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Eleventh Meeting of Focal Points for SPAs

Rabat (Morocco), 2-5 July 2013

**Report of the Eleventh Meeting of Focal Points  
for Specially Protected Areas (SPAs)**

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## **Report of the Eleventh Meeting of Focal Points for Specially Protected Areas (SPAs) (Rabat, 2-5 July 2013)**

### **Introduction**

1. At their Seventeenth Ordinary Meeting (Paris (France), 8-10 February 2012), the Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, invited the Regional Activity Centre for Specially Protected Areas (RAC/SPA) to hold in 2013 the Eleventh Meeting of the Focal Points for SPAs.

2. The meeting was organized from 2 to 5 July 2013, in Rabat (Morocco), at the Hotel Golden Tulip Farah Rabat (Place Sidi Makhlouf, 10000 Rabat, Morocco), with the support of the Moroccan authorities.

### **Participation**

3. All the Focal Points for SPAs of the Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, had been invited to attend the meeting or to designate their representatives. The National Correspondents of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO) had also been invited to the meeting.

4. In addition, the members of the Correspondence Group on Good Environmental Status and Targets (COR GEST) - Biodiversity and Fisheries cluster of the Ecosystem Approach (EcAp), had been invited to a joint session with the Focal Points for SPAs and SAP BIO National Correspondents. The purpose of the session would be to discuss the approaches for defining Good Environmental Status (GES) and to set targets for "Biodiversity and Fisheries" related ecological objectives in the framework of the EcAp of MAP. The joint session (Agenda item 5) was scheduled for 2 July 2013. Moreover, intergovernmental and non-governmental organizations concerned had been invited to designate their representatives to the meeting as observers.

5. The following Contracting Parties were represented at the meeting: Cyprus, Croatia, Egypt, the European Union, France, Greece, Israel, Italy, Lebanon, Libya, Monaco, Morocco, Montenegro, Slovenia, Spain, Tunisia and Turkey.

6. The following institutions and organizations were represented by observers: ACCOBAMS, IUCN-Med, GFCM, MedPAN, Oceana, UNDP-Turkey and UNEP-WCMC.

7. RAC/SPA acted as the Secretariat for the meeting.

8. The list of participants is attached as Annex I to the present report.

### **Agenda item 1 – Opening of the meeting**

9. The meeting was opened on Tuesday, 2 July 2013, at 9.00 a.m., by the representatives of the host country and by the Regional Activity Center for Specially Protected Areas (UNEP/MAP-RAC/SPA).

10. Ms Sabah TAHARI, representing Morocco's High Commission for Waters, Forests and Combating Desertification, welcomed the participants, wishing them a pleasant stay and much success in their work. Underlining that good governance of the Mediterranean ecosystems is a gauge of regional stability, she stated that her country passed a law in 2010 aiming to expand the scope of the legislation of 1934 (which had resulted in the creation of 10 national parks), thereby preserving Morocco's rich biodiversity. She also referred to the inclusion of the National Park of Al-Hoceima in the List of Specially Protected Areas of Mediterranean Importance (SPAMIs), and the identification, with the assistance of RAC/SPA, of the site of the Cap des Trois Fourches. To conclude, the speaker again expressed her wishes for a successful meeting, which she was pleased to say had attracted much interest in Morocco.

11. Mr Abderrahmen GANNOUN, Director of RAC/SPA, welcomed the participants to the meeting and thanked the Moroccan authorities, notably the High Commission for Waters, Forests and Combating Desertification, for the assistance they provided to RAC/SPA in organizing the meeting. He also referred to the general framework and the objective of the meeting, and the challenges the Mediterranean region faced in the fight against the deterioration of marine and coastal biodiversity.

**Agenda item 2 – Rules of Procedure**

12. The internal rules adopted for meetings and conferences of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Related Protocols (UNEP/IG.43/6, Annexe XI) apply mutatis mutandis to the present meeting.

**Agenda item 3 – Election of Officers**

13. On the recommendation of the Secretariat, the meeting unanimously elected the following officers:

Chairperson: Mr Moustafa Mokhtar Ali FOUDA (Egypt)

Vice-Chairpersons: Ms Ivna Vukšić (Croatia)

Ms Amal ABOU HATAB SULTAN (Lebanon)

Rapporteur: Ms Eleni TRYFON (Greece)

**Agenda item 4 – Adoption of the Agenda and organization of work**

14. The Secretariat introduced the provisional agenda distributed as UNEP(DEPI)/MED WG.382/1 Rev. 1, and the annotated version in document UNEP(DEPI)/MED WG.382/2.

15. After reviewing the two documents, the meeting approved the organization of work proposed by the Secretariat, set out in the annotated provisional agenda for the meeting (document UNEP(DEPI)/MED WG.382/2).

16. The agenda was then adopted by the meeting; it is attached as Annex II to the present report.

**Agenda item 5 – Review and discussion of the Approaches for definition of Good Environmental Status (GES) and setting targets for the "Biodiversity and Fisheries" related Ecological objectives in the framework of the ecosystem approach (EcAp) (Joint session)**

17. Mr Abderrahmen GANNOUN, Director of RAC/SPA, pointed out that the work of the meeting regarding this agenda item actually consisted of a joint session involving the focal points for the SPAs and the Correspondence Group on Good Environmental Status (GES)

and targets (biodiversity and fisheries cluster). He informed the participants that Ms Maria Luisa SILVA, Coordinator of MAP, Mr Atila URAS, Programme Administrator of MAP, and Ms Gyorgyi GURBAN, Head of the EcAp project at MAP, all of whom had planned to attend the meeting, were unable to come to Rabat for reasons beyond their control.

18. Ms Gyorgyi GURBAN informed the meeting by teleconference of the objectives of the EcAp process, the seven stages of the corresponding road map, and the progress of the process. She stated that the aim of this meeting was (i) to agree an updated project list of GES and targets, (ii) to identify targets and indicators for which data are available and (iii) to make recommendations of future work.

19. The Secretariat then presented the document UNEP(DEP)MED WG.382/15, Proposed GES and Targets regarding Ecological Objectives on biodiversity and fisheries. The Secretariat explained to the meeting that the biodiversity and fisheries cluster agreed the evaluations of biodiversity as determining GES and targets would cover the following four elements:

- a list of habitats that is representative of the major categories of habitat types
- three groups of species (marine mammals, birds and reptiles) selected from Annex II of the SPA/BD Protocol.

20. The Secretariat also presented the proposals in terms of the geographical coverage, habitats and species to be considered in evaluating the GES and targets for each Ecological Objective.

21. The meeting went on to examine the proposals presented; modifications were made to the proposals based on opinions expressed. The descriptions of GES and the targets, as they were modified by the meeting, figure in Annex III of the present document.

22. During the discussion about Ecological Objective 3, several participants made remarks about the objective, particularly regarding the relevance of the associated indicators, and the importance of continued work with this objective. It was specifically suggested to better adapt the indicators to the managing of fish stocks so that better understanding could be obtained of the state and evolution of the exploited stocks.

23. Additionally, the Executive Secretary of the GFCM informed the meeting that his organization would soon start a project along the same lines as action undertaken by



UNEP/MAP on exploited species. This GFCM project will benefit from the financial support of Italy.

24. Following various oral contributions from participants, the meeting decided to consider the work done so far on this objective as preliminary. It recommended that this Ecological Objective 3 be refined as soon as possible in a joint UNEP/MAP-GFCM action, including through the aforementioned project being launched by GFCM.

25. Several delegations underlined the importance of reinforcing collaboration with international organizations concerned, such as the International Commission for Conservation of Atlantic Tuna (ICCAT) and the International Seabed Authority. Similarly, there is benefit to be gained from drawing on similar exercises carried out in the framework of OSPAR, HELCOM and the implementation of the European Marine Strategy Directive.

26. As for the identification of indicators and targets for which the degree of development and the existing data are considered sufficient to consider their adoption by the next meeting of the Contracting Parties, the meeting agreed that Ecological Objectives 1 and 2 could be submitted for adoption. For Ecological Objective 3, there is a need to review the indicators, the descriptions of GES and the targets in close collaboration with GFCM and ICCAT. Furthermore, collaboration with relevant competent bodies would enhance GES and targets determination for Ecological Objectives 4 and 6.

**Agenda item 6 – Status of implementation of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean**

27. The Secretariat informed the meeting that in advance of the Eleventh Meeting of Focal Points for Specially Protected Areas, both the Coordinating Unit for the Mediterranean Action Plan and RAC/SPA had invited the Focal Points for the SPAs to provide a report on the implementation, in their respective countries, of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (the SPA/BD Protocol). Those reports were foreseen for the period from January 2010 to December 2011, following the format adopted for that purpose at the Fifteenth Ordinary Meeting of the Contracting Parties. Owing to the adoption in 2008 of the Action Plan for the conservation of the Coralligenous and other calcareous bio-concretions in the Mediterranean, the elements related to this action plan should be integrated into the online form for the next countries' reporting period.

28. The Secretariat introduced document UNEP(DEPI)/MED WG.382/3, entitled *Status of implementation of the protocol concerning specially protected areas and biological diversity in the Mediterranean*, for the period January 2010 - December 2011, which constitutes a summary of the reports submitted by the Focal Points of RAC/SPA. These reports had been submitted either through the new online reporting system or as electronic files using the same format as the online system. It was evident from the national reports, compiled by 14 Parties, that significant progress had been made in implementing the Protocol. The aspects best handled were those relating to the regulation of research activities and the regulation or prohibition of all activities likely to have an impact on the SPAs, as well as the launch of impact studies before taking any decisions on activities likely to affect protected areas and/or species and their habitats. Protection and management of species listed in Annex II and III of the Protocol seem to be assured on the legislative level. Few Parties reported on the difficulties encountered in relation with the legislative aspects. The main limiting factors concern financial and technical capacity.

29. As for the SPAs, the institutional arrangements for the overall management of each SPA and for the coverage of both land and marine areas seem to be well-managed in the majority of the Parties. However, there is still work to be done in setting up management plans for the SPAs.

30. The overall number of SPAMIs has increased, with inclusion of eight SPAs in the SPAMI list over the reporting period.

