and climate change.

a) The first one, at the National level, asked whether MPAs are included in the national climate change strategies:

- Significantly, out of 90 national respondents, 60% answered “I don’t know”. Certainly, an effort should be done by all national representatives to find out about this possible national opportunity.
- Another 33% responded “NO” and only 6 (from Algeria, Spain and Tunisia) said “YES”, in every case related to the fact that the national plans or strategies against climate change include coastal strategies structured with the rest of sectors and environmental parameters affected; only in one case (Algeria) the National Strategy suggests the establishment of marine protected areas.
b) The second question asked about the use of MPAs as sentinels, monitoring examples, for climate change effects. Responses were “No” (50%), “I don’t know” (10%) and “Yes” (40%); out of these, most relate to studies such as: the European Commission report on the socioeconomic benefits of MPAs; the evaluation of ecosystem services in coastal wetlands (projet MedEscWet by MedWet and Plan Bleu as observatory of coastal wetlands); the economic valuation of the Port Cros National Park; a publication about the application of ecosystem services to fisheries in Spain; or other general MPA projects which might have included monitoring activities. Really, the issue has not yet being specifically grabbed in MPAs, other than by some LIFE projects and by the pioneering examples in the selected case studies, of which 5 were selected to be presented during the MPA Forum in Tangier: the T-MedNET (Garrabou); the long term monitoring case in Columbretes island (Kertsing); the practical case of Port Cros (Binet); the results of the IUCN study on invasive marine species in the Mediterranean (Otero); and the results from the Life Blue Natura Project in Andalucia.

c) The third question asked about MPAs as examples to address the impacts of climate change (e.g. through shared governance, or considering their ecosystem services) and almost all were left blank; the EU answered “The EU presents the experience of several LIFE projects (e.g. LIFE Barge project “Preservation, restoration and valuation of coastal habitats of European interest of the Aiguillon Bay”, or TaCTICS “Tackling Climate Change-Related Threats to an Important Coastal SPA in Eastern England”).

d) Finally, respondents were asked about any idea regarding how the Mediterranean MPAs Roadmap could be updated to integrate climate change challenges, or other international frameworks such as the UN Sustainable Development Goals. A 65% responses were left blank. The rest suggest mitigation of carbon emissions, and some concrete ideas for MPAs as the following:

National level:

a. Use MPAs as sentinels of climate change
b. Support more research regarding the climate change. Monitoring of invasive species. Supporting citizen-science
c. Définir les hot spot en méditerranée et y concentrer le maximum d’effort. La recherche des hot spot pour les diverses espèces devrait être une priorité absolue pour optimiser les efforts fournis à la protection de l’environnement
d. Develop a multidisciplinary Task Force on Climate Change impacts on the Mediterranean

7 More information can be found in the LIFE publications on Climate change (http://ec.europa.eu/environment/life/publications/lifepublications/generalpublications/documents/life_climate_change.pdf - see section 7.1.2) and marine environment (http://ec.europa.eu/environment/life/publications/lifepublications/generalpublications/documents/marine_report.pdf)
e. **Evaluer les benefices financiers des couverts végétaux terrestres et marins (puit et captage de carbone)**

f. **Développer un grand projet autour de l'adaptation au changement climatique, via l'échange des approches/évolutions entre le bassin occidental et oriental de la Méditerranée**

g. **incité les états à intégré les AMP comme outil de monitoring des changements climatiques**

h. Include MPAs into the existing climate change national plans and strategies

i. Increase the education and communication activities

**Regional level:**

a. **Verifier avec les pays que les AMP sont dans les mesures des nouvelles propositions National Determined Contributions de UNFCCC**

b. Monitoring climate and global change (encompassing invasive species) in a network basis

c. Climate change can be taken into account in the process of the establishment of the ecological network and of new MPAs or for the prioritization of the MPA selection process. (Str. Obj. 1); in monitoring and evaluation processes and strengthening of MPA staff skills under Obj.2; in evaluation of ecosystem services under Obj. 3

d. To stop alien species invasion from Egyptian Suez canal, e.g. with the creation of an ecological barrier.

e. The issue could be brought to the attention of the first UfM Working Group on ENV and CC, which should take place in December 2016 or - most probably - January 2017.
10. DONOR ASSESSMENT AND FINANCING OPPORTUNITIES

10.1. Mediterranean region provisions on donors and funding

- The Antalya Roadmap Strategic Objective 4 states “Increase the allocation of financial resources to establish and maintain an ecological network of effectively managed MPAs, in particular: “The status of national and regional financing of MPAs should be regularly presented to the parties of the Barcelona Convention as an indicator of their compliance to the Aïchi Target 20. Donors should be invited to support long term sustainable finance mechanisms. New donors should be identified and mobilised to support MPAs”.

- The Barcelona Convention MPA Roadmap provides:
  - As an Objective, to “Ensure the stability of the system of Mediterranean MPAs by enhancing their financial sustainability”
  - “Invite funding agencies and donors to consider increasing up to appropriate levels the funding for MPAs in the five coming years (2016-2020) to assist Mediterranean countries to upgrade the management of MPAs and to undertake the appropriate steps to urgently increase the surface areas covered by MPAs in the Mediterranean”.
  - “…aims at the contribution to the creation of a trust fund to contribute to enhancing Mediterranean MPAs launched in 2013 by the Governments of France, Monaco and Tunisia. This initiative was welcomed by Ministerial Message conveyed by the Ajaccio High-level Policy meeting organized in the framework of the IMPAC 3”.

10.2. Present funding situation

In general (ref.4, 2015) an annual operating budget of 250 000 euros for a coastal site less than 2000 ha is considered a suitable budget. However, in the Mediterranean only a 30% of the annual operating budget for marine protected areas is covered, versus 48% globally. Disparities between EU and non-EU members bordering the Mediterranean are considerable, since lower governmental financial provisions in non-EU countries may be facing a gap of 20 to 42 million euros each year to effectively manage their sites.

Regarding the sources of funding, the Mediterranean MPA assessment (MedPAN & RAC/SPA, 2012) describes that 89% of MPAs were mainly funded by governments; only 36% of MPAs (29 sites in the sample) reported having an autofinancing component (including Lebanon, Slovenia, Croatia, Turkey, Greece, France and Italy); only 12 MPAs show funding from NGOs and from international donors, and just 8 MPAs receive funds from the private sector (Croatia, France, Greece, Spain, Italy, Slovenia, Lebanon). Over a 70% of MPAs do not have a business plan, but
here EU countries show less development (20%) than non-EU countries (33%) probably because the latter are in higher need of self financing.

10.3. United Nations provisions

- The UN Sustainable Development Goal 13.a asks to “Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible “

- The UN REDD+ program creates a financial value for the carbon stored in forests, and offers financial incentives for developing nations to foster conservation of their forest carbon stocks. But the importance of seagrass meadows as carbon sinks and stocks has recently been underlined, in turn suggesting that the REDD+ should also have a marine application. A LIFE project in Andalusia is researching the role of seagrass meadows as carbon sinks and stocks; IUCN (2016) has also launched a document on mitigation from coastal wetlands. Other international opportunities, as Blue Carbon, also need to be assessed.

- GFCM - In June 2016, the GFCM presented its first comprehensive mid-term strategy (2017-2020) toward the sustainability of Mediterranean and Black Sea fisheries, including the implementation of spatial measures to protect areas in international waters. This strategy is intended to attract external donors to sponsor selected activities.

- The CBD - LIFEWEB initiative is a partner association to finance biodiversity. It aims to assist in the implementation of the 2011-2020 Strategic Plan for Biodiversity and of the Protected Areas work program.

10.4. European Union

The EU contributes to the Mediterranean Basin environment through a number of funding mechanisms and instruments:

- Natura 2000: The European Commission requests to better define the Natura 2000 Network financial needs, to look for innovative financing sources and to develop Natura 2000 financing, using additional tools and European budgets. The European Union recognizes the vital importance of this network in reaching the Aichi objective 11, and is dedicated to make this project as effective as possible; they suggest alternative and complementary sources of funding, such trust funds, profits from tourists, donations and private funds. They could also capture a portion of the entry fees, or ecological tax transfers to municipalities associated with specific activities. The European Commission published a guidance handbook to assist authorities to identify...
the opportunities for EU co-financing of Natura 2000 and encourage these opportunities to be fully incorporated into national and regional funding programmes (2014-2020).

- **EU’s financial instruments from 2014 to 2020** (ref.52) In 2014, the EU adopted a multiannual financial framework for 2014 to 2020 expenditures. Unfortunately, the EU budget share that is allocated to the conservation of natural resources will decline, although Europe remains very involved in this area through various financial tools (most extracts of text taken from Binet et al 2016, ref.4):

  - **Horizon 2020** is a program for research and innovation whose three main points are scientific excellence, industrial leadership and societal challenges. This program is based on an annual call for proposals open to companies, universities, institutions, and provides substantial funding.

  - The **LIFE** program is the EU’s financial instrument supporting environmental conservation, being the most clearly focused on biodiversity. Between 2014 and 2020, the LIFE Program will distribute 3.06 billion euros.

  - The **MED** program is a transnational cooperation program funded by the EU. Its priorities are innovation, environment, territory accessibility and balanced development. To date, 144 projects have been planned and financed by the European Regional Development Fund (ERDF) up to 85%. The North MedPAN project is one of them, it helps financing the MPA via its call for small projects.

  - **EUROPEAID** is a European program for development and cooperation that is dedicated to the environment and sustainable management of natural resources (including energy) with 470 million euros between 2007 and 2010.

  - **INTEGRATED MARITIME POLICY** The EU provides funds to the political priorities within the Integrated Maritime Policy (ref.44), as expressed by the Commission, the Council and the European Parliament under Regulation 508/2014. The funding is implemented through:

    - Annual work programmes with a total budget of EUR 259 million for the 2014-2020 period, which has a budget of EUR 29 million to be spent mainly on calls for tender and calls for proposals

    - EUR 71 million for the 2014-2020 period within the framework of the **EMFF operational programmes**. The EMFF is the fund for the EU’s maritime and fisheries policies for 2014-2020, and is accessible through the Fisheries authorities in each Member State. In particular, the project on integrated maritime policy for the Mediterranean (IMP - MED) is funded by the ENPI South, and aims to provide opportunities to southern Mediterranean neighboring countries, to engage in the development of integrated approaches for maritime affairs.
• The European Union EcApMED 2012-2015 financed projects which paved the way towards the establishment of a joint network of SPAMIs in the open seas (the “Joint Management Action of EC with UNEP/MAP for identifying and creating Specially Protected Areas of Mediterranean Importance (SPAMIs) in the open seas, including the deep seas” project), with three priority sites for engagement: the Alboran Sea, the Adriatic Sea and the Sicily Channel/Tunisian Plateau. Meetings were organized for consultation among the concerned countries, within the framework of the MedOpenSea project coordinated by RAC/SPA and financed by the European Commission.

• The EU Blue Growth strategy, e.g. in the Adriatic is exchanging best practices among managing authorities of marine protected areas. Building on the work of the Adriatic Protected Areas Network (AdriaPAN), it is creating a network of managing authorities of Marine Protected Areas of the Adriatic and Ionian, to exchange best practice and work on measures to improve the ecological status of the seas, developing joint management plans for cross-border habitats and ecosystems, and harmonisation and enforcement of national laws with EU legislation. Also the Mediterranean programme of the IUCN launched a call for projects for implementation between June 2014 and May 2015 focusing on a maritime integrated approach, inspired by the European Commission’s Blue Growth strategy, seeking transnational partnerships to establish a state of the art for the whole program area or for a sub-region (Adriatic, Western Mediterranean…), and to propose orientations for potential future projects. The solution is identified in an innovative approach, which implies the involvement of the key actors in the planning (of conservation measures and fishery regulation) process and the enhancement of any potential socio-economic benefit coming from a sustainable governance of the fishery (Blue Economy).

10.5. Joint strategy

A joint strategy as been launched among the Secretariats of ACCOBAMS, GFCM, IUCN-Med, UNEP/MAP through RAC/SPA, and IUCN, with the collaboration of MedPAN, for the spatial-based Protection and Management Measures for Marine Biodiversity, intended to attract external donors for its implementation.

10.6. Multilateral donors

• The Global Environmental Facility of the World Bank invested an average of $14 million annually between 1992 and 2009 in biodiversity conservation projects. Working through the United Nations Development and Environment Programmes (UNDP and UNEP) and the World Bank as implementing agencies, GEF has provided more than $447 million for the Mediterranean Basin. Of that amount, $175.2 million (26.3 percent) has been devoted to biodiversity projects. The GEF-5 Programme has
supported UNEP -WCMC, UNEP/GRID -Arendal, CI, IUCN, and WWF with 4,5 M$ (2013-2016) in demo-scale local action to restore/protect coastal water quality, quantity, fisheries, and coastal habitat demonstrations of “Blue Carbon” to protect carbon sink “blue forests”. Also, when the CBD COP 10 called for capacity building to support the application of the EBSA criteria, the COP invited the GEF and other donors and funding agencies to extend support for capacity-building to developing countries in order to identify EBSAs, and develop appropriate protection measures in these areas.

- The Critical Ecosystem Partnership Fund (CEPF, ref.84) created in 2000, provides grants to civil society stakeholders in order to protect naturally rich but threatened ecosystems. CEPF investments in the Mediterranean Basin will focus on six priority biodiversity conservation corridors with 50 of the highest priority key biodiversity areas, in general, very much oriented to land conservation. The six corridors are: Southwest Balkans / Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia / Atlas Mountains / Taurus Mountains / Cyrenaican Peninsula / Orontes Valley and Lebanon Mountains. Only a number of these sites contain some of the last remaining pristine coastlines in the Mediterranean Basin. In total, 15 countries will be eligible to receive CEPF funds. Investment in the southern countries presents an important opportunity to protect areas with high biodiversity and high levels of threat. CEPF has received support from the Prince Albert II of Monaco Foundation and the MAVA Foundation for the development of the Mediterranean Basin Ecosystem Profile.

- The Because the Ocean initiative (ref.96) supported by more than 20 signatory countries, focuses on the ocean as a relevant climate regulator and on the critical role it will play in the implementation of the Paris Agreement on climate change; here, it is proposed that funds from donors are used particularly in MPAs.

10.7. Bilateral donors (extracts of text taken from Binet et al 2016, ref.4)

- The French Fund for Global Environment facility (FFEM) assists developing countries in their fight to protect the environment. Its flagship program, the Small Scale Initiative project (SSI) is designed to help players of the African civil society who are heavily involved in the protection of biodiversity.

- The agency for the Italian Development Cooperation aims to ensure (among other things) environmental sustainability.

- AECID (the Spanish Agency for International Cooperation for Development) runs several technical cooperation offices within Spain embassies. Sustainability is part of its scope.

- In the Netherlands, the Matra program is a financial assistance for a democratic and social transition, focusing on one side at countries wishing to join the EU and Arab countries.
• In Norway, NORAD (the Norwegian Agency for Development Cooperation), under the Ministry of Foreign Affairs, selected climate change and biodiversity protection as one of its priorities.

Details for the disbursements from bilateral AID for MPAs from a list of 22 MPAs in some 10 countries both EU and non-EU are shown in ref.4 Table 12, Appendix 5 -last page (8).

10.8. International Foundations and NGOs (extracts taken from Binet et al 2016, ref.4)

• The Prince Albert II of Monaco foundation, launched in 2006, supports public and private initiatives in three priority areas, climate change, biodiversity and water in three regions: the Mediterranean Sea, Polar Regions and the Least Developed Countries (LDCs) as defined by the United Nations.

• The nature foundation MAVA, launched in 1994, is solely dedicated to the protection of biodiversity through three regional programs (Alpine Arc, the Mediterranean, and West Africa) and is a regular supporter to MPA projects in all the Mediterranean basin.

• The Oak foundation, created in 1983, aims to address global, social and environmental issues, specifically those that impact lives of the poorest populations. To date it has distributed 3,000 grants abroad.

• The Total foundation, founded in 1992, is especially dedicated to marine biodiversity. It focuses on long-term partnerships in four areas of activity: solidarity in France, international health, culture and heritage as well as environment and biodiversity

• MedPAN launches every year a call for small MPA projects around the Mediterranean basin.

• The Nature and Discoveries foundation finances association projects for the protection of nature, nature education and raising public awareness. It provides financial assistance ranging from 500 to 10,000 euros.

• International NGOs are active fund-raisers for conservation, and some are donors also, such as the WWF, the Frankfurt Zoological Society or the RSPB-Birdlife.

• The European Fundraising Association (EFA) is a network of 23 fundraising associations whose aim is to strengthen and develop fundraising in Europe.

http://www.medpan.org/documents/10180/0/Study+on+the+sustainable+financing+of+Mediterranean+MPAs/422b548e-3a2d-4b7d-95a3-c4b98c2132cd
10.9. Environmental Funds and MPA Trust Funds

- **National Environmental Funds** exist in some Mediterranean countries (Algeria, Egypt, Greece, Slovenia, Tunisia) or sub-regions (eg. Lebanon, Morocco, Tunisia and the West Bank benefit from the Middle East North Africa Environmental Fund) in order to support environmental objectives; the source of funds may be tools such as airport taxes, environmental fines, protected areas entrance fees, EIA compensations, or even international AID agencies. They are mostly directed to “brown environment” problems (pollution). Information is scattered and not always clear to assess whether the protected areas systems may benefit from these national environmental funds.

- A trust fund for conservation is a long-term investment fund gathering public and private capital, which sole purpose is to finance the conservation of biodiversity. It may be an Endowment Fund, for which the capital is invested in perpetuity in financial markets and where only interests are used, or the so called “Sinking funds” which are 10-20 years funds for which both interests and principal are used. Regional trust funds have existed for several years in other biodiversity hotspots and have shown an undeniable success (eg, the Micronesia Trust Fund, the Caribbean Biodiversity Trust Fund, or the Meso-American Reef Fund) currently representing investments over $ 60 million US. They include institutional investors as well as private foundations. The success of these funds was a useful source of inspiration for the creation of a trust fund dedicated to the development and sustainable management of MPAs in the Mediterranean:

- **The Mediterranean MPA Association (Trust Fund):** was officially announced in 2013 by HSH Prince Albert II of Monaco and the French Minister of Ecology, Sustainable Development and Energy, and also supported by the Tunisian government, and later was announced and welcomed at the 19th COP to the Barcelona Convention (Athens, Feb. 2016), at the same time as adopting the MPA Roadmap. After an initial phase of political declarations of intent, at present this fund is starting its operational launch phase to mobilize public or private large donors. Once implemented, this trust fund will work in complement and coordination with existing mechanisms under the Action Plan for the Mediterranean of the Barcelona Convention. It will aim to support an MPA approach that combines conservation of ecosystems and economic development of local communities. It recently held its second General Assembly (June 2016 in Paris) welcoming new memberships from two countries (Albania and Morocco, who now join France, Monaco and Tunisia), plus four regional organizations (MedPAN, PIM Initiative, RAC/SPA and WWF-Mediterranean) and the Prince Albert II of Monaco Foundation. Other States and organizations could join the Association by the end of 2016.

10.10. Payment for Ecosystem Services (PES)

This relatively new approach in support of nature conservation has been extensively documented, discussed and conceptualized. As an example, a 2011 report from the European Commission on financing Natura 2000 estimated that the cost of the protected area network
management in the EU was at least 5.8 billion euros per year, but benefits generated by the Natura 2000 network services (freshwater, landscapes, CO2 sinks) are in the order of 200 to 300 billion euros per year minimum. An ever-growing amount of economic evidence demonstrates that nature-based solutions are less costly, more fair, and more sustainable. However, the practical application of these mechanisms is just starting; the most developed cases are all found in Latin America; most of them concern the conservation of river basins, where payments or compensations reach land owners who can guarantee the fresh water supply to downstream massive consumers (irrigation, hydroelectrics, cities). Certainly, CO2 compensation mechanisms are also considered a PES; the concept extends to the payment of fees to enter a natural protected area, or the voluntary payment of an added price for an ecological product (eg “ecological” food).