31. Finally, with regards to the action plans for endangered species, those best implemented among the Parties are the action plans for birds, monk seals and marine turtles. Taking all the action plans together, the most activity by the Parties has taken place in the areas of regulation, research programmes and the establishment of SPAs.

32. At the end of the presentation, the representative of Israel stated that the form was quite cumbersome. He recommended consulting other secretariats of multilateral agreements to improve efficiency of the reporting exercise and streamline the process.

33. The representative of Greece underlined the need for a better match between the period covered by the report and the submission of said report, referring to reporting difficulties related to the passage of too much time in between.

34. The representative of Slovenia shared his interest in seeing graphics included in the Secretariat's presentation in order to have an overview of the efforts employed by the Parties to implement the Protocol. He also mentioned the delay in receiving the invitation to submit the national report, the difficulties to gain access to the online system and to fill in the form in a relatively short time period.

35. The Secretariat took note of the various suggestions and indicated that they would be taken into account and would be transmitted to the Coordinating Unit.

**Agenda item 7 – Progress report on the activities of the Regional Activity Centre for Specially Protected Areas**

36. The Director of RAC/SPA gave a brief presentation on the Centre's activities accomplished since the latest meeting (Tenth) of the Focal Points for the SPAs (Marseilles, May 2011), referring to the document UNEP(DEPI)/MED WG.382/4 *Progress Report of the activities of the Regional Activity Centre for Specially Protected Areas (RAC/SPA)*.

37. He stated that the activities had been carried out in conformity with the MAP strategic programme for the five years from 2010 to 2014. He reviewed the main achievements in MAP priority areas in relation to the mandate of RAC/SPA protection of biodiversity, reinforcement of governance, integrated management of coastal zones, and the fight against climate change. The Director also noted the difficulties encountered in implementing the 2012-2013 biennial programme: the lack of financial resources and the delay in implementing some activities due to delays in the availability of MAP funds or to the general regional context.

38. He said that details of these activities will be given under Agenda items 8, 9, 10 and 11.

**Agenda item 8 – Evaluation and updating of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean region (SAP BIO)**

39. The Secretariat informed the meeting of the process of evaluation of the implementation of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean region (SAP BIO) and presented documents: UNEP(DEPI)/MED WG.382/Inf.3, *Report on the evaluation and future orientations of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO)*, and UNEP(DEPI)/MED WG.382/5, *SAP BIO implementation: The first decade and way forward (as reviewed by the National Correspondents of SAP BIO)*. The former document had been fully explained to the same audience during the Fourth Meeting of SAP BIO National Correspondents, held in Rabat, on 1 July 2013 (in the presence of SAP BIO National Correspondents and also Focal Points for SPAs). The latter document was a revised version of document UNEP(DEPI)/MED WG.381/3, previously discussed by the Fourth Meeting of SAP BIO.

40. The meeting made comments on the revision of the working document. A representative expressed her satisfaction with the slight adaptations made to allow harmonization with her national legislation. Greece representative recalled that the text regarding the MPAs roadmap had to be consistent with the discussions of that topic that had taken place under agenda item 9 and under the SAP BIO National Correspondents meeting and the concerns raised there as regard the use of official documents as the only resources for strategic approaches. The meeting praised the addition of a new chapter regarding modalities of implementation, the content of which it considered adequate. The meeting approved the final revised version as a guide for the implementation of SAP BIO priorities between 2014 and 2020 appearing as Annex IV to this report.

**Agenda item 9 – Extension, strengthening and effective management of the marine and coastal protected areas network, including areas beyond national jurisdiction**

**a) Inclusion of sites in the SPAMI List**

41. The Secretariat outlined the SPAMI objectives, the procedure for inclusion in the SPAMI List, and highlighted the SPAMIs included in the List up to 2012. The Secretariat

further informed the meeting that it had received only one request for inclusion in the SPAMI List, from Cyprus concerning the marine turtle reserve of Lara-Toxeftra.

42. In accordance with the procedures laid down in the SPA/BD Protocol, the Cyprus draft proposal had been transmitted for examination to the Focal Points for the SPAs (UNEP(DEPI)/MED WG.382/16).

43. The floor was given to the representative of Cyprus to present the proposed site for inclusion in the SPAMI list.

44. The Cyprus representative highlighted the turtle reserve of Lara-Toxeftra by giving a general description of the area, providing an overview of the habitats and the species of interest found in the area and describing the management plan of the reserve. She indicated that the Lara-Toxeftra zone has been protected since 1989, in virtue of fisheries legislation classifying it as a marine and coastal reserve for the protection of nesting sites of two species of marine turtles, *Caretta caretta* and *Chelonia mydas*. Moreover, the reserve was included in 2011 in the Natura 2000 network as part of the Akamas peninsula. The speaker referred to the project of marine turtle protection launched in 1978, and she discussed its activities and its impact on protection of marine turtles. She also pointed out training activities carried out jointly by the Cyprus Wildlife Society (CWS) and the Department of Fisheries and Marine Research (DFMR), and supported by RAC/SPA.

45. The representative of Oceana reminded the meeting of the importance of having SPAMIs in the open seas.

46. The representative of Egypt indicated that there needed to be a geographically balanced coverage of SPAMIs to be able to reach the goal of 10% by 2020.

47. The Executive Secretary of GFCM raised the question of whether Fisheries Restricted Areas under the auspices of GFCM could be considered protected marine areas.

48. The representative of MedPAN pointed out that a database on protected marine areas in the Mediterranean has been developed in collaboration with RAC/SPA and that it includes sites meeting criteria presented at the Tenth Meeting of Focal Points for the SPAs. She mentioned that this database is on line.

49. The representative of Oceana noted that the most recent establishment of Fisheries Restricted Areas dates back to 2006 and that extra effort is needed to classify new zones.

50. In this context, the representative of GFCM referred to the resolution GFCM/37/2013/1, regarding area-based management of fisheries, which highlighted that the creation of Fisheries Restricted Areas falls within the competence of GFCM and the creation of SPAMIs is coordinated by UNEP/MAP initiatives.

51. The representative of the EU called for better synergy with Regional Fisheries Management Organizations, particularly GFCM and ICCAT (The International Commission for the Conservation of Atlantic Tunas).

52. Regarding Cyprus proposal, the meeting agreed to submit the Lara-Toxeftra marine turtle reserve to the Parties for inclusion in the SPAMI list. The full proposal is presented as Annex V to the present report.

**b) Ordinary periodic review of the areas included in the SPAMI list**

53. The Secretariat informed the meeting of the processes of ordinary periodic review of the areas included in the SPAMI list made over the current biennium in compliance with the procedure adopted by the Contracting Parties. The results of this assessment are presented in document UNEP(DEPI)/MED WG.382/6, *Report on the ordinary periodic review of the areas included in the SPAMI List*. The review concerns the marine reserve of Banc des Kabyles (Algeria), the Habibas Islands (Algeria) and the marine protected area of Portofino (Italy).

54. The meeting accepted the results of the review and recommended keeping the three SPAMIs in the process of the ordinary review.

55. The Secretariat also invited the meeting to examine some proposals for the improvement of the management of the SPAMI list, including those related to adjusting the dates of ordinary periodic reviews.

56. The representative of the EC proposed an interval of five years for the review of the sites on the list. That way, the Secretariat would not have to make ordinary reviews every biennium.

57. The Secretariat responded that this would not conform to the review procedure for SPAMIs adopted by the Contracting Parties in 2008 and that any modification would necessitate a new submission for adoption.

58. The meeting agreed that for the biennium 2014-2015, the sites registered in the SPAMI List in 2001, 2003, 2008 and 2009 would be affected by the ordinary periodic review.

The sites are as follows:

- Port-Cros National Park
- Pelagos Sanctuary for the Conservation of Marine Mammals
- Alboran Island
- Cabo de Gata-Nijar Natural Park
- Cap de Creus Natural Park
- Columbretes Islands
- Mar Menor and Oriental Mediterranean zone of the Region of Murcia coast
- Medes Islands
- Sea Bottom of the Levante of Almeria
- Kneiss Islands
- La Galite Archipelago
- Zembra and Zembretta National Park.
- Archipelago of Cabrera National Park
- Maro-Cerro Gordo Cliffs.
- Marine Protected Area and Natural Reserve of Torre Guaceto
- Marine Protected Area of Tavolara-Punta Coda Cavallo
- Miramare Marine Protected Area
- Plemmirio Marine Protected Area.
- Bouches de Bonifacio Natural Reserve
- Marine Protected Area of Capo Caccia-Isola Piana
- Punta Campanella Marine Protected Area
- Al-Hoceima National Park.

59. Next, the meeting approved the proposals made by the Secretariat for an adjustment of the dates of the ordinary periodic reviews and for the improvement of collaboration and communication in relation to the SPAMI network, as well as for improvement of SPAMI visibility, namely by the creation of a specific logo.

60. In the context of exchange activities and of networking between the SPAMIs, the meeting recommended not duplicating efforts already undertaken by the MedPAN network.

**c) Regional working programme for the coastal and marine protected areas in the Mediterranean, including the High Sea**

**c.1) Strengthening the marine and coastal protected areas network**

61. Under this agenda item, the Secretariat presented the status of activities of the Regional Project for the Development of a Mediterranean Marine and Coastal Protected Areas (MPAs) Network through the Boosting of MPAs Creation and Management (MedMPAnet Project), implemented under the umbrella of the Strategic Partnership for the Large Marine Ecosystem of the Mediterranean (MedPartnership).

62. While recalling the general framework of the project, the Secretariat provided an overview of activities implemented since the project launch in mid-2010, as well as activities foreseen for 2013-2014. The focus was mainly on achievements related to (i) the identification and planning of new MPAs in order to expand the regional network and improve its ecological representativeness, and (ii) activities reinforcing capacity, communication and awareness with a view to improving the management of the MPAs.

63. Following the Secretariat's presentations, the delegations were invited to share their opinions on these activities and to make recommendations for future activities.

64. The representative of Tunisia congratulated the Secretariat for the excellent work accomplished in the context of the MedMPAnet Project. She declared that the results of this work would help in the elaboration of the marine and coastal management plan of the Kuriat Islands, according to a collaborative and participatory process. She added that the MedMPAnet Project will help Tunisia organize a campaign to monitor the nesting of the loggerhead Turtles on the Kuriat Islands.



65. The representatives of Croatia thanked RAC/SPA for its support through the MedMPAnet Project and gave further information on the activities being implemented which are in line with their national needs and priorities.

66. The representative of Montenegro paid tribute to the work of the Secretariat and thanked RAC/SPA for the assistance given to her country within the MedMPAnet Project, in particular in terms of habitat assessment survey and small fishery study. She also emphasized regarding the activity on legal, policy and institutional reforms, that it could be more efficient especially regarding the timeframe and having in mind that Montenegro expressed need for this activity at the beginning of the MedMPAnet Project. Also, she said that Montenegro expect to receive final reports by RAC/SPA regarding finalized activities within the MedMPAnet Project. She, also, stressed hope that collaboration of RAC/SPA with PAP/RAC and CP/RAC in implementing the upcoming "Pilot Project on testing the Ecosystem Approach (ECAP) application of Boka Kotorska Bay" within the framework of the CAMP will be also valuable and successful.

67. The Libyan representative congratulated RAC/SPA on its excellent work in Libya within the context of the MedMPAnet project. He informed the meeting that the results of the Project in Ain Al-Ghazala helped its declaration as new Marine Protected Area. He asked RAC/SPA for further support to promote the extension of the marine part of El Kouf National Park.

68. The representative of Morocco acknowledged the Secretariat's work provided for the identification of priority areas for conservation in her country. She informed the meeting that the project achievements with regards to the Cap des Trois Fourches marine area will help Morocco undertaking appropriate measures towards the creation and development of that site as marine protected area.

69. The representative of the European Union congratulated on the work done by the Secretariat and the efforts provided by all delegations in creating new MPAs. He recalled the importance to reach the 2020 CBD goals by establishing effectively managed, ecologically representative and well connected network of marine protected areas.

70. Several delegates commended the project capacity building activities and pointed out the importance of feedback from trainees with regards to training workshops. They emphasized the need for capacity developing more than capacity building.

**c.2) Creation of Specially Protected Areas of Mediterranean Importance (SPAMIs) in open seas**

71. RAC/SPA made a presentation on the progress of the MedOpenSeas project, which has been funded by the European Commission for a third phase from 2012 to 2015 (UNEP(DEPI)/MED WG.382/Inf.5). The project aims to facilitate the development of SPAMIs in the open seas of the Mediterranean, including areas beyond national jurisdiction. Priority areas during the current third phase are the Adriatic Sea, Alboran Sea, Sicily Channel and Tunisian Plateau. Scientific reports on the marine ecology of the Gulf of Lions were now ready for consideration by the Parties, notably France and Spain (UNEP(DEPI)/MED WG.382/Inf.6-9). Progress under the MedOpenSeas project was critically dependent upon Party engagement. In this context, the countries concerned by each of the priority areas are invited to make consultations on the way forward during sub-regional meetings that should be held in October-November 2013.

72. Tunisia stated that October would be suitable for a meeting on the Sicily Channel/Tunisian Plateau areas and requested a bilateral meeting with RAC/SPA in Tunis.

73. Spain welcomed the Gulf of Lions report and confirmed its positive disposition to contribute to the development of SPAMIs in both the Alboran Sea and the Gulf of Lions.

74. Italy expressed the need to move forward to regional workshops between the States directly concerned by this kind of initiatives.

75. France representative congratulated RAC/SPA for the scientific studies and information documents including those related to the Gulf of Lions (Birds, Cetaceans and Fisheries). She also said that her country is open to advance thinking on this area, while noting that the process of submitting SPAMI reports relies ultimately on the sovereign responsibility of Parties and that discussions should also involve all the competent authorities in the area. She finally noted that the funding issue for pursuing the work in the identified areas of conservation interest arises during the next biennium. France has also stressed that the holding of the Mediterranean workshop on EBSAs is essential and must be made prior to the next SUBSTTA and Meeting of the Contracting Parties to the Barcelona Convention. It will serve to finalize the identification of the areas fulfilling the criteria of marine ecological or biological significant areas that have been validated by the Parties in Hyderabad for the Mediterranean, and their inclusion in a global Directory maintained by the CBD Secretariat to be forwarded to the General Assembly of the United Nations.

76. The European Union confirmed its strong interest in the creation of SPAMIs in the open seas, but warned that MedOpenSeas project funds would be re-allocated to other RAC/SPA activities if Party engagements were not sufficient. The Director of RAC/SPA recommended that countries accelerate the organizing of coordination meetings among themselves.

77. Greece asked to receive potential meeting dates well in advance and commented on the new SeaSketch website, an online portal for participatory MPA mapping.

78. Croatia highlighted the need for further data on the Adriatic Sea.

79. Oceana confirmed its willingness to collaborate to support the conservation of open sea habitats through the MedOpenSeas project.

**c.3) Draft Roadmap towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean Marine Protected Areas (MPAs) by 2020**

80. The Secretariat presented the Draft Roadmap towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean Marine Protected Areas (MPAs) by 2020 submitted to the meeting as document UNEP(DEPI)/MED WG.382/7. She pointed out the objective and the reason behind the elaboration of this draft. She also explained that the roadmap was elaborated through a participatory approach involving main regional and national organizations working on MPAs, MPA managers (MedPAN members and partners) and by all the participants to the MPA Forum.

81. Recalling the vision of the roadmap for 2020 which consist in achieving by 2020 a connected, ecologically representative, effectively managed and monitored network of Marine Protected Areas which ensures the long term conservation of the key components of the marine biodiversity and gives solid support to the sustainable development of the region, the Secretariat underlined that the roadmap defines four strategic objectives and that the activities identified to achieve these strategic objectives will be implemented at local, national and Mediterranean levels.

82. While acknowledging the quality and relevancy of the draft roadmap, the representative of Greece asked for more time to examine the draft and submit comments. She stressed that the roadmap was produced by stakeholders Forum and that for becoming an official document the proper procedures and consultations should formally take place.

83. The representative of Italy, while supporting the roadmap, asked that the implementation process is undertaken in close consultation with the focal points for SPAs.

84. The EU representative mentioned that the draft roadmap in its current state contains precise dates that risk a delay in the roadmap's implementation. Therefore, he reiterated that the EBSA regional workshop organized jointly by CBD and RAC/SPA should be confirmed

85. The Director of RAC/SPA suggested that since the regional work programme for protected marine and coastal areas of the Mediterranean had now terminated, the proposed roadmap could serve as an alternative for countries to meet their commitments to achieve the CBD objectives by 2020.

86. The President of MedPAN Association supported the comments of the RAC/SPA Director, while adding that this roadmap, prepared by the MedPAN network and RAC/SPA, and contributed to by several managers and national and regional partners, can serve as a tool for governments to meet their commitments.

87. The representative of Oceana agreed with both the RAC/SPA Director and the President of MedPAN, while adding that the roadmap is a tool to reinforce the commitments of the Contracting Parties to the Barcelona Convention.

88. Several representatives said that the roadmap in its current form constitutes a good tool for reaching the CBD objectives by 2020.

89. The meeting recommended submitting the roadmap to the MAP Focal Points to envisage its adoption by the CP. However the representative of Greece stressed that her delegation keeps a reservation to submit comments and views to the next MAP Focal Points meeting. The Draft Roadmap is presented as Annex VI to this report

**Agenda item 10 – Conservation and management of species and habitats**

**a) Amendment of Annexes II and III to the SPA/BD Protocol**

90. Under this agenda item, the Secretariat introduced document UNEP(DEPI)/MED WG.382/14 (*Draft Proposals of amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol)*).

91. The Secretariat gave a briefing on the procedure adopted by the Contracting Parties in 2008, for the amendments of Annex II and III to the SPA/DB Protocol. The Secretariat presented also an amendment proposal it received from Italy in conformity with the procedure. The proposal concerned the following cnidaria species:

<i>Antipathella subpinnata</i> (Ellis & Solander, 1786) <i>Anthipates dichotoma</i> (Pallas, 1766) <i>Anthipates fragilis</i> (Gravier, 1918) <i>Leiopathes glaberrima</i> (Esper, 1792)  <i>Parantipathes Larix</i> (Esper, 1790)	<i>Removal from Annex III (concerning the Anthipates genus) Inclusion in Annex II</i>
<i>Callogorgia verticillata</i> (Pallas, 1766) <i>Cladocora</i> spp <i>Ellisella paraplexauroides</i> (Stiasny, 1936)	<i>Inclusion in Annex II</i>
<i>Lophelia pertusa</i> (Linnaeus, 1758) <i>Madrepora oculata</i> (Linnaeus, 1758)	<i>Inclusion in Annex II</i>

92. The floor was given to the representative of Italy to provide the meeting with the rationale of the proposal.

93. The meeting was invited to consider the proposal and make recommendations on the follow up to be given to it.

94. The representative of Spain explained that her delegation supported the proposal and provided additional scientific information to reinforce it. She also expressed the intention of her country to include other species in Annex II.

95. The EU representative asked if GFCM had been consulted concerning the proposed amendment and if the proposed species are included in the management plan on red coral being elaborated within the framework of CGPM. .

96. The GFCM Executive Secretary informed the meeting that the management plan on red coral will be submitted to the next session of GFCM. He stressed the importance of the consultation with GFCM and proposed to ensure that a written notification be sent to GFCM whenever an amendment to the species annex to the SPA/BD Protocol is proposed.

97. He encouraged further coordination in the future among multilateral institutions on such topics and he pointed out that many decisions were taken in GFCM thanks to RAC/SPA contributions.

98. Several participants stressed that such coordination among multilateral institutions and organizations at regional level was primarily the responsibility of RAC/SPA whereas national coordination was the responsibility of Focal Points for SPAs.