The EU expects the “blue economy” to play a significant role within the central EU policy of promoting jobs and growth; the EU Blue Growth Strategy (ref.43) is a concrete example. Although blue growth must be sustainable, amongst the blue economy stakeholders there are those who view marine protected areas as merely conservation tools to close off parts of the sea to all users, as threats likely to impact negatively on their businesses; and at the same time, blue growth activities that are not properly planned and implemented may have a detrimental effect on marine biodiversity and the marine environment. Despite these possible weaknesses, only due to the novelty of the concept, in the EU the blue growth focus is gaining momentum: the Mapping and Assessment of Ecosystems and their Services (MAES) is an essential component of the EU Biodiversity Strategy, and is being currently connecting with MSFD indicators so that the good status of marine ecosystems would also be measured in terms of their capacity to produce resources/deliver services. MPA ecological services show huge financial possibilities, mostly linked to the landscape and recreational services (tourism industry) and as CO2 sinks through the seagrass meadows; Posidonia may capture 4,58 Tm CO2/ha/year (Rita 2010), equalling a fast growing species of pine (Pinus radiata).
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11. DISCUSSION

11.1 Some real progress in the 4 Strategic Objectives

In estimated quantitative terms, the Roadmap has achieved a general 27% progress since 2012. In spite of the remaining shortbacks, such achievement in just a 4 years period can be considered really satisfactory: this is a mid-term result, in a complex region, and over an ambitious Roadmap which was worded over desired long term objectives. It must be considered that in the international development field, long-term targets are aimed at pointing out a strategic direction but very seldom, if ever, completely achieved: we can recall the Agenda21 (1992); the development commitments made in 2002 at the World Summit on Sustainable Development in Johannesburg and now echoed in SDG13 for 2030; the CBD target for a 10% of MPAs in 2012 and later delayed for 2020; or the general results achieved by ODA worldwide.

- **Strategic Objective 1**: Based on the questionnaires, the increase in protected area coverage and the establishment of new representative MPAs has progressed a 35% during the period, reaching the 7,14 % of the Mediterranean. At this pace, the region may reach the Aichi target of 10% by 2021-2022. Another advanced Roadmap Action in Strategic Objective 1 is 1.3. Biological datasets (43% progress). Some MPAs have significantly progressed on knowledge, completing sets of biological and ecological indicators, and started networking activities at the regional level to monitor global changes.

- **Strategic Objective 2**: Regarding effective MPA management, there is an acceptable result (29%) during the period; a noteworthy fact is North Africa being slightly ahead in the region (31 %). The regional progress mainly responds to the declared improvement of the national legal and institutional frameworks applicable to MPAs, also informed by the online reporting system to the Barcelona Convention, and by which many countries enacted new regulations regarding MPAs. Also declared are communication campaigns, at the national level; and training for management issues, mostly at the regional level.

- **Strategic Objective 3**: Following the questionnaire responses, the effective MPA integration to other sectors improves a 28% during the period, a considerable performance given the complexity of the issue and the ambition of some Roadmap Actions, e.g. “...integrate public policies using ecosystem-based management and territorial planning at National, European and international policies levels” .... or "...regularly identify and progressively replace subsidies which may be detrimental to marine and coastal environments“ between many other. Progress declared in coastal policy integration, inter-institutional agreements, and MPA zoning, is behind the improvements in North African countries.

- **Strategic Objective 4**: Based on the questionnaires, the progress for MPA sustainable financing only scores 15% during the period. Most of this improvement is due to:
- The establishment of a Mediterranean Trust Fund and association for MPAs (2013) which has later received support from the Barcelona Convention COP 19.
- National progress in some countries, particularly in Egypt because of its national policies on environmental taxation; and in Croatia, due to business planning and self-financing in MPAs.
- The accomplishment of a MPA financing regional assessment, and training guides (2015).

This may seem a modest progress, but consider that only four years ago, during the Roadmap preparation Forum in Antalya (2012) a first assessment about the weak financial situation in the Mediterranean MPAs was presented as a first appeal for the reaction of the participant organizations to this crucial issue. A next attempt to estimate the total financial requirements for the Mediterranean MPAs was conducted in a study commissioned by MedPAN (Spergel 2012). Now there is a broad array of literature on business plans, trust funds, funding strategies, and excellent webpages.

11.2. The gap between subregions has narrowed

A relevant conclusion of this Evaluation is the real reduction of the gap that used to separate the different Mediterranean subregions. Overall, North Africa has progressed more quickly than the rest, particularly in moving along Strategic Objectives 2 and 3.

The questionnaire results provide some insight about the performance of individual countries in the Roadmap progress. It is remarkable that some countries which were usually delayed before 2012 have progressed more than the rest during this period, most significantly Algeria, Tunisia, Egypt and to a lesser extent also Morocco, in Northern Africa, and Albania in the Eastern Mediterranean. Significantly, over 50% of all the MPA case studies illustrating the Roadmap progress come from North African countries, revealing a real field-site dynamism in this subregion.

In the EU, some countries already advanced in 2012 have continued progressing at a good pace (France, Italy, Croatia). The case of Malta, topping the bill of country progress, is remarkable. However, these results need be taken as indicative, as the sample size and reliability are not conclusive to rank countries in a robust way.

Neither the progress at the local level can be discussed with the available information, which comes from preliminary and raw data-sets pertaining the “2016 MPA Status” in prep. by MedPAN, RAC/SPA and other partners, due for early 2017. As in other Mediterranean MPA assessments, the sample size even being broad (80 MPAs) is still relatively small, particularly after the establishment of over 200 marine Natura 2000 sites, and also biased to the most capable MPAs (most in the EU countries), which are those responding to the questionnaires.

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At the field level, however, the number and dynamism of studies, initiatives and experiences in the spheres of science and MPA management has grown significantly, same as the exchange of knowledge and field practices between a critical mass of people; a growing list of projects and activities can be checked through the RAC/SPA webpage, the MAPAMED facility and the remarkable updating electronic bulletins from MedPAN.

Overall, the Roadmap progress is marked by a growing MPA coverage, improved datasets and basic information, increased institutional and human capacities (including improved legal and institutional frameworks in many southern countries), closing the gap between subregions, and building the basements for future sustainable funding.

All together, regardless of its variable quantitative level, the direction of this progress is fully coherent with the Roadmap vision and objectives, and yet seems more valuable when compared to the MPA networks in other Regional Seas.

Progress recognized, still some significant lags remain:

11.3. Strategic Objective 1, main remaining challenges:

- **MPA coverage**: The encouraging result of 7.14% MPA coverage in the Mediterranean hides the fact that almost half of it (48.5%) belongs to the Pelagos Sanctuary for cetaceans. For the remaining part, almost 2/3 (64%) belong to the expansion of Natura 2000 marine sites in the EU waters. During the period and according to MAPAMED dataset, only 6 traditional MPAs under national designation have been established, 4 of them in France. In fact, the real increase of traditional MPA coverage is of just 19% as related to 2012, that is, a mere increase of 0.25% of the Sea surface. This shows that the governmental interest for MPAs has not grown as much as the 7.14% figure seems to display. Establishing new MPAs needs more political will; in some countries the legal process to establish an MPA may result in a bureaucratic nightmare: “if everything goes right it may take 24 months, but if some error is done during the process you return to the starting box. At the end you need political will, because other decisions, e.g. on fisheries, can be officialized within just a few days”. In other countries, MPAs were proposed during the period but not established due to general budget constraints, particularly to cover the expected enforcement needs.

- **Arguable representativity**: The representativeness of ecological sub-regions, habitats and species is very variable. From a regional perspective, the current MPA system is not representative of the Mediterranean’s habitat and ecosystem diversity. Most Mediterranean MPAs are coastal, 85% of them being along the northern coasts. The new MPAs have not necessarily been established in unrepresented marine ecosystems, exception done for the N2000 system based on marine habitats, which is a strong ecological basis.

- **Limited knowledge on connectivity**: The knowledge about ecological connectivity between MPAs still stands in its first methodological steps and is being discussed at the scientific
level (otolith chemistry, genetics, climate change scenarios...); an opportune literature review is in progress by MedPAN.

- **Very few no-go, no-take zones:** Recent literature suggests that MPA buffer zones, even subject to more strictly regulated fisheries, do not guarantee the conservation for many species, so more strict no-go or no-take zones (NTZ) are needed. The present figure of 0.04% coverage of strict zones in the Mediterranean remains very low. Research suggests that even small no-take zones can provide more benefits to external fished areas (i.e. spillover, larval export) than large buffer zones. We must acknowledge, however, that broad multiple-use zones inside MPAs certainly constitute an ecological buffer, they also deliver biological results, and most of all should be encouraged as they constitute privileged pilot sites for an improved marine governance; this is in turn useful for overall marine spatial planning and to learn about the control of human activities in the marine ecosystem.

### 11.4. Strategic Objective 2, main remaining challenges:

- **MPA management plans:** The local assessment (MedPAN and RAC/SPA in prep) shows that 53% of the MPAs contacted have a management plan at least partially implemented, and another 20% in preparation, a result only slightly improving that in 2012. However, the data may not be representative of the regional situation as the answers come from the 80 presumably most advanced MPAs in the Mediterranean. In addition, an indeterminate figure (estimated over 70%) of the N2000 marine sites is still orphan of management plans.

- **Monitoring:** Most of the MPAs lack or have a low quality monitoring, which is not always done in and around the sites. This is valid for biological monitoring and even more so for socio-economic monitoring. Although the basic knowledge and datasets has improved during the last 4 years, regular ecological monitoring is still almost restricted to a few MPAs in 4 European countries (refs. 92 to 107). In any case the 10% Aichi indicator does not measure the effectiveness of protected areas in reducing biodiversity loss, which ultimately depends on a range of management and enforcement factors. A number of initiatives are underway to address this limitation (e.g. the Biodiversity Indicators Partnership [http://www.bipindicators.net/pamanagement](http://www.bipindicators.net/pamanagement)).

- **Low field support:** Resources, be them human, material or financial, are often inadequate and cause poor surveillance and control standards; poor law and regulation enforcement are persistent problems and some of the great weaknesses of MPAs in this region. Also, local involvement in management is yet incipient or non-existent in many countries. No “real” fisheries co-management is found in any Mediterranean MPA, mostly because the legal framework of MPAs generally does not allow fishermen to have any formal decision-making power. Over 40% of 26 MPAs investigated (Di Franco et al 2014) do not have any fisheries management plan.
• The risk of paper MPAs: A concern in recent literature is whether “paper MPAs” are desirable. Observers are worried about the risk that countries around the world continue to create marine protected areas, mostly on paper, just to reach the international targets but with no improvement in terms of real protection or in support of sustainable and local economic activities. On top, there is a risk that if just new restrictions and additional layers of institutional requirements are set in place, but without means to enforce them, no perceived results, and with no participation in decision making, marine stakeholders -most notably fishermen- may oppose to collaborate in other future conservation efforts. On the other side, it must be considered that “paper parks”, as already observed in land ecosystems (eg. very large parks in the Amazonian basin) have been useful in avoiding the development of new infrastructures and the issuing of concessions for the exploitation of natural resources (e.g. fishing, mining, hydropower).

11.5. New opportunities for Strategic Objective 3:

MPA integration should take advantage of the most recent international policies: the Contracting Parties to the Barcelona Convention have adopted the Ecosystem Approach (EcAp) and agreed a roadmap for its implementation; together with the European Union the Barcelona Convention has also committed (ref.5) to the ultimate objective of achieving the Good Environmental Status of the Mediterranean Sea (EU MSFD refs. 42, 43). The MSFD is binding to all EU member States. The Union for the Mediterranean Ministerial Conference on Blue Economy requires that MPA networks are coherent and representative. Other macro regional strategies such as the EUSAIR for the Adriatic and Ionian Region (refs. 45 and 85), have been launched along the same lines.

• Ecosystem approach policies should integrate MPAs: The growing relevance of the EcAp and of marine spatial planning (MSP) should translate into support to the existing MPA systems. Observers underline that the first objective of any marine spatial planning should be designating new MPAs in areas which require special protection (especially in the open sea) and enlarging the network of MPAs so it can be representative and connected. MSP and EcAp initiatives would then contribute to the Aichi target by dealing with pressures beyond their borders, and by providing political will for effective MPAs.

• MPAs as pilot sites for EcAp initiatives: On top of biodiversity conservation, MPAs need to better communicate their relevance and gain international recognition as pilot sites with real experience -over 20 years- on improved marine planning and governance, MSP and zoning, in sustainable small-scale fisheries, stakeholder participation, and in long term research and monitoring.

MPA integration into other sector’s policies must be regarded as one of the strongest opportunities for both MSP and MPAs. This win-win deal is important as MPAs are undervalued by decision makers probably because their contribution to the economy, coastal
or marine spatial planning, or to the challenges from climate change, are still both poorly documented and communicated.

11.6. **Funding opportunities to accomplish Strategic Objective 4:**

A consequence of the latter is what recent research suggests: less than a 15% of the financing needs for effective MPA management are covered (Binet et al. 2016, ref.4). Governmental funding and continuity are not guaranteed, in part due to the long financial crisis, but also because MPAs continue to be perceived as a cost, rather than as an investment.

The improvement of financial support to Mediterranean MPAs has been recalled by the Barcelona Convention, inviting funding agencies and donors to increase to appropriate levels the funding for MPAs in the five coming years (2016-2020). Also the GFCM Mid-term Strategy (2017-2020) is intended to attract external donors to sponsor selected activities.

For the moment, the most important multilateral donors in the Mediterranean are the EU and the Global Environmental Facility (GEF). The geographical distribution of funds is however not equitable. The EU targets countries in the northern Mediterranean Basin; other subregions receive support mostly from GEF, and from other multilateral and bilateral agencies, NGOs and foundations, focused on less-developed countries.

In 2014, Europe adopted its financial framework 2014 to 2020; unfortunately, the EU budget share allocated to the conservation of natural resources has declined. However, Europe remains involved in this area through other financial tools: Horizon 2020, the LIFE, the MED programme, even EUROPEAID (if linked to poverty), and the Integrated Maritime Policy attending marine governance and spatial planning projects (with a particular chapter for the Mediterranean). Responding to our questionnaire, the EU underlines its commitment to “Ecosystem Approach within Barcelona Convention aiming at delivery of Good Environmental Status and the establishment of a coherent MPA network”. The EU EcApMED 2012-2015 already financed projects towards the establishment of a joint network of SPAMIs in the open seas (Alboran Sea, Adriatic Sea, and Sicily Channel/Tunisian Plateau); while the EU Blue Growth strategy, eg in Adriatic, is exchanging best practices among MPA managing authorities, and supporting IUCN-Med in MPA projects.

Some donors specifically focus on the Aichi Target 11: the CBD (Lifeweb), the EU (N2000 and LIFE+) and the GEF (EBSAs, Blue Carbon initiative, and SAP BIO in the Mediterranean). Other appropriate sources, although not specifically focusing the Aichi Target 11, are the United Nations (the REDD+ and the future Green Climate Fund), bilateral AID (from France, FFEM, Italy and Spain), and private Foundations (as MAVA, OAK, TOTAL, and Prince Albert).

The opportunities for MPA funding must be also researched in detail for each country; checking the national strategies for biodiversity and for climate change, the fisheries policies, the application of the multiple EU Funds, and other sources which may apply to achieve the Aichi targets.
11.7. **A case of cooperation and collaborative effort:**

Most of the field initiatives undertaken in non-EU countries had some technical and/or financial assistance support from the regional organizations. Without these external resources and without efficient partnership forged with other Mediterranean actors, these results could not have been possible.

The activities proposed by the Roadmap concern all stakeholders and all levels of intervention. Its formulation and progress has been a collective effort including RAC/SPA, MPA managers, relevant agreements and intergovernmental organisations, NGOs, scientists, and the support from the FAO/GFCM, the EU, the Conservatoire du Littoral, and from a number of committed private foundations.

Some governmental organizations had a prominent participation in the development of the projects which root the Roadmap to the field: since 2012, RAC/SPA has been assisting countries in MPA pilot sites, carrying out studies, establishing management and business plans, developing guidelines and training activities. The Conservatoire du Littoral also promoted relevant field work through its Small Islands Initiative in developing countries.

The active collaboration from NGOs in the Roadmap progress needs to be acknowledged. Prominently, during the period 2012-2016 MedPAN, and to a great extent WWF-MedPO, have taken the Antalya Roadmap as their own programme of work. MedPAN has served as a regional hub for MPA knowledge, data and information, assessing progress and lessons learned, supporting small pilot initiatives, producing guidelines and exchanging experiences between MPA managers and their network of national and regional members. While WWF-MedPO, being perhaps the most active marine conservation NGO in the region, participated in a majority of regional MPA initiatives and supported the Roadmap’s field application through a broad number of relevant and locally rooted MPA projects, particularly in the Mediterranean developing countries. Also the IUCN Mediterranean Office has been active with the Roadmap development, particularly focusing on the challenges brought by global change to MPA science and management.

11.8. **An innovating Roadmap, in line, and opportune**

We may ask ourselves how much of the progress achieved in the Mediterranean region is due to the Antalya Roadmap. In fact the Roadmap has not been much acknowledged in other international marine agreements and initiatives since 2012, not even in specialized literature. But really, it has influenced the description of EBSAs in the Mediterranean, the national MPA plans of Malta and of Bosnia and Herzegovina, the 6th World Parks Congress, and most significantly, has inspired and almost constituted the draft for the Barcelona Convention “Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean” (2016). The latter result on itself merits every effort done in the preparation and communication of the Antalya Roadmap since 2012.
The Antalya Roadmap is coherent and complementary with the main initiatives that, along the period 2012-2016, were launched following the international interest on marine ecosystems. Concepts such as the ecosystem approach, blue growth, marine spatial planning, marine integrated governance, have become common objectives to most international marine initiatives. Just the list of governmental commitments to these concepts is overwhelming, responding to the fact that they all share the ecosystem approach and the Aichi Target 11. We found, however, that most of these initiatives, launched after 2012, do not mention the Antalya Roadmap (the UNEP/MAP MidTerm Strategy 2015-2021; the UNEP/MAP MSSD 2016-2025; the Barcelona Convention Regional Climate Change Adaptation Framework (2016); the FAO-GFCM resolution on FRAs/SPAMIs (2013); and any other Regional Seas Convention). However, many of their objectives, actions and proposals are fully in line or almost match those in the Antalya Roadmap (Annex 7). The coincidence is also high (Table 7) with the most relevant international initiatives related to marine conservation.

Recently the CBD expressed interest in the Antalya Roadmap as a creative regional instrument contributing to Aichi target 11. The Roadmap pioneered regional support to the Aichi targets, which were already committed by governments, and helped creating momentum and inspiration, even in a complex context within the region (economic and migratory crisis). In the end, it is not possible to assess the influence of the Antalya Roadmap; it might be said, however, that it has pionnered its field and probably inspired other important processes. In the end, it does not matter who the promoter might have been, but the progress towards the common objectives which in 2010 were adopted by every country through the Aichi targets.

11.9. A good case within the Regional Seas:

In MPA terms, other Regional Seas Conventions (Black Sea, OSPAR, HELCOM) seem to be delayed in relation to the Mediterranean, specially the Black Sea. Most have issued “Roadmaps” for objectives related to pollution, but concerning MPAs, only scattered actions are found; just OSPAR mentions the Aichi target, and only the HELCOM region reached a higher MPA coverage than in the Mediterranean Sea (11.7%, but as in the Mediterranean, it is uneven in geographical distribution and ecological representativity).

It is perhaps the Caribbean CaMPAM which most closely resembles the Mediterranean situation: it is based on the Cartagena Convention, under UNEP Secretariat, with Contracting Parties from a large number of heterogeneous riverine countries, facing important ICZM and tourism growth challenges, and using similar dynamic tools -resembling MedPAN- producing lessons learnt and field guides, exchanging experiences between MPA managers and scientists. CamPAM has also adopted a “2020 Goal” for MPAs and their surrounding regions, in this case targeting the protection of 20% of the Caribbean Sea for 2020.