99. The representative of Oceana expressed the full support of her organization to the amendments made by Italy. She also noted that the GFCM Action Plan is only for red corals, which are exploited in the Mediterranean region, and that none of the newly proposed species is included in this Action Plan. On the other hand, she stressed the importance of the conservation of black coral species, also to be in coherence with EU interpretation manual of habitats used for the designation of marine Natura 2000 sites and with the MSFD, in which EU countries have chosen black corals as GES indicators.

100. The proposal was approved by the meeting; however the EU representative expressed the reservation of his delegation owed to the need of respecting internal procedures for verification of such proposal.

#### **b) Action Plans for the conservation of threatened species**

101. Under this agenda item, referring to the relevant sections of document UNEP(DEPI)/MED WG.382/4, *Progress Report of the activities of the Regional Activity Centre for Specially Protected Areas (RAC/SPA)*, the Secretariat presented the activities carried out by RAC/SPA since the Tenth Meeting of Focal Points for SPAs, regarding the implementation of the Action Plans for the conservation and management of species (monk seal, cetaceans, marine turtles, cartilaginous fish, marine and coastal birds).

102. After briefing the meeting on activities related to Monk seal and cetaceans, the Secretariat gave the floor to the representative of ACCOBAMS, who updated participants on activities for these species. She provided a thorough account of activities undertaken since the latest SPA Focal Points meeting.

103. The representatives of Cyprus and Croatia provided further information regarding work done on behalf of cetaceans in their countries. They congratulated RAC/SPA and ACCOBAMS for providing support to strengthen the conservation of cetaceans.

104. The Secretariat further presented activities on turtles and bird species listed in the regional action plans. She also shared the results on elasmobranches, including the successful decision (IG.20/5) by the Seventeenth COP of Barcelona Convention to list elasmobranches in the annexes.

105. The Parties pledged support for the implementation of the regional action plans and underlined the importance of availability of further funds for such actions.

#### **b.1) Draft Regional Strategy for the conservation of Mediterranean Monk Seal**

106. After briefing the meeting on activities on Mediterranean monk seals, the Secretariat presented the *Draft Regional Strategy for the conservation of Monk Seals in the Mediterranean* (document UNEP(DEPI)/MED WG.382/9 Rev.1).

107. The Parties were invited to review and adopt the regional conservation strategy and express their level of commitment to its successful implementation.

108. Greece and participants welcomed the structure and the way of addressing the issue by the strategy stressing that most of the proposed objectives and targets are relevant and feasible. For the implementation of the Strategy, Greece recommended that further consideration be given to the timeframe set by the strategy, specially for the establishment of MPAs, that was assessed as unrealistic, in particular because of the administrative steps involved and, further, owing to the procedures for the establishment of the proposed mechanisms, funding of actions and the involvement of volunteers in patrolling.

109. The Executive Secretary of the GFCM recalled that a GFCM recommendation on the monk seal had been adopted, thanks to, inter alia, RAC/SPA having made a significant contribution to the GFCM Scientific Advisory Committee.

110. The meeting invited RAC/SPA to submit the strategy for adoption by the Contracting Parties and to develop funding request to ensure its effective implementation. The Draft Strategy is included in Annex VII to the present report.

**b.2) Draft Updated Implementation Timetables of the Action Plans for the Conservation of Marine Turtles, Birds and Cartilaginous Fishes**

111. The Secretariat presented the document UNEP(DEPI)/MED WG.382/8, *Draft Updated Implementation Timetables of the Action Plans for the Conservation of Marine Turtles, Birds and Cartilaginous Fishes*.

112. The meeting was invited to discuss and adopt these updated implementation timetables, having taken note of the progress made in implementing these action plans for the conservation of species, at national and regional levels (presented in document UNEP(DEPI)/MED WG.382/Inf.11, Status of Implementation of the Action Plans for the Conservation of Marine Turtles, Birds and Cartilaginous Fishes).

113. The EU representative requests to add to the bird calendar tables, other concerned partners such as BirdLife International, ICCAT, etc.

114. The ACCOBAMS Executive Secretary recalled that the Action Plan for the conservation of Cetaceans in the Mediterranean did not have an implementation timetable and hence no updates to be discussed. She expressed the need to create such a timetable for implementation.

115. Generally, France encourages collaboration with other relevant organizations on the subject.

116. The representative of Spain noted that the implementation of these regional action plans should contribute to achieve the related targets of the ecosystem approach process.

117. Egypt recalled the need to make references to the advances made regarding the CITES listing and to involve CITES in further collaboration.



118. The updated implementation timetables were accepted by the meeting and appear as Annexes VIII (Marine Turtles), IX (Birds) and X (Cartilaginous Fishes) to the present report..

**c) Action Plans for the conservation of priority habitats**

119. The Secretariat presented, for each action plan, a synthesis of the activities carried out, referring to the relevant sections of the document UNEP(DEPI)/MED WG. 382/4.

120. Action Plan for the conservation of marine vegetation in the Mediterranean Sea: The Secretariat presented the activities undertaken in the frame of the implementation of the Action Plan for the conservation of marine vegetation in the Mediterranean Sea. The Secretariat explained that several activities planned for the biennium, like organizing the 5th Mediterranean symposium on marine vegetation, had not been organized due to the delay on the availability of MTF fund.

121. Delegates congratulated RAC/SPA for its efforts and asked for the work to be continued.

122. Action Plan for the conservation of the coralligenous and other calcareous bio-concretions in the Mediterranean: The Secretariat mentioned the activities undertaken in the context of the Action Plan for coralligenous and other calcareous bio-concretions in the Mediterranean. The Secretariat recalled that several activities planned for the biennium, like organizing the second Mediterranean Symposium on coralligenous Formations had not been organized due to the delay on the availability of MTF fund.

123. The representative of the Secretariat indicated also that Key habitats like seagrass meadows and coralligenous were taking into account in the ecological field survey and rapid assessments undertaken in the framework of MedMPAnet Project.

124. The representative of the Secretariat told the meeting that a project concept form on key habitats inventorying and mapping in order to extend the SPAMIs network has been drafted and submitted in December 2012, to the MAVA Foundation. He also announced that the MAVA Foundation board had expressed its interest to support the submitted project and had asked RAC/SPA to develop the full project proposal.

125. Action Plan concerning species introduction and invasive species in the Mediterranean Sea: Under this agenda item, the Secretariat described activities carried out in the context of implementation of the Action Plan concerning species introductions and invasive species in the Mediterranean Sea, as presented in document UNEP(DEPI)/MED WG.382/4.

126. The representative of the Secretariat pointed out that due to the lack of funds, RAC/SPA activities under this Action Plan has focused on the development of the online database on marine invasive species in the Mediterranean sea (MAMIAS, www.mamias.org), in collaboration with Hellenic Centre for Marine Research (HCMR). He informed the meeting that a demonstration of the online database would be made under the agenda item 11.a.

127. Several delegations took the floor to congratulate RAC/SPA on its activities and to emphasize the need to maintain and update the database.

**c.1) Draft Action Plan for the conservation of dark assemblages of the Mediterranean Sea (marine caves, canyons, etc.)**

128. The Secretariat present the *Draft action plan for the conservation of dark assemblages of the Mediterranean Sea (marine caves, canyons, etc...)* submitted under the reference UNEP(DEPI)/MED WG.382/10 and explained that an ad hoc was organized to discuss the draft proposal of the action Plan thanks to the support of the French Agency of Marine Protected Areas.

129. Several delegations took the floor to congratulate RAC/SPA for the preparation of the Action Plan and emphasized that the title was in contradiction with the scope and the content of the Action Plan. The meeting agreed to set up a working group for the elaboration of a new title.

130. The representative of France informed the meeting that she supported the adoption of this Action Plan which was a response to a request made during the last focal points meeting. She informed the audience about the activities undertaken by the French Agency for Marine Protected Areas tasked with the acquiring of new knowledge on marine caves in the framework of CARTHAM programme.

131. The meeting accepted the Draft Action Plan with some changes as contained in Annex XI to this report

**c.2) Draft Preliminary Reference List of Pelagic Habitat Types in the Mediterranean Sea (between the surface and 200 m depth)**

132. Under this agenda item, the Secretariat has introduced document UNEP(DEPI)/MED WG.382/11 Towards the Identification and Draft Reference List of Pelagic Habitat Types in the Mediterranean Sea.

133. The meeting was invited to review and discuss the document and make recommendations on the way forward in order to develop a comprehensive reference list of pelagic habitat types in the Mediterranean region.

134. The representative of Spain congratulated RAC/SPA on its work, which was a significant tool and she suggested that satellite data should be validated by field data. She demanded to clarify the matrix indicated in the table of page 16 and to improve the scientific justifications about this table.

135. The representative of the European Union noted that in the northern western basin, in-situ data were available annually and satellite data could be used in areas where no regular data were available.

136. The Executive Secretary of ACCOBAMS welcomed RAC/SPA's initiative and encouraged continuing work to establish the exhaustive reference list.

**Agenda item 11 – Other activities**

137. a) Activities related to the collection, compilation and dissemination of information:  
The Secretariat, referring to the relevant sections of document UNEP(DEPI)/MED WG.359/4, gave a presentation on the activities conducted by RAC/SPA and introduced the marine Mediterranean invasive alien species database (MAMIAS), while explaining the context of its elaboration, its objectives and its various modules.

138. Several delegations took the floor to congratulate RAC/SPA on this database and to emphasize the need to maintain and update the database and exchange data with other global and regional databases on alien species.

139. The representative of Greece said that in order to include new species, RAC/SPA should look for the engagement of citizen scientists through awareness raising.

140. The Executive Secretary of MedPAN pointed out that network of MAP managers could contribute to data collection for the database in collaboration with IUCN-Med in the framework of the future scientific strategy of the MedPAN network and based on the Guide on the scientific monitoring of invasive species in MPAs produced by IUCN-Med.

141. The Secretariat made a demonstration of the Web Application Standard Data Entry Form (SDF) 2.0 and of the Mediterranean Geographical Information System on Biodiversity (MedGIS).

142. The representative of Greece suggested to enhance the MedGIS application, specifically the description of the presented layers, including clear reference to their sources.