10 The UN SDG-14, the UN Ocean Sanctuary Alliance initiative; the CBD EBSAs, and its SOI Action Plan 2015-2020; the EU Blue Economy Ministerial Declaration, and the Adriatic-Ionian Blue Growth programme; IUCN’s Promise of Sydney and IMAPANA (International MPA Network); and WWF’s marine policies and strategies.
11.10. **The essential commitment from the Barcelona Convention**

The Antalya Roadmap progress has been ultimately orchestrated by the UNEP/MAP RAC/SPA office in Tunisia, also responsible of fostering the idea and making it possible to prepare a draft roadmap (2015) that, in consultation with relevant regional organizations, could be officially integrated into the regional agenda. RAC/SPA prepared the final Roadmap and eased its adoption by the Contracting Parties of the Barcelona Convention at their COP19 (February 2016) as the “**Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean**”.

Seldom has an initiative from the professional and civil society, let alone as sophisticated as the Antalya Roadmap, been almost completely adopted by the governmental stakeholders. Only 3 years passed between the launching of the Antalya Roadmap by civil society and its adoption by regional governments, exemplifying the unprecedented international interest on marine issues. This binding milestone now allows to commit decision-makers and to influence other international and regional organizations and funding sources. This result might be the single and most significant Roadmap outcome during the period.

12. **ROADMAP GAPS**

As a fair balance to its pioneering character, the Antalya Roadmap today may need updating considering some recent international developments. These gaps were already identified in the ToR for this Evaluation:

- d) The UN Sustainable Development Goals to 2030;
- e) The United Nations Convention on the Law of the Sea (UNCLOS) concerning MPAs in in areas beyond national jurisdiction; and
- f) The recent developments concerning the linkages between MPAs and United Nations Framework Convention on Climate Change (UNFCCC).
- g) The wide international acceptance of the Ecosystem Approach.

12.1. **SDG 14: United Nations Agenda for Sustainable Development 2030**

There is a strong coherence between the long term objective (or Vision) in SDG-14 and that of the Antalya Roadmap. SDG-14 calls to “**Enhance the conservation and sustainable use of oceans and their resources by implementing the legal framework in UNCLOS.**”. SDG-14 incorporates the Aichi 10% target as its only numerical goal, and also calls for improved governance, sectorial integration, and effective management, such as in the Roadmap Strategic Objectives. It includes indicators relevant for the Roadmap, like those pertaining the
ecosystem approach, resilience, reviewed subsidies, and support to artisanal fisheries. And finally, recognizing the present fragmentation of marine governance, it highly recommends to take action and to ensure coordination through the existing regional agreements and conventions. The MPA Roadmap seems to be fully in line with this recent UN agreement (see Section 9.1. and refs. 28 and 29).

12.2. Marine areas beyond national jurisdiction

To comply with the area coverage part of the Aichi Target 11, the Mediterranean Sea needs at least another 3% extra coverage. The possibilities to achieve such a growth in coastal waters, through the establishment of the traditionally small MPAs does not seem possible, while the spectacular increase that would be needed from the Natura 2000 marine sites in the EEZ waters is also unlikely to happen. Thus, more MPAs in the open seas, and including international waters, are needed.

However the juridical procedures to establish MPAs in ABNJ are still under discussion, there is a very strong movement in that direction: almost every significant international or regional marine convention, agreement and organization is interested or engaged in the declaration of protected areas in ABNJ (UNCLOS, CBD-EBSAs, FAO/VME, GFCM/FRAs, the EU, Barcelona Convention, ACCOBAMS, GEF, IUCN and almost every specialized international NGO), suggesting that the issue is mature for a regional coordinated effort. Some experts recommend to build MPAs in ABNJ on the technical side, using the EBSA agreements; also, the similarities between the scientific and technical knowledge required for both the EBSA and FAO/VME processes is leading to increased collaboration between the FAO and the CBD Secretariat on deep sea issues.

The Law of the Sea (UNCLOS 1982) already provides “to protect and preserve rare or fragile ecosystems and the habitat of depleted, threatened or endangered species and other forms of marine life”. However, there is currently no international governance framework for regulating and coordinating MPAs in the High Seas. As States cannot exercise jurisdiction action against non-flag vessels, the effectiveness of any regulatory measure on the High Seas is contingent on the cooperation of all States. The UN is in the process of complementing the UNCLOS (UN GA Resolution 69/292, June 2015) on the “Development of an international legally binding instrument under the UNCLOS on the conservation and sustainable use of marine biological diversity of ABNJ”, also recalled by the SDG-14c, and in which the EU is also participating. Recommendations are to be delivered to the UN General Assembly by the end of 2017, and it is widely hoped that a decision to launch formal negotiations to draft the text of a new treaty based on the PrepCom’s recommendations will be taken by 2018. Experts note that, in case the agreement is not reached in 2018, it should be by 2022 (the UNCLOS 40th Anniversary).

In the Mediterranean Sea, things seem better off than in any other region of the world, including the OSPAR Convention. The Barcelona Convention Biodiversity Protocol applies to all the maritime waters of the Mediterranean, irrespective of their legal condition (either maritime internal waters, historical waters, territorial seas, exclusive economic zones, fishing
zones, ecological zones, High Seas), by which the Convention became the world pioneer when establishing the first protected area embracing the High Seas (Pelagos Sanctuary, 1998). The Convention foresees that such a proposal must be made "by two or more neighbouring parties concerned"; the recognition by other countries (taken by consensus by the Contracting Parties) comes through the decision to include the area in the SPAMI List.

In summary, the Mediterranean Sea holds an outstanding position to expand protected areas into the High Seas. A possible limitation is that, for geographical reasons no point in the Mediterranean is located at a distance of more than 200 n.m. from the closest land or island, so any waters beyond the limits of national jurisdiction (High Seas) would disappear if all the coastal States decided to establish their own exclusive economic zones (or fishing zones or ecological protection zones). The whole issue constitutes focus of an Alliance, already under preparation, between ACCOBAMS, UNEP/MAP-RAC/SPA, GFCM, IUCN-Med and MedPAN, to foster the creation of MPAs in ABNJ.

12.3. Some Roadmap progress on climate change

In 2012, the Roadmap did not particularly identify the challenge that climate change could mean for MPAs, and the importance that MPAs could have for climate change mitigation and adaptation efforts. Only once does the Antalya Roadmap mention climate change, in a local Action (2.2.) related to invasive species.

The questionnaires for this Evaluation asked about “To what extent are MPAs integrated in the National climate change Strategies”; the results are weak or just starting: a 95% of the answers (n=240) were either NO or I DON’T KNOW (only in Algeria are MPAs explicitly mentioned).

However, there was progress from the technical side, with relevant inputs such as:

- The IUCN-Med work on invasive species and producing a Guide for monitoring climate change in MPAs (with MedPAN and RAC/SPA).
- A dedicated training workshop on CC and MPA management developed in 2014 underlined the value of MPAs as biodiversity refuges, climate change sentinels, examples of adaptive management plans, governance coherence, and CC schools.
- During this period a number of field projects in MPA networks were started, and have been selected as case studies for their presentation during the 2016 MPA Forum in Tangier: Blue4Good Sustaining seagrass through blue carbon financing in MPAs; the LIFEBlue Natura in Andalucia; the MedBioNet campaign with the Conservatoire du Littoral; a MedPAN small project in Montenegro; the T-MedNet Project, networking on climate change monitoring.

12.4. Climate change as a new cross-cutting issue in the Roadmap:
During the past few years the political relevance of climate change has mounted and consolidated (Paris 2015), fostering, between other, the strong development of mechanisms to finance mitigation and adaptation activities in developing countries. Regionally, the EU in particular claims to be one of the leading Parties.

The Mediterranean region in particular is one of the most vulnerable, and expected to receive severe impacts from global change. During the period 2012-2016, many international framework initiatives have acknowledged the close relation between climate change and the marine ecosystem, giving way to a spectacular political and institutional support:

- **At the global level**, the UNFCCC is ready to take the oceans as key elements for mitigation and adaptation to climate change; the “Because the Ocean” initiative launched before UNFCCC COP21 in Paris (2015) is already supported by 22 signatory countries. More specific to MPAs, the Blue Carbon Initiative, (UNESCO Intergovernmental Oceanographic Commission, UNEP, IUCN, CI), supported by GEF-5, aims at developing global partnerships to mitigate climate change through the restoration and sustainable use of coastal and marine ecosystems.

- **At the Mediterranean level** the Barcelona Convention launched a “Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas”, which adds to the ICZM Protocol Action Plan 2012-2019 pointing at EcAp and CC, to the UNEP/MAP Mid-Term Strategy 2016-2021 where climate change adaptation is a cross-cutting theme, and to the MSSD asking to “Address climate change as a priority issue for the Mediterranean”. The EU Marine Strategy Framework Directive also includes EcAp and climate change into its main considerations. EcAp and CC are also part of the Union for the Mediterranean Climate Change Adaptation Framework, Ministerial Declarations on environment (Athens, 2014) and on Blue Economy (Brussels, 2015) support the strong links between the marine ecosystem and the climate change concerns.

Indeed, the time has come to update the MPA Roadmap regarding climate change challenges, strengthening the MPA network in their role of sentinel sites, improving management plans to take into account climate change, and considering MPAs both as carbon sinks and adaptation tools, and thus, candidate areas for climate change funding opportunities.

### 12.5. Ecosystem Approach, funding opportunities for MPAs

MPA ecological services display huge financial support possibilities, either linked to the landscape and recreational services (tourism industry) or as CO2 sinks through the seagrass meadows. From current observation of ODA and the GEF, the nexus between climate change and biodiversity is causing an upward trend in total biodiversity-related aid.

Linking MPAs to climate change appears as the main mid-term opportunity: the UN SDG to 2030, Goal 13 calls to “Implement the commitment undertaken by developed-country parties to
The UNFCCC to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible”. The “Because the Ocean” initiative (ref.96) supported by more than 20 signatory countries, focuses on the ocean as a relevant climate regulator and on the critical role it will play in the implementation of the Paris Agreement; here, it is proposed to allocate funding into MPAs.

The UN REDD+ programme is leading forest CO2 compensations worldwide; the concept includes “avoided deforestation”, to which the standing seagrass meadows may apply as carbon sinks for CC mitigation (*Posidonia* may capture 4,58 Tm CO2/ha/year equalling a fast growing species of pine *Pinus radiata*; considering the actual price of 2,57 € / CO2 Tm in the voluntary market, this would mean 1,200€/Km2/year).

An ever-growing amount of economic evidence demonstrates that nature-based solutions are less costly, more fair, and more sustainable. But the practical application of these mechanisms is just starting. A remarkable opportunity is the EU blue growth focus, gaining momentum through the EU Mapping and Assessment of Ecosystems and their Services (MAES) -which is an essential component of the EU Biodiversity Strategy- and through the Blue Growth Strategy (ref.48), which is expected to play a significant role within the central EU policy of promoting jobs and growth, addressing cooperation at regional level in ensuring ecosystem-based activities in maritime spatial planning, on the implementation of the marine framework strategy Directive, and enhancing a trans-border, open-water network of MPAs, including the exchange of best experiences, small scale fisheries, monitoring and enforcement.

In summary, also on funding premises do MPAs need to better communicate their importance and gain international recognition on EcAp, climate change mitigation and adaptation, and conservation of basic ecosystem services for fisheries and for coastal tourism, as much as experienced pilot sites in marine and coastal spatial planning, in improved marine management, in sustainable small-scale fisheries, and long term monitoring. Funding agencies should consider MPAs in this wide sense, and as the Barcelona Convention Parties already asked “to consider increasing up to appropriate levels the funding for MPAs in the five coming years (2016-2020)”.
13. RECOMMENDATIONS TOWARDS 2020

The evaluation ToR asked to deliver recommendations for further efforts to 2020, in particular to attain the Aichi Target 11, and to open the institutional framework of the roadmap beyond the CBD objectives, in line with strategic orientations of related initiatives like the UNFCCC.

The Evaluation discussion opens questions that merit a short reflection: How to increase the MPA coverage to 10% in 2020 and, what type of new MPAs are needed? How to approach their effective management, integration and finance? Should the Roadmap be updated? And, which may be the Forum’s role for the future?

Following the evaluation conclusions, we present a synthesis of the main recommendations for 2020 which, including some ideas and proposals for 2020 which were submitted through the questionnaires (see the consolidated list of ideas for 2020 in Annex 8). The Actions and recommendations already included in the Antalya Roadmap are not repeated here.

13.1. Increased MPA coverage to 2020

To comply with Aichi Target’s 10% surface part, the Mediterranean Sea would need an extra 3% MPA coverage by 2020. This stretch is very unlikely to be reached only by establishing more of the traditionally small MPAs, or through new N2000 sites in the EU waters. The following recommendations are presented for consideration:

a) **Adopt the target of 30% marine protection by 2030:** in 2012 the Roadmap was agreed as a tool to achieve the Aichi target 10% by 2020. However, new challenges arise and the Roadmap may point them out for the future; nowadays scientific evidence supports the full protection of at least 30% of the ocean to reverse existing adverse impacts, increase resilience to climate change, and sustain long-term ocean health. The recommendation to adopt the target of 30% marine protection by 2030 is already included within the strategies of most of the international NGOs specialized in marine issues, and was recently adopted by the World Conservation Congress (2016). The stretch of MPAs to 30% of the world seas should include MPA networks representative enough to deliver outcomes for biodiversity, ecosystem services, food security and livelihoods. The idea seems to be in line with the Ecosystem Approach and with the SD Goal-14 discussion foreseen for the 2017 UN HLPF under the theme “Ensuring food security on a safe planet by 2030”.

b) **Extend the Natura 2000 network into non EU Mediterranean waters:** the main advantages would be, on the one side, an improved MPA complementarity and representativity, based on the list of 36 marine habitats; but most importantly, new and strong north-south cooperation opportunities, as recalled by the Barcelona Convention, and by every EU strategy applicable to the Mediterranean Sea; it would also provide an opportunity to share capacities. It may be articulated based on the Bern Convention, following the experience...
of the Areas of Special Conservation Interest (ASCI) in the Emerald Network, comprised by areas on request of national authorities in non-EU countries of Europe and North Africa. The first steps have been taken, including conversations in Tunisia and a pilot site in Morocco.

c) **Establish MPAs in ABNJ**: As already discussed before, this issue is active in the international agenda and mature for a regional coordinated effort. A new agreement is expected under the UNCLOS, foreseen to be delivered to the UN General Assembly by the end of 2017; however, in the Mediterranean Sea this agreement may not be mandatory, as the Barcelona Convention already pioneered the necessary procedures and is globally cited as a model for protecting areas in ABNJ. Some experts recommend to build MPAs in ABNJ on the technical side, using the EBSA agreements, already achieved in the Mediterranean by the identification of 15 EBSA areas. EBSAs are not MPAs but, preceeded by scientific and political agreements, provide grounds for new MPAs. The GFCM FRAs are also useful starts, and would benefit from including further restrictions (e.g. spills, mining, transportation) to approach the real MPA concept.

d) **Better knowledge**, particularly in the open seas: currently, the preservation of deep sea ecosystems and the creation of MPAs in the open seas are topics of growing importance due to the presence of key habitats and species, but their nature and distribution are still little known and further research is needed.

e) **Peace parks**: have worked well on land. A UNEP-WCMC inventory in 2007 identified 227 transboundary protected areas, just a few being marine; the CBD COP12 in Korea (2014) also issued a Statement for Transboundary Conservation for Biodiversity and Peace. In the Mediterranean Sea it would make a sound approach where marine national jurisdictions are being discussed, and also in areas where one country established an MPA up to the national border and the neighbouring country might wish to do the same. In 2010 the CIESM/ICSEM (International Commission for the Scientific Exploration of the Mediterranean Sea) selected 8 large marine areas straddling both open sea and coastal waters, characterized by key hydrodynamic, biological and geological features. The concept of transboundary or peace parks may also applied to an expansion of Natura 2000 sites into non-EU waters.

f) **Increase the coverage of no-go and no-take-zones**: Either a 10% or a 30% of MPA coverage would not ensure biological results, ecological representativeness, and protection effectiveness. A basic need is the establishment of more NTZ. In the present context, the most promising way forward would be the identification of NTZ within the existing Natura 2000 marine sites.

13.2. **Improved MPA effectiveness by 2020**

It seems more politically demanding to effectively manage MPAs than to merely declare them on paper. “Improving the management effectiveness in the existing MPAs” is the most repeated proposal throughout the evaluation questionnaires ("La grande question est celle de
Indeed, facing this limitation should be one of the priorities to 2020, if not the main one. It poses a significant challenge as in the Mediterranean sea, the unmanaged MPAs outnumber the rest. The time and capacities to cope with this challenge are limited, so the issue should be highly focused and prioritized into a small number of short-term objectives:

a) **Develop management plans for N2000 sites**: The EU is already engaged in the effective management of MPAs under the Natura 2000 network - in accordance with legal requirements under the Habitats directive - with their designation as Special Areas of Conservation and the establishment of conservation objectives and measures to meet their ecological requirements; these areas would also need to adopt the necessary fishery management measures for MPAs in accordance with CFP provisions. The challenges concerning climate change should also be considered into these management plans.

b) **Approach management planning in every other MPA**: a sound way to start planning processes in areas with a weak technical or institutional capacity would be facilitating the cartography of every existing "paper MPA". Basic cartography would mean assessing the ecological features, biological values and administrative limits, in turn allowing to map the use of resources, distribution of impacts, scenarios, zoning and compatibility of uses, in fact to start the participatory processes and MPA planning based on local capacities.

c) **Supporting young MPAs**: For starting MPAs, the sharing of best practices is a clear opportunity; some Mediterranean MPAs with effective management had good results with limited resources. Also, some respondents suggest that young MPA would benefit from setting up minimum standards for effective management and for good governance.

d) **Improved enforcement**: could be pursued by reaching national and local agreements with related institutions, complementing roles and sharing expertise and capacities; and through the use of remote devices to increase the enforcement efficiency.

e) **Monitoring management effectiveness**: The 10% indicator does not measure the effectiveness of protected areas, which ultimately depends on a range of management and enforcement factors. The assessment of protected area management effectiveness should be synthesised into an indicator allowing comparisons through time and space.

f) **A harmonized monitoring system**: Today, just a small number of MPAs in a few countries have monitoring systems in place, usually developed by researchers and generally addressing natural values rather than management needs. In the Mediterranean the available data sets are scarce and, in any case, heterogeneous and discontinuous, making MPA assessment non-viable at each national level, let alone at the Regional level. In other Regional Seas, comparable and updated data have proven still more difficult to find. Progressing towards harmonized monitoring systems, developing a simple and comprehensive set of indicators, starting by management variables at the national level, would provide comparable data sets and facilitate the future assessment and follow-up of the MPA situation, while reinforcing the Mediterranean leadership in MPA conservation.
13.3. Improved MPA integration and sustainability by 2020

a) MPAs as pilot sites of improved marine governance: Concepts as the ecosystem approach, blue growth, marine spatial planning, marine integrated governance, have become common objectives to most international marine initiatives. Because of their multiple objectives, MPAs could be readily added into the new environmental policies around the ecosystem approach, climate change, and the good environmental status of marine waters. On top of biodiversity conservation, MPAs should better communicate their relevance and gain international recognition as demonstration projects with over 20 years of real experience on improved marine governance.

b) Integration of MPAs into non-MPA fields: Conversely, and away from the environmental sector, MPAs can be an excellent management instrument for reaching sustainability in coastal zones and for recent policies and programmes related to MSP, ICZM, coastal tourism, and artisanal fisheries, which may in turn support the MPA systems (thus contributing to the Aichi target) by dealing with pressures beyond their borders, and by providing political will for effective MPAs.

c) Nearby opportunities for MPA integration are provided at different levels:

- Global level: The SDG 2030 Agenda is for the first time considering the marine environment and the ecosystem approach into an overarching sustainability agenda. An opportunity is offered by the foreseen 2017 UN HLPF under the theme “Ensuring food security on a safe planet by 2030” where the SDG14 will be on the agenda together with SDG13 (Climate), and SDG17 (Partnerships).