143. The Executive Secretary of MedPAN made a presentation of the online database of Marine Protected Areas in the Mediterranean (MaPAMed), established in collaboration with RAC/SPA, and gave an overview of the data contained and the ways and means of their collection.

144. The representative of the WCMC made a presentation on the World Database on Protected Areas (WDPA) and enquired about the possible update of the WDPA through MaPAMed and in particular for the countries that were not within the EIONET network.

145. Several delegations took the floor to congratulate RAC/SPA on the developed tools and asked for further assistance for their use.

146. The representative of the Secretariat concluded by exposing the planning activities for the next biennium referring to the relevant document UNEP(DEPI)/MED WG.359/12.

147. b) Activities related to climate change and its impacts on marine and coastal biodiversity in the Mediterranean: The Secretariat presented the work on indicators for monitoring the impact of climate change in MPAS as reflected in the document UNEP(DEPI)/MED WG.382/Inf.13 *Current status of climate change impact indicators on marine biodiversity in the Mediterranean Marine Protected Areas*.

148. Reference was done to the methodology followed to select the most promising indicators in terms of practicality and the technical complexity faced by the experts. The elaboration of details for each indicator through descriptive files was also explained to the audience. The RAC/SPA remarked that the realisation of such work had been done with very limited resources and had comprised two expert workshops in collaboration with IUCN Med.

149. The progress of RAC/SPA in this field was congratulated by Parties, who encouraged the Centre to continue working in this field and to exchange with the Secretariat of the UN Framework Convention on Climate Change to enhance collaboration.

150. c) Biodiversity related activities to implemented under the CAMP programmes (Coastal Area Management Programmes) led by the Regional Activity Centre for Priority Actions Programme (RAC/PAP): Under this agenda item, the Secretariat informed the meeting on Biodiversity related activities implemented in Montenegro and Spain, under the Coastal Area Management (CAMP) Programmes led by the Regional Activity Centre for Priority Actions Programme (RAC/PAP).

151. The representative of Montenegro expressed gratitude to all relevant RACs in supporting the implementation of CAMP. She stressed that, due to the lack of the fund for supporting the CAMP, RAC/SPA participated by supporting biodiversity study (as a document) and also data from the MedMPAnet Project particularly from habitat assessment surveys, contributed for the establishment of GIS database for the purpose of CAMP. She mentioned also that upcoming activity is the realization of the "Pilot Project on testing the Ecosystem Approach (EcAp) application of Boka Kotorska Bay" within the framework of the CAMP and that Montenegro is grateful that RAC/SPA will participate in collaboration with PAP/RAC and CP/RAC in this activity.

152. The representative of Spain expressed her gratitude to RAC/SPA for its support in the implementation and completion of CAMP Almeria.

153. France's delegate remarked the importance to consider the land-sea links in the implementation of the Protocol and the SAP BIO, and recommended to keep working on behalf of coastal and island species even in the current constraining economic situation. She recalled the support provided by the Conservatoire du Littoral Français and la Tour du Valat.

**Agenda item 12 – Extended Functional review of UNEP/MAP System, including the Regional Activity Centre for Specially Protected Areas**

154. The Director of RAC/ASP briefly informed the meeting of the main results of the extended functional review of the UNEP/MAP system, as decided by the Seventeenth Meeting of the Contracting Parties, which took place in Paris in February 2012. The Director also briefly discussed the status of the assessment process of proposed reforms.

155. The participants took note of the options presented by the functional review. Several participants took the floor to emphasize the importance of the position of the RAC/SPA Scientific Director. This post, suspended for the period 2012-2013, is intended to enhance coordination of the scientific work of RAC/SPA and ensure more exchanges with the scientific bodies of other conventions and international organizations. The post should therefore assist RAC/SPA to better cope with the challenges ahead.

156. While thanking RAC/SPA for the presentation, France recalled that discussions are underway in other bodies of the Barcelona Convention, including the last meeting of the Bureau of MAP, which examined these institutional and financial issues. These decisions will certainly affect the programme of work of RAC/SPA for the next biennium, but it is not up to the Focal Points for SPAs to decide on the options presented. At this stage, pending a possible decision on the subject by the Parties at Istanbul COP, it is the decisions of the Paris COP that prevail and RAC/SPA Focal Points should attempt to prioritize the activities of the programme of work in a spirit of rationalization of available funds and developing synergies between relevant organizations in the region.

157. It has been recalled that the decision concerning the follow-up to the proposals of the functional review are the responsibility of other MAP bodies, notably the meetings of the MAP Focal Points and the Contracting Parties, that would have to decide on this by the end of 2013. It has been suggested to forward a clear message to the next meeting of the MAP Focal Points to emphasize the need to reinstate the post of the RAC/SPA's Scientific Director and to stress the importance of biodiversity conservation as an issue that deserves further emphasis in the Mediterranean region.

**Agenda item 13 – Programme of the Regional Activity Centre for  
Specially Protected Areas for 2014-2015**

158. The Secretariat presented the draft general guidance for the programme of work of RAC/SPA for the next biennium 2014-2015 included in the document UNEP(DEPI)/MED WG.382/13. She indicated that the detailed working programme and budget would be developed later in order to take into account the results of the extended functional review of UNEP/MAP system.

159. The representative of the European Union recalled the need for the elaboration of MoU with ICCAT as a relevant actor and proposed to include this matter within the proposed activities under the Subject (III) related to Biodiversity for 2014-2015 biennium.

160. The secretariat informed the meeting that the proposal of ACCOBAMS to prepare an implementation timetable for cetacean action plan would be taken into account within the planned activities of 2014-2015 biennium appearing in the Annex XII.

**Agenda item 14 – Any other matters**

161. No other matters were raised for discussion.

**Agenda item 15 – Adoption of the Report of the Meeting**

162. The Meeting reviewed the draft report prepared by the Secretariat, modified it and adopted the present report.

**Agenda item 16 – Closure of the Meeting**

163. After the customary exchange of courtesies, the Meeting was closed on Friday, 20 June 2011 at 6.20 p.m.





## **Annex I**

### **List of Participants**



## List of Participants / Liste des Participants

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**Annex II**

**Agenda**



## Agenda

- Agenda item 1 – Opening of the Meeting
- Agenda item 2 – Rules of Procedure
- Agenda item 3 – Election of Officers
- Agenda item 4 – Adoption of the Agenda and organization of work
- Agenda item 5 – Review and discussion of the Approaches for definition of Good Environmental Status (GES) and setting targets for the "Biodiversity and Fisheries" related Ecological objectives in the framework of the ecosystem approach (EcAp) (Joint session)  
[With the contribution of the Group of Correspondence on Good Environmental Status (GES) and Targets (COR GEST) / Biodiversity and Fisheries cluster]
- Agenda item 6 – Status of implementation of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean
- Agenda item 7 – Progress report on the activities of the Regional Activity Centre for Specially Protected Areas
- Agenda item 8 – Evaluation and updating of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean region (SAP BIO)
- Agenda item 9 – Extension, strengthening and effective management of the marine and coastal protected areas network, including areas beyond national jurisdiction
- Agenda item 10 – Conservation and management of species and habitats
- Agenda item 11 – Other activities
- Agenda item 12 – Extended Functional review of UNEP/MAP System, including the Regional Activity Centre for Specially Protected Areas
- Agenda item 13 – Programme of the Regional Activity Centre for Specially Protected Areas for 2014-2015
- Agenda item 14 – Any other matters
- Agenda item 15 – Adoption of the Report of the Meeting
- Agenda item 16 – Closure of the Meeting



## **Annex III**

**Proposed GES description and targets for the following Ecological Objectives (EOs) in the framework of the Ecosystem Approach: EO 1 (Biodiversity), EO 2 (Non-indigenous species), EO 3 (Harvest of commercially exploited fish and shellfish), EO 4 (Marine food webs) and EO 6 (Sea-floor integrity)**



**Proposed GES description and targets for the following Ecological Objectives (EOs) in the framework of the Ecosystem Approach: EO 1 (Biodiversity), EO 2 (Non-indigenous species), EO 3 (Harvest of commercially exploited fish and shellfish), EO 4 (Marine food webs) and EO 6 (Sea-floor integrity)**

**GES description and targets with regard to Ecological Objective 1 (Biodiversity)**

Proposed GES description and targets for Key coastal and marine habitats

<b>Operational objective</b>	<b>Indicator</b>	<b>Proposed Description</b>	<b>Proposed Targets</b>
<b>1.4 Key coastal and marine habitats are not being lost</b>	1.4.1 Potential / observed distributional range of certain coastal and marine habitats listed under SPA protocol <sup>1</sup>	The habitat is present in all its natural distributional range.	<p><b>State</b> The ratio Natural / observed distributional range tends to 1</p> <p><b>Pressure</b> Decrease in the main human causes of the habitat decline</p>
	1.4.2 Distributional pattern of certain coastal and marine habitats listed under SPA protocol	The distributional extent is in line with prevailing physiographic, hydrographic, geographic and climatic conditions.	<p><b>State</b> Decline in habitat extension is reversed and the extension of recovering habitats shows a positive trend.</p>
	1.4.3 Condition of the habitat-defining species and communities	The population size and density of the habitat-defining species, and species composition of the community, are within reference conditions ensuring the long term maintenance of the Habitat	<p><b>Sate</b> No human induced significant deviation of population abundance and density from reference conditions<sup>2</sup></p> <p>The species composition shows a positive trends towards reference condition over an increasing proportion of the habitat(for recovering habitats)</p>

Geographical Scale: The assessments should be made at national level and used to compile subregional (and where possible regional) assessments. The subregional assessments shall be compiled for each of the four Mediterranean subregions used for the initial assessment carried out within the framework of the EcAp process.

Habitats to be considered:

Biocoenosis of infralittoral algae (facies with vermetids or trottoir),  
Hard beds associated with photophilic algae,  
Meadows of the sea grass *Posidonia oceanica*,

<sup>1</sup> The meeting proposed that this indicator should refer to natural distributional range instead of potential distributional range

<sup>2</sup> Reference conditions should be defined for the habitats to be considered under EO1

Hard beds associated with Coralligenous biocenosis and semi dark caves,  
Biocoenosis of shelf-edge detritic bottoms (facies with *Leptometra phalangium*),  
Biocoenosis of deep-sea corals,  
Seeps and biocoenosis of bathyal muds (facies with *Isidella elongata*).

Natural monuments listed by the Marine Vegetation Action Plan<sup>3</sup>: Barrier reefs of Posidonia, organogenic surface formations, terraces (platforms with vermitids covered by soft algae) and certain Cystoseira belts.

Upwelling areas, fronts and gyres.

This is an indicative list, the meeting recommended that the habitats to be considered should be given further consideration (particularly regarding the pelagic habitats) within the framework of the elaboration of the integrated monitoring for each of the four Mediterranean subregions.

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<sup>3</sup> The Action Plan for the conservation of marine vegetation in the Mediterranean Sea has been adopted by the Eleventh Ordinary meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Malta, 27-30 October 1999).



**Proposed GES description and targets for Marine Mammals:**

<b>Operational objective</b>	<b>Indicator</b>	<b>Proposed Description</b>	<b>Proposed Targets</b>
<b>1.1 Species distribution is maintained</b>	1.1.1 Distributional range	<p><u>Cetaceans</u>: Not relevant</p> <p><u>Monk Seal</u>: Monk Seal is present along all Mediterranean coasts with suitable habitats for the species.</p>	<p><b>State</b> <u>Cetaceans</u> Not relevant</p> <p><u>Monk Seal</u>: The distribution of Monk Seal remains stable or expanding and the species is recolonizing areas with suitable habitats.</p> <p><b>Pressure/Response:</b> Human activities<sup>4</sup> having the potential to exclude marine mammals from their natural habitat within their range area or to damage their habitat are regulated and controlled.</p> <p>Conservation measures implemented for the zones of importance for cetaceans</p> <p>Fisheries management measures that strongly mitigate the risk of incidental taking of monk seals and cetaceans during fishing operations are implemented.</p>
	1.1.2 Area covered by the species (for sessile/benthic species)		
<b>1.2 Population size of selected species is maintained</b>	1.2.1 Population abundance	The species population has abundance levels allowing to qualify to Least Concern Category of IUCN. <sup>5</sup>	<b>State</b> Populations recover towards natural levels.
	1.2.2 Population density	<p><u>Cetaceans</u>: N/A</p> <p><u>Monk Seal</u>: Number of individuals by colony allows to achieve and maintain a favourable conservation status<sup>6</sup></p>	<b>State</b> Continual recovery of population density

<sup>4</sup> Seismic surveys, marine noise generating activities, fishing, maritime traffic, etc.

<sup>5</sup> A taxon is Least Concern when it has been evaluated and does not qualify for "Critically Endangered", "Endangered", "Vulnerable" or "Near Threatened"

<sup>6</sup> To be applied at local level and not at national scale

<p><b>1.3 Population condition of selected species is maintained</b></p>	<p>1.3.1 Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates)</p>	<p><u>Cetaceans:</u> Species populations are in good condition: Low human induced mortality<sup>7</sup>, balanced sex ratio and no decline in calf production <u>Monk Seal:</u> Species populations are in good condition: Low human induced mortality, appropriate pupping seasonality, high annual pup production, balanced reproductive rate and sex ratio</p>	<p><b>State</b> Decreasing trends in human induced mortality</p> <p><b>Pressure/Response</b> <u>Cetaceans:</u> Appropriate measure implemented to mitigate incidental catch, prey depletion and other human induced mortality <u>Monk Seal:</u> Appropriate measures implemented to mitigate direct killing and incidental catches and to preclude habitat destruction.</p>
<p><b>1.4 Key coastal and marine habitats are not being lost</b></p>	<p>1.4.1 Potential / observed distributional range of certain coastal and marine habitats listed under SPA protocol</p>		
	<p>1.4.2 Distributional pattern of certain coastal and marine habitats listed under SPA protocol</p>		
	<p>1.4.3 Condition of the habitat-defining species and communities</p>		

Geographical Scale: For cetaceans the assessments should be made at the Mediterranean level and at national level whenever possible. For the Monk seal assessments should be made at national and subregional scale.

<sup>7</sup> Baseline data are required.

Marine mammal Species to be considered (in alphabetical order):

- *Balaenoptera physalus* Fin whale
- *Delphinus delphis* Common dolphin
- *Globicephala melas* Long-finned pilot whale
- *Monachus monachus* Monk Seal
- *Physeter macrocephalus* Sperm whale
- *Stenella coeruleoalba* Striped dolphin
- *Tursiops truncatus* Bottlenose dolphin

**Proposed GES description and targets for Birds:**

<b>Operational objective</b>	<b>Indicator</b>	<b>Proposed GES Description</b>	<b>Proposed Targets</b>
<b>1.1 Species distribution is maintained</b>	1.1.1 Distributional range	The species continues to occur in all their Mediterranean natural habitat ,	<b>State</b>  No significant shrinkage in the population distribution in the Mediterranean in all indicator species,  and for colonial-breeding seabirds (ie, most species in the Mediterranean): New colonies are established and the population is encouraged to spread among several alternative breeding sites <sup>8</sup> .
	1.1.2 Area covered by the species (for sessile/benthic species)		
<b>1.2 Population size of selected species is maintained</b>	1.2.1 Population abundance	The species population has abundance levels allowing to qualify to Least Concern Category of IUCN. <sup>9</sup>	No human induced decrease in population abundance. Population recovers towards natural levels where depleted.  The total number of individuals is sparse enough in different spots.
	1.2.2 Population density	Population density allows to achieve and maintain a favourable conservation status	<b>State</b> Continual recovery or maintenance of population density in enough different spots to allow resilience No decrease in population density in new/ recolonized critical habitat (for recovered populations)

<sup>8</sup> This is recommended by the conservation plans of some taxa (Audouin's G, Lesser-crested T)

<sup>9</sup> A taxon is Least Concern when it has been evaluated and does not qualify for "Critically Endangered", "Endangered", "Vulnerable" or "Near Threatened"

<b>1.3 Population condition of selected species is maintained</b>	1.3.1 Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates)	Species populations are in good conditions: Natural levels of breeding success & acceptable levels of survival of young and adult birds.	Population models point to long-term maintenance of populations of all taxa, particularly those with IUCN threatened status  Incidental catch mortality is at negligible levels, particularly for species with IUCN threatened status.
<b>1.4 Key coastal and marine habitats are not being lost</b>	1.4.1 Potential / observed distributional range of certain coastal and marine habitats listed under SPA protocol		
	1.4.2 Distributional pattern of certain coastal and marine habitats listed under SPA protocol		
	1.4.3 Condition of the habitat-defining species and communities		

Geographical Scale: For Birds the assessments should be made at national, subregional and Mediterranean level, and where possible at population level.

Bird species to be considered: (in alphabetical order):

- Calonectris diomedea* (Scopoli, 1769)
- Chroicocephalus genei* (Breme, 1839)
- Hydrobates pelagicus* (Linnaeus, 1758)
- Larus audouinii* (Payraudeau, 1826)
- Phalacrocorax aristotelis* (Linnaeus, 1761)
- Puffinus mauretanicus* (Lowe, PR, 1921)
- Puffinus yelkouan* (Brünnich, 1764)
- Sterna bengalensis* (Lesson, 1831)
- Sterna nilotica* (Gmelin, JF, 1789)
- Sterna sandvicensis* (Latham, 1878)

**Proposed GES description and targets for Reptiles:**

<b>Operational objective</b>	<b>Indicator</b>	<b>Proposed GES Description</b>	<b>Proposed Targets</b>
<b>1.1 Species distribution is maintained</b>	1.1.1 Distributional range	The species continues to occur in all its natural range in the Mediterranean , including nesting, mating, feeding and wintering sites.	<p><b>State</b> Turtle distribution is not significantly affected by human activities</p> <p>Turtles continue to nest in all known nesting sites</p> <p><b>Pressure/Response</b> Protection of nesting turtle nesting sites.</p> <p>Human activities<sup>10</sup> having the potential to exclude marine turtles from their range area are regulated and controlled.</p>
	1.1.2 Area covered by the species (for sessile/benthic species)		
<b>1.2 Population size of selected species is maintained</b>	1.2.1 Population abundance	The population size allows to achieve and maintain a favourable conservation status	<p><b>State</b> No human induced decrease in population abundance Population recovers towards natural levels where depleted.</p>
	1.2.2 Population density	N/A for Mediterranean marine turtles	N/A for Mediterranean marine turtles
<b>1.3 Population condition of selected species is maintained</b>	1.3.1 Population demographic characteristics (e.g. body size or age class structure, sex ratio, fecundity rates, survival/ mortality rates)	<p>Low mortality induced by incidental catch<sup>11</sup>,</p> <p>Favourable sex ratio and no decline in hatching rates</p>	<p><b>Response</b> Measures to mitigate incidental catches in turtles implemented</p>

<sup>10</sup> Uncontrolled use of turtle nesting sites, fishing, maritime traffic, etc.

<sup>11</sup> Baseline data are required.

<b>1.4 Key coastal and marine habitats are not being lost</b>	1.4.1 Potential / observed distributional range of certain coastal and marine habitats listed under SPA protocol		
	1.4.2 Distributional pattern of certain coastal and marine habitats listed under SPA protocol	Increasing distribution of nesting sites	The species recovers historical nesting sites
	1.4.3 Condition of the habitat-defining species and communities		

Geographical Scale: The assessments should be made at national and Mediterranean scales for nesting activity and at Mediterranean level for the population size and condition.