- Regional level: The recent EU policies (MSFD, MSP, Blue Growth Strategy, Common Fisheries Policy) would benefit from MPAs as field demonstration sites; particularly considering that member states are in obligation to draw up maritime spatial plans - which may include nature and species conservation sites and protected areas - as soon as possible (March 2021 at the latest). EU countries also need to adopt the necessary fishery management measures for MPAs under Natura 2000 in accordance with the new CFP provisions. Additional opportunities are offered by the mechanisms set by GFCM Resolution in 2013 to streamline actions with UNEP/MAP (eg. for the adoption of fisheries measures supporting SPAMIs). Also the UNEP/MAP MSSD 2016-2025 recalls that environmental governance is hampered by “the fragmentation of responsibility, uncoordinated and non-results-based planning and implementation”; MPAs can also be considered as demonstration projects for the implementation of the ICZM Protocol Action Plan.

- National level: Interinstitutional MPA coordination at the national level can be fostered by ad hoc comittees, as existing in some Mediterranean countries, established by Decree and under the authority of either the Ministries of the Interior or the Ministries of Environment, with the participation from planners from the other ministries and other national stakeholders involved in marine
issues. Another interesting case are the “fisheries reserves” in Spain (25 sites to date) established since the late 1980s by the Fisheries authorities to preserve stocks for small scale professional fishermen, and which have gradually focused on biodiversity conservation and the management of recreational activities, approaching the concept of MPAs.

d) **Food security:** International AID agencies should be aware of the multiple objectives of MPAs, and consider them as cases of ecosystem based solutions for food security, collaboration in long-term planning, and live examples of participatory methods, all in interest of poverty alleviation.

e) **MPA ecological services:** MPA ecological services display the most promising financial support possibilities, particularly through their nexus with climate change. The “blue carbon” needs be considered both in the UN REDD+ programme and in the foreseen Green Climate Fund in the UNFCCC; to achieve this, some instrumental agreements are already in place, particularly the “Because the Ocean” initiative paralell to the Paris Agreement and supported by more than 20 signatory countries, and the International Blue Carbon Policy Working Group (UNEP, UNESCO, IUCN, CI, supported by GEF-5) to integrate blue carbon in UNFCCC and the CBD.

f) **Increased complementarity of funding sources:** Achieving the Aichi Target 11 requires a financial effort from governments. This implies, on the one side, consolidating public funding with a view to upgrading MPAs to the autonomous phase, in particular “securing the financial resources necessary to the establishment of MPAs during their initial years” (Barcelona Convention MPA Roadmap, 4.3). However, increased capacities may depend on collaboration as much as on money; the environmental authorities may avoid taking care of every expenses, reducing costs through interinstitutional collaboration, if planning and management were participated by other sectors and levels of authority.

Complementarity also concerns external financing sources:

- In the EU countries, MPAs can try to access support from non-MPA EU funds (such as Blue Growth, structural funds from the EMFF, and Territorial Cooperation programmes);

- In non-EU countries, the role of external funders is yet more crucial, but before matching the national budgets, the donor agencies ask the recipient countries to commit MPA operating budget lines.

- Finally, the MPA regional organizations would also benefit from fostering donors’ complementarity, perhaps through broadening and reinforcing the role of the existing Trust Fund or by calling for regular donor’s meetings on the MPA issue.
14. ROADMAP UPDATE AND PROPOSALS FOR 2020

14.1. Roadmap review, or update

The Antalya Roadmap should be updated in light of fast development of the MPA context during the last four years. At this point, the 2016 edition of the Mediterranean MPA Forum (Tangier, Morocco, 28 November-1 December 2016) is expected to be a key milestone in view of the 2020 deadline of the CBD Aichi targets.

In 2012 the Antalya Roadmap was innovating and ambitious, drawing a very sound future for MPAs. Its four Strategic Objectives have proved a solid basement, in fact been used by most of the later marine initiatives (recall Table 7). A throughout review of the Roadmap now may prove unnecessary, as many of its Actions remain perfectly updated, still need to be fully achieved and will be valid for years. Besides, it may not be possible to follow the same approach for a new text, as it was based on a wide consensus and built over time.

The Antalya Roadmap would however benefit from an update on the new items (SDG, ABNJ, and climate change). The way forward would need to be discussed by the Steering Committee and ultimately, by the participants in the Tangier MPA Forum. Ahead we are proposing possible contents for this update, with some addings into the 4 existing Strategic Objectives, and a possible and complementary “Strategic Objective 5”.

14.2. Possible new Actions within the 4 Strategic Objectives

Strategic Objective 1: recalling our previous section 13.1, to update the deadlines (some were for 2015) and to rephrase accordingly and include within the Regional Actions:

a) New recommendation to adopt the target of 30% protection by 2030;
b) New recommendation on the extension of the Natura 2000 network into non EU Mediterranean waters;
c) New recommendation to increase coverage of no-take-zones;
d) New recommendation on Transboundary or Peace Parks;
e) New recommendation on supporting a scientific working group on representativity and connectivity;
f) New recommendation on supporting the best monitoring systems in order to continue learning, and expand monitoring stations to all marine subregions.
g) New recommendation for the creation of an ecological barrier in the Suez Canal, in order to stop further invasion of alien species into the Mediterranean Sea.
h) Updating 1.11. and 1.13. on improved knowledge and on the establishment of MPAs in the open seas and including international waters (mentioning UNCLOS, CBD-EBSAs and FAO/VME and GFCM FRAs)
**Strategic Objective 2:** recalling our previous section 13.2, to update the deadlines (some were for 2014) and to rephrase accordingly and include within the National Actions:

a) New recommendation to consider the challenges of climate change both in MPA management plans and their monitoring activities.

b) New recommendation to consider water quality issues both in MPA management plans and their monitoring activities, and as central components in future ICZM schemes.

c) New recommendation to reinforce the enforcement of the existing no-go and no-take zones.

d) New recommendation (or unfolding 1.14. on scientific monitoring into Str. Obj. 2) about a harmonized monitoring system (including management) allowing easier and comparable assessment of progress at the Regional level.

e) Updating 2.9. by including the development of management plans for N2000 sites;

f) Updating 2.10. on setting up of minimum standards for effective management and recommendations for good governance;

g) Updating 2.7. about new technologies for marine surveillance and control;

h) Updating 2.8. on monitoring management effectiveness, perhaps by a stand-alone Action;

i) Updating 2.14. (Regional level) on cartography for every delayed and new MPA;

j) Updating 2.18. and include support to sharing of best practices through twinning projects in the Mediterranean (between MPAs with effective management and recently established MPAs);

**Strategic Objective 3:** recalling our previous section 13.3, to update the deadlines (some were for 2015-2017) and to rephrase accordingly and include:

a) New recommendation on MPAs as management instruments to reach sustainability (MSP, ICZM, coastal tourism, artisanal fisheries) which should in turn support the MPA systems;

b) New recommendation on integrating MPAs as demonstration projects for the implementation of the ICZM Protocol Action Plan;

c) New recommendation on MPAs as pilot sites for improved environmental marine governance, for the ecosystem approach and for blue growth strategies;

d) New recommendation to launch a “Blue Growth” large project on socioeconomic benefits of MPAs in their adjacent territories;

e) New recommendation for increased cooperation among EU Member States (and with non-EU countries) for the management of marine N2000 and other MPAs, including making full use of transboundary cooperation opportunities under Interreg and EUSAIR;

f) New recommendation to foster integration of MPAs within the new GFCM ad hoc Working Group on Small Scale Fisheries.

g) Updating 3.1. and 3.8. on zoning, to include no-go and no-take-zones;
h) Updating 3.9. (due for 2015) including a recommendation to establish interinstitutional committees for MPAs at the National level;

i) Complementing 3.11. to include options such as marine protected areas established by other marine-related authorities (eg. Fisheries).

**Strategic Objective 4:** recalling our previous section 13.3, to update the deadlines (some were for 2015-2017) and:

a) New recommendation recalling the commitment made in 1992 by many developed countries to achieve the target of 0.7% of ODA/GNI to developing countries and 0.15% to 0.2% of ODA/GNI to least developed countries;

b) New recommendation to present MPA proposals to the annual call for projects in the EU Horizon 2020 program for research and innovation;

c) Update 4.9. after the new trust fund and association have been established.

**Synergies with the Sustainable Development Goal 14:**

The SDGs were launched after the Antalya Roadmap, and including some of their provisions is interesting in the foreseen Roadmap update, either in its introductory remarks or along its four Strategic Objectives.

The SDG to 2030, for the first time consider the marine environment and the ecosystem approach into an overarching sustainability agenda, in particular SDG Target 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”. The Antalya Roadmap is strongly in line with SDG-14, whose only numerical goal is the Aichi 10% target and which also calls for improved governance, MPA sectorial integration and effective management.

a) The Roadmap would support the Proposal of Indicators for the SDG-14 (UN Economic and Social Council - 08/11 March 2016. E/CN.3/2016/2/Rev.1), many of which, pertaining the ecosystem approach, resilience, reviewed subsidies, and support to artisanal fisheries, were already included in the 2012 Roadmap. The Roadmap would update in 2016 by adopting the following new challenges in SDG-14:

- Taking the 2015 baseline as reference, to increase the percentage of coastal and marine development with formulated or implemented integrated coastal management/maritime spatial planning plans (that are harmonized where applicable), based on an ecosystem approach (follows SDG Action 14.2).

- By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics (follows SDG Action 14.4).
• By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies (follows SDG Action 14.6).

• By 2030, increase the economic benefits to least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism (follows SDG Action 14.7).

• Increase the access for small-scale artisanal fishers to marine resources and markets (follows SDG Action 14.7b) measured as the proportion of national fishery production by country that are catches by small-medium fishery businesses.

b) The Roadmap, recalling the importance of MPAs for marine resilience, recuperation of fish stocks and sustainable management of small-scale fisheries, invites ODA agencies to consider MPAs as relevant cases of ecosystem based solutions for food security, collaboration in long-term planning, and live examples of participatory methods, all in interest of poverty alleviation.