Turtle species to be considered:

*Caretta caretta* (Linnaeus, 1758)

*Chelonia mydas* (Linnaeus, 1758)

*Trionyx triunguis* (Forsk. 1775)

**GES description and targets with regard to Ecological Objective 2 (Non-indigenous species)**

Operational objective	Indicator	Proposed GES Description	Proposed Targets
<p><b>2.1 Invasive non-indigenous species introductions are minimized</b></p>	<p>2.1.1. Spatial distribution, origin and population status (established vs. vagrant) of non-indigenous species</p>	<p>Introduction and spread of NIS linked to human activities<sup>12</sup> are minimised, in particular for potential IAS</p>	<p><u>State</u> The number of species and abundance of IAS introduced as a result of human activities<sup>13</sup> is reduced.</p> <p><u>Pressure/Response</u></p> <ul style="list-style-type: none"> <li>- Improved management of the main human related pathways<sup>14</sup> and vectors of NIS introduction (Mediterranean Strategy for the management of ballast waters, early warning systems, etc.)</li> <li>- Action plans developed to address high risk NIS, should they appear in the Mediterranean.</li> </ul>
	<p>2.1.2 Trends in the abundance of introduced species, notably in risk areas</p>	<p>Decreasing abundance of introduced NIS in risk areas</p>	<p><u>State</u> Abundance of NIS introduced by human activities<sup>15</sup> is reduced to levels giving no detectable impact</p>
<p><b>2.2. The impact of non-indigenous particularly invasive species on ecosystems is limited</b></p>	<p>2.2.1 Ecosystem impacts of particularly invasive species</p>	<p>No decrease in native species abundance, no decline of habitats and no change in community structure that have been generated by IAS via competition, predation or any other direct or indirect effect.</p>	<p><u>Pressure/Response</u> Impacts of NIS reduced to the feasible minimum</p>
	<p>2.2.2 Ratio between non-indigenous invasive species and native species in some well-studied taxonomic groups</p>	<p>Stable or decreasing proportion of NIS in the different habitats</p>	<p><u>State</u> To be set upon species choice and their related impact degree of the invasive upon the indigenous ones, taking into account the role of Climate Change in accelerating the establishment of NIS populations.</p>

<sup>12</sup> Excluding introduction through the Suez Canal

<sup>13</sup> Excluding introduction through the Suez Canal

<sup>14</sup> Excluding introduction through the Suez Canal

<sup>15</sup> Excluding introduction through the Suez Canal



Geographical scale:

The assessments should be made at subregional scale.

Species to be considered:

Cluster of IAS shall be identified by subregion within the framework of the integrated monitoring.

### GES description and targets with regard to Ecological Objective 3 (Harvest of commercially exploited fish and shellfish)

Note: the meeting of the SPA Focal Points recommended to consider the work done so far on the Ecological Objective 3 as preliminary and to refine it jointly with GFCM and ICCAT.

Operational objective	Indicator	Proposed GES Description	Proposed Targets
<b>3.1 Level of exploitation by commercial fisheries is within biologically safe limits</b>	3.1.1 Total catch by operational unit <sup>16</sup>	Total catch does not exceed the Maximum Sustainable Yield (MSY) <sup>17</sup> .  Remark: If only landings by commercial fleet are considered, the total catch would not reflect all the fish biomass removed from the stock, since IUU and recreational fishing may generate significant taking in some stocks. However data on IUU and recreational fishing are missing for most areas and stocks.	MSY
	3.1.2 Total effort by operational unit <sup>18</sup>	Total effort does not exceed the level of effort allowing the Maximum Sustainable Yield (MSY). It includes the effort deployed by commercial fleet and estimated effort from recreational fishing and IUU operators.	Fishing effort does not exceed the level of effort allowing the MSY
	3.1.3 Catch per unit effort (CPUE) by operational unit	Stable or increasing CPUE <sup>19</sup>	Stable or positive trend.
	3.1.4 Ratio between catch and biomass index (hereinafter catch/biomass ratio).	The catch/biomass ratio allows to recover the stock or to maintain it at a level where it can produce the Maximum Sustainable Yield (MSY) Remark: This ratio can be calculated only if regular sampling programmes are carried out by the countries	
	3.1.5 Fishing mortality	Fishing mortality in the stock does not exceed the level that allows MSY ( $F \leq F_{MSY}$ )	$F_{0.1}$

<b>3</b>	<b>2</b>	<b>T</b>	3.2.1 Age	Size structure of the stocks allows	Average size of fish
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<sup>16</sup> Operational Unit should be replaced by GFCM's GSA

<sup>17</sup> MSY: The largest annual catch that may be taken from a stock every year without affecting the catch of future years

<sup>18</sup> Operational Unit should be replaced by GFCM's GSA

<sup>19</sup> Not to be applied for gregarious species such as small pelagic. For other species, if CPUE data are not available at Operational Unit level, CPUE at the stock level will be considered.

	structure determination (where feasible)	to maintain or to reach the Maximum yield-per-recruit	caught > average size at maturity.
	3.2.2 Spawning Stock Biomass (SSB)	The spawning stock biomass (SSB) is at a level capable of providing MSY or higher	

#### Geographical scale:

As part of the guidance for a common methodology to be used by clusters, the ECAP Coordination Group recommended that scales should be national and when possible regional (Mediterranean) and transboundary or sub-regional. Currently, around half of the Mediterranean countries have stock assessments for some of the stocks being fished on their national waters.

Under GFCM, stock assessments are made by Geographical Sub-Areas (GSA) established as management units in 2001 and amended in 2009 (RESOLUTION GFCM/33/2009/2). The GSA delimitation is mainly based on practical considerations rather than on the stock distribution, and many stocks extend beyond the geographic limits of GSAs. However, although the concept of their delimitation still needs further consideration, the GSAs, as established by GFCM appear as the most appropriate subdivisions for stock assessments for management purposes in the Mediterranean Sea. They are also adopted for assessments at national level.

#### Species to be considered

Considering that most of the Mediterranean fisheries are multi-specific with a limited number of fisheries targeting only one species, the determination of GES for EO3 within a context of an Ecosystem Approach should be based on the assessment of the adopted indicators for a set of species belonging to different trophic levels. Considering the above criteria, the following species are proposed to be considered:

		<b>Pelagic/ Demersal</b>	<b>Province</b>
<i>Thunnus thynnus</i>	High trophic level fish predator	Pelagic	Neritic/ Oceanic
<i>Xiphias gladius</i>	High trophic level fish predator	Pelagic	Neritic/ Oceanic
<i>Engraulis encrasicolus</i>	Planktivorous fish	Pelagic	Neritic
<i>Sardina pilchardus</i>	Planktivorous fish	Pelagic	Neritic
<i>Merluccius merluccius</i>	Predator fish, (lives between 70 and 370 m)	Demersal	Neritic
<i>Mullus barbatus</i>	Predator Fish (medium trophic level) (Sand and soft bottoms at depths less than 100 m)	Demersal	Neritic
<i>Mullus surmuletus</i>	Predator Fish (medium trophic level) (Lives on broken and rough grounds but found also on sand and soft bottoms at depths ranging from 5 to	Demersal	Neritic/

	400 m)		
<i>Parapenaeus longirostris</i>	Crustacean	Demersal	Oceanic
<i>Scyliorhinus canicula</i>	Predator fish	Demersal	Neritic/ Oceanic
<i>Nephrops norvegicus</i>	Crustacean	Demersal	Neritic/ Oceanic

### GES description and targets with regard to Ecological Objective 4 (Marine food webs)

Operational objective	Indicator	Proposed GES Description	Proposed Targets
4.1 Ecosystem dynamics across all trophic levels are maintained at levels capable of ensuring long-term abundance of the species and the retention of their full reproductive capacity	4.1.1 Production per unit biomass estimates for selected trophic groups and key species, for use in models predicting energy flows in food webs	Production per unit biomass allows for levels of energy flows in food webs that sustain the long-term abundance of the species and the retention of their full reproductive capacity	Quantitative targets may be established if baseline information will be available. (Remark: modelling energy flows in food web requires a significant amount of data) <sup>20</sup>
	4.2.1 Proportion of top predators by weight in the food webs	The ratio of top predators to the rest of the food web is at level that will not have long-term adverse effects on food web dynamics and related viability	Threshold may be established if baseline information will be available.
	4.2.2 Trends in proportion or abundance of habitat-defining groups	The population size and density of the habitat-defining species are at levels ensuring the long term maintenance of the ecosystem	No [human induced] decrease in population abundance and density  The species shows a positive trends in population abundance and density (for recovering ecosystems)
4.2 Normal proportion and abundances of selected species at all trophic levels of the food web are maintained	4.2.3 Trends in proportion or abundance of taxa with fast turnover rates	Taxa with fast turnover rates significantly contribute in maintaining food web dynamics	The partitioning of biomass among trophic levels is adapted to the trophic structure of the ecosystem

<sup>20</sup> The use of MTI ( Marine Trophic Index) is recommended for the areas with accurate data about fishery catches.

Geographical scale:

Considering the knowledge gaps on food webs in Mediterranean ecosystems and the impact of the continuous change in species composition induced by NIS, in particular in the Eastern Basin, the GES description and Targets for EO4 should be addressed at subregional level.

## GES description and targets with regard to Ecological Objective 6 (Sea-floor integrity)

Operational objective	Indicator	Proposed GES Description	Proposed Targets
<b>6.1 Extent of physical alteration to the substrate is minimized</b>	6.1.1 Distribution of bottom impacting activities	Limited distribution/extent of bottom impacting activities	All most important bottom impacting activities are regulated.
	6.1.2 Area of the substrate affected by physical alteration due to the different activities	Limited surface area of the substrate affected by bottom impacting activities (for sensitive substrate types)	Surface area of each substrate type affected by bottom impacting activities is reduced from current levels.
<b>6.2 Impact of benthic disturbance in priority benthic habitats is minimized</b>	6.2.1 Impact of bottom impacting activities in priority benthic habitats	Impact of bottom impacting activities on priority benthic habitats is minimized	No priority benthic habitat impacted by bottom impacting activities
	6.2.2 Change in distribution and abundance of indicator species in priority habitats	The population size and density of the habitat-defining species are at levels ensuring the long term maintenance of the Habitat	<b>Sate</b> No human induced decrease in population abundance and density  The species shows a positive trends towards reference conditions in terms of population abundance and density (for recovering habitats)

### Geographical scale:

The assessments for the determination of GES and targets in relation to the Ecological Objectives 6 (Sea-floor integrity) will be made at subregional level.