• It is recommended to take stock of the UN High Level Political Forum in 2017 under the theme “Ensuring food security on a safe planet by 2030”, where UN Member States are due to report, on a voluntary basis, on National progress to the the SDG-14, together with SDG2 (Zero 4 Hunger), SDG13 (Climate), and SDG17 (Partnerships).

c) Together with SDG-14, the Roadmap recognizes the present fragmentation of marine governance, and highly recommends to take action and to ensure coordination through the existing regional agreements and conventions, particularly the Barcelona Convention, ACCOBAMS and GFCM.

• Supports the GFCM comprehensive mid-term strategy (2017-2020), presented in June 2016, toward the sustainability of Mediterranean and Black Sea fisheries, including the implementation of spatial measures to protect areas in international waters and to meet the UN SDG-14.


• Recommends to cooperate with other Regional MPA networks to strengthen advocacy at the international level, and to exchange experiences, knowledge and practices at the national and local levels.
14.3. Components for a new Strategic Objective 5

14.3.1. General Objective:

Strategic Objective 5: To open the institutional framework of the Roadmap beyond the CBD objectives, to be in line with other relevant strategic orientations, particularly the United Nations Framework Convention on Climate.

14.3.2. Climate Change

The Mediterranean region is globally recognized as one of the most vulnerable and expected to receive some of the most severe impacts from the effects of climate change. Since 2012 the political relevance of climate change has mounted and consolidated (Paris 2015), fostering, on the one side, the development of new political commitments at the Mediterranean level, and at the global level, the strong development of mechanisms to finance mitigation and adaptation activities in developing countries.

The UNFCCC is ready to take the oceans as key elements for mitigation and adaptation to climate change; the “Because the Ocean” initiative launched before UNFCCC COP21 in Paris (2015) is already supported by 22 signatory countries. The EU Marine Strategy Framework Directive includes EcAp and climate change into its main considerations. More specific to MPAs, the Blue Carbon Initiative, (UNESCO Intergovernmental Oceanographic Commission, UNEP, IUCN, CI), supported by GEF-5, aims at developing global partnerships to mitigate climate change through the restoration and sustainable use of coastal and marine ecosystems.

a) SDG-13: The Mediterranean MPA Roadmap recalls and shares the provisions outlined in the UN Sustainable Development Goal 13 “Take urgent action to combat climate change and its impacts”, in particular by adapting, as needed, the following to the specific case of MPAs:

- Integrate climate change measures into national policies, strategies and planning.
- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
- Implement the commitment undertaken by developed-country parties to the UFCCC to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation and adaptation actions and fully operationalize a Climate Fund both for land and sea.
- Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries.
• Address the impacts of ocean acidification, through enhanced scientific cooperation at all levels.

b) Recognizing the recent regional provisions: The Roadmap shares the new policies developed at the Mediterranean level, particularly within the Barcelona Convention framework:

• “Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas” (2016);
• The “Mid-term Evaluation of the Action Plan for the Implementation of the ICZM Protocol for the Mediterranean (2012-2019)” pointing at the ecosystem approach and to the challenges of climate change;
• The “UNEP/MAP Mid-Term Strategy 2016-2021” where climate change adaptation is a cross-cutting theme;
• The “Mediterranean Strategy for Sustainable Development (MSSD 2016-2021)” focusing on addressing climate change as a priority issue for the Mediterranean;
• The “Union for the Mediterranean” Ministerial Declarations on Environment (Athens 2014) and on Blue Economy (Brussels, 2015) supporting the strong links between the marine ecosystem and the climate change concerns.

c) Acknowledging the MPA ecosystem services: The Roadmap recognizes the importance of MPAs in their provision of ecosystem services, included in terms of compensation, and recommends:

• The recognition of MPAs as a nature-based solution for preserving marine ecosystems that help with climate change;
• Recalls the Promise of Sydney to “Include MPAs in the UN Framework Convention on Climate Change and the UN International Strategy for Disaster Reduction Post Hyogo framework, recognising them as cost-effective solutions for climate change adaptation, mitigation and disaster risk reduction”;
• Fosters the consideration of the “blue carbon” both in the UN REDD+ programme and in the foreseen Green Climate Fund within the UNFCCC. To this end, supporting the “Because the Ocean” initiative, and the International Blue Carbon Policy Working Group to integrate blue carbon in UNFCCC and the CBD;
• Recommends to consider bringing the blue carbon issue to the attention of the first UfM Working Group on environment and climate change, foreseen for early 2017;
• By 2020. to develop a detailed cartography of the Mediterranean meadows classified by their performance as CO2 sinks, in order to produce close estimates about their mitigation services, which may in turn be considered within CO2 compensation funds and markets;
• To quantify the fisheries ecological services from MPAs in association with the UNEP/MAP Plan Bleu, and the partners in the Mediterranean Wetlands Observatory.
• Updating Action 3.12. to explicitly acknowledge climate change.
d) **MPAs as tools for adaptation to climate change:**

MPAs act as carbon sinks, but their most costly component -management- is yet more precious as an adaptation tool. The Roadmap recommends:

- To underline the value of MPAs for CC Adaptation, as:
  - Biodiversity refuges essential for the resilience and faster recovery from disturbance in the Mediterranean Sea;
  - Pilot sites for ecological adaptation, where climate change is included as a component of all the MPA management plans, and its effects studied and foreseen so that management can be regularly adapted to the changing ecological context;
  - Climate change sentinels (research and control samples):
    - Inciting national governments to establish at least one sentinel site per country (encompassing temperatures and invasive species) in a regional network basis;
    - At the Regional level, at least one SPAMI per year should add to the CC monitoring networks being developed at the Mediterranean level; in the future, acting as CC sentinels should be added as complementary criteria for the inclusion of a candidate MPA into the SPAMI List.
  - Improved marine governance: MPAs are best placed to create consensus and awareness about climate change, being a complex issue that requires the involvement of all stakeholders (governments, scientists, NGOs, fishermen, tourism operators, divers...);
  - Climate change “schools” to increase awareness and understanding about its impacts and about the vulnerability of marine biodiversity.

- To support MPAs in order to identify adaptation needs and exchanging and adopting best practices (as recommended in the Barcelona Convention Decision IG.22/6 on CC).

### 14.4. The MPA Forum’s role

Once the Mediterranean countries have adopted the Barcelona Convention MPA Roadmap, a question arises on which may be the future role of the Forum of Mediterranean MPAs. Certainly, the Barcelona Convention MPA Roadmap is binding to the Contracting Parties, but also subject to the timing and procedures affecting the national governments. The Forum’s profile is more agile, independent and flexible, and triggers a unique process during which managers, policymakers, socio-economic actors, civil society and the scientific community tackle and agree on the challenges that MPAs face in the region. The Forum is in a position to, independently and professionally, monitor the implementation of the MPA Roadmap, broadening the support for its development, while proposing innovating ideas.

In relation to the Roadmap, some of the MPA Forum objectives could be:
To support the implementation of the Barcelona Convention MPA Roadmap by fostering complementary efforts from “non-Focal Point” stakeholders (managers, scientific community, NGOs, MPA professionals and socio-economic actors).

To monitor the implementation of the Barcelona Convention MPA Roadmap.

To launch innovating initiatives.

14.5. About the regular assessment of MPAs in the Mediterranean

The status of the Mediterranean MPAs has been assessed in 1997, 2005, 2008, 2012 and 2016 (in prep). The last one today available (2012) can be considered a landmark in its type. All these assessments were documented through questionnaires addressed by RAC/SPA or MedPAN to MPA managers and to MPA authorities at the national levels. Based on the MPA general objectives, each of them has followed a somehow common set of indicators, but the later assessments have incorporated more and more variables, as the availability of information has grown over time.

These assessments have made complex situations understandable and have been instrumental in clearing the MPA situation at the regional level, allowing to identify weaknesses and priorities for future action.

One concern is that the results may be uncomplete or biased; all these assessments have coped with similar methodological limitations:

- The lack of systematized MPA information at the national levels;
- Scarcce data sets and, in any case, hetorogeneous and discontinuous;
- Only the most developed MPAs answer the questionnaires (around 1/3 of the total);
- The regional sample is strongly biassed by the MPAs in the EU countries;
- There might be more than one institution involved (national, local ..) so the answers may include an incomplete mix of resources available in field sites and in city headquarters;
- Governmental responses tend to be on the optimistic side of the spectrum.

Another concern is that, when comparing the contents of these regional assessments, it becomes apparent how the knowledge, complexity and quantity of marine information has mounted over time; the number of marine fields treated increases as the new information available makes them subject of evaluation, while each of them expands on itself creating new subcathegories to fit the ever-growing knowledge. At this point, the task of producing any detailed Mediterranean MPA assessment is getting unapproachable and also difficult to be compared throughout the years.

It seems advisable to narrow the focus into a number of significant MPA-status descriptors, and to synthesize the information needed into a reasonably comprehensive set of indicators - including natural sciences but also socioeconomic factors and management topics, including management effectiveness- making the status and context of MPAs more assessable and allowing comparison between countries and time periods.
A system to regularly assess the Barcelona Convention Roadmap should be set-up, perhaps through a standardized set of indicators at the national level, which may also help to communicate results and to upscale capacities in the more delayed countries. At this point, such an experience may need to cope with national susceptibilities, but would make a honest step forward in support of the Mediterranean Roadmap and the Aichi target as a whole, filling a need in MPA networks not only in the Mediterranean but in every other Regional Sea, and in fact worldwide.

The growth of the international interest about marine conservation and the results of the Antalya Roadmap are promising; the challenges ahead are clear, shared, and are encouraging. Now, the Roadmap, in fact the Barcelona Convention Roadmap, needs to translate into stronger political commitment to develop new integrated management and governance approaches, with further efforts at the national levels as well as greater cooperation, coordination and mutual assistance across the Mediterranean shores.

All this progress, however, will fall short of realism and dynamism unless the committed technical teams from the few regional organizations that have made it possible along the past four years, can be reinforced to face with the new issues and the evergrowing challenges of the Roadmap in a new phase where MPAs need be fostered as sound examples for the ecosystem approach, marine spatial planning, the sustainable development goals, and global change.