### Sensitive substrates and Priority benthic habitats to be considered:

A list of sensitive substrates shall be defined for each of the 4 subregions taking into account its specificities

From the list of habitat to be considered for Ecological Objective 1 (Biodiversity), the habitats that are vulnerable to bottom impacting activities will be considered for the Ecological Objective 6 (Sea-floor integrity)





## **Annex IV**

**SAP BIO implementation: The first decade and way forward  
(As reviewed by the National Correspondents of SAP BIO)**

Note:

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of RAC/SPA and UNEP concerning the legal status of any State, Territory, city or area, or of its authorities, or concerning the delimitation of their frontiers or boundaries.

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## **SAP BIO implementation: The first decade and way forward** **(As reviewed by the National Correspondents of SAP BIO)**

### **1. Introduction**

The Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO) was adopted on 14 November 2003 in Catania by the Contracting Parties to the Barcelona Convention to cope with the complex threats to which marine and coastal biodiversity is subject in the Mediterranean. It took 3 years to elaborate, starting from 2001, as part of a wide-ranging process based on consultations with the countries to diagnose the state of marine and coastal biodiversity, to identify national priorities and to craft a National Action Plan for each of the priority themes. The results of the national consultations were compiled to craft a regional SAP BIO element that would back up and coordinate the National Action Plans.

The actions identified by SAP BIO as having priority concerned seven main axes:

1. inventorying, mapping and monitoring Mediterranean marine and coastal biodiversity
2. conserving sensitive sites, species and habitats
3. assessing and mitigating the impact of threats to biodiversity
4. developing research to improve knowledge and fill in gaps regarding biodiversity
5. developing skills to ensure technical assistance and coordination
6. information and participation
7. increasing awareness.

In the SAP BIO context, about fifty National Action Plans have been crafted to handle the priority issues identified by the national process carried out by each of the countries.

In 2008-2009 an action to update the SAP BIO on Climate Change issues was conducted. The action was implemented through a bottom-up interactive participative approach with Parties expert representatives and lead to an Addendum to the SAPBIO focused on biodiversity and climate change issues. The addendum was adopted on November 2009 by the Contracting Parties to the Barcelona Convention.

At their Seventeenth Ordinary Meeting (Paris, France, 8-10 February 2012), the Contracting Parties to the Convention on the Protection of the Mediterranean Marine and Coastal Environment (Barcelona Convention) and its Protocols invited the Secretariat to assess the progress made in applying SAP BIO and defining its options at national and regional level over the coming years. The Parties stressed the importance of taking into account the Ecological Objectives adopted for the Mediterranean and the Aichi Biodiversity Targets adopted by the CBD in SAP BIO's new options.

The present document presents:

- an analysis of how SAP BIO has been implemented since it was adopted in 2003, and
- proposals for future SAP BIO orientations.

## 2. Evaluation of the SAP BIO implementation

The analysis of SAP BIO's implementation was made by a group of 6 experts set up by RAC/SPA. It was done in a first stage by examining the information provided by the countries in the National Reports submitted to the following pertinent Agreements and Conventions:

- the Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean
- the Convention on Biological Diversity
- the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean and the Adjacent Atlantic Area (ACCOBAMS)
- the Convention on Migratory Species
- the Ramsar Convention

The first analysis also considered the thematic reports submitted to the CBD (theme-based reports related to invasive species and to the implementing of Work Programmes on Protected Areas and the Taxonomy Initiative).

In a second stage a questionnaire, already filled in, was produced and sent to each of the National Focal Points for SPAs to be checked and for additional information to be added.

The results of these two stages are given in the Table below. The two first columns of the Table deal respectively with priority actions and their aims as defined in SAP BIO. The third column presents, for each priority action, an analysis of the state of implementation, describing what has been achieved as well as the main difficulties encountered in implementation. Furthermore, given that SAP BIO has an important regional element, an analysis of back-up by international and regional organisations also appears.

As the Table below shows, many of the actions advocated by SAP BIO have been achieved since 2003. However, implementation is far from being homogeneous for all the countries. The Table also shows that many actions have not yet been carried out or have been carried out in a way that is not yet satisfactory.

The lack of financial resources and limited human ones were often mentioned by the National Focal Points as being one of the main reasons for the non-achievement, or partial achievement, of SAP BIO's priority actions.

It should be noticed that at the level of RAC/SPA, and of the MAP in general, the approach for implementing SAP BIO has been harmonised with MAP's work on the ecosystem approach started in 2009, particularly the work of the Group of Experts appointed by the Governments on applying in the Mediterranean the ecosystem approach road map

CATEGORY	TARGET
<p><b>I. INVENTORYING, MAPPING AND MONITORING OF MEDITERRANEAN COASTAL AND MARINE BIODIVERSITY</b></p>	<p><u>General objective</u>                      "Contribute to achieving the WSSD targets concerning establishing by 2004 a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments <sup>1</sup>"</p> <p><u>Specific targets</u></p> <ul style="list-style-type: none"> <li>✓ GIS-based mapping of sensitive habitats by 2008 (relevant objective/s: 1a)</li> <li>✓ Mediterranean Checklists of species by 2006 (1b,d)</li> <li>✓ Standard monitoring protocols for socio-economic impacts, global trade, endangered species, effectiveness of protected areas by 2004 (2a; 3a; 4a; 5a)</li> <li>✓ SAP BIO indicators by 2006 (6 a,b,c,d,e)</li> </ul>

Activity (priority actions)	Aims	Assessment of implementation
<p>1) Make a complete and integrated inventory (by sub-region) of Mediterranean coastal, wetland, and marine sensitive habitats</p>	<p>a) Description and GIS-based mapping of the spatial distribution of the sensitive habitats:</p> <p>b) Complete checklist of species associated with each sensitive habitat</p> <p>c) Long-term routine monitoring programmes, in order to define temporal variability of abundance, biomass and other assemblage variables within sensitive habitats</p> <p>d) Elaborate national checklists for marine and coastal species for all the Mediterranean countries</p>	<p><b>Achievements:</b> Use of GIS technologies has made great strides in many Mediterranean countries, but much still remains to be done to obtain a satisfactory mapping of the distribution of sensitive habitats. The best covered habitats are the Posidonia meadows, wetlands, and marine turtle nesting sites. Efforts have been made in the north-western Mediterranean to map coralligenous beds and canyons.</p> <p>The checklists of species associated with each sensitive habitat are still lacking.</p> <p>Some general checklists for marine and coastal species were developed by a few countries. These available lists should be used as starting point to define the national checklists for all Mediterranean countries.</p> <p>The MedWet Initiative of the Ramsar Convention on Wetlands has developed (through the MedWet Scientific and Technical Team) a standard methodology and associated tools for the inventory of Mediterranean wetlands. The methodology and tools include: inventory data collection forms (at different scales: catchment, site, habitat), a habitat classification system, guidelines for</p>

<sup>1</sup> Extract from Paragraph 34b, Plan of Implementation of the World Summit on Sustainable Development – Johannesburg, September 2002.

		<p>remote sensing and GIS mapping, a computer database for data storage. The first version of the methodology was published in a series of five manuals in 1996 by Wetlands International and ICN, and in 2008 a new series of manuals and tools were produced by the Greek Biotopes &amp; Wetland Centre (EKBY), Tour du Valat, the Tuscany Agency for Protection of Environment (Italy) and the Institute for Nature Conservation and Biodiversity (Portugal). Innovations included relevant legal frameworks (e.g. the EU Water Framework Directive) and the latest technological tools for remote sensing and GIS and for database management (through an internet online Web Information System). Also the methodology for a Pan-Mediterranean Wetland Inventory was developed as a tool for carrying out easy and low-cost inventories of wetlands (<a href="http://www.medwet.org/medwet-inventory">www.medwet.org/medwet-inventory</a>). A number of countries have carried out inventories using or adapting the standard MedWet tools, while others have tested the methodology in the framework of different international projects.</p> <p><b>Main difficulties for implementation:</b> Some countries do not have the financial and human means needed for crafting and running GIS systems, but the main difficulty regarding mapping the spatial distribution of sensitive habitats remains the lack of field data. SAP BIO's recommendation to undertake drives on board seagoing vessels to map sensitive habitats has only been partially implemented. In certain cases, habitat inventories are not considered a high priority at national or regional level (and therefore they are not included in national or international projects/initiatives) despite they are among the main objectives of major international conventions and protocols (Ramsar, Mediterranean SPA/BD, etc.)</p> <p><b>Support from international and/or regional organisations:</b> Certain organisations have helped countries via training courses on the use of GIS systems to map habitats. Furthermore, in the context of projects to develop Marine Protected Areas a small number of field surveys to map habitats were carried out, with the support of international backers and organisations. RAC/SPA has set up a GIS system compiling the data available on the spatial</p>
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		<p>distribution of habitats. The MedWet Initiative has supported (through the members of the MedWet Scientific and Technical Team) the testing and the implementation (either complete or partial) of wetland inventory in certain Mediterranean countries and regions. It has also contributed to the SAP BIO as a member of the Advisory Committee since its inception. Also members of the MedWet Scientific and Technical Team have participated in several RAC/SPA meetings and have provided technical support on the implementation and/or adaptation of the MedWet Inventory methodology and tools (e.g. the habitat classification for coastal wetlands).</p>
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Activity (priority actions)	Aims	Assessment of implementation
<p>2) Establish of a monitoring system of endangered and threatened species</p>	<p>a) Implement a monitoring system for endangered species at regional level</p> <p>b) Establish and update the health and risk status of endangered populations</p>	<p><b>Achievements:</b> Several initiatives for monitoring endangered or threatened species have been launched in the Mediterranean, but most focus on particular species and are not integrated within coordinated regional approaches. For example, drives to monitor marine bird populations, and monitoring networks for the upper or lower edges of Posidonia beds, have been carried out in certain sites.</p> <p>Since 2003, assessments of the conservation status of certain groups of species have been made using the IUCN's Red List methodology (categories and criteria). These assessments have concerned cetaceans of the Mediterranean and Black Sea (13 species have been regularly assessed), Mediterranean cartilaginous fishes (71 species assessed), Mediterranean marine fishes (513 species and 6 subspecies assessed)</p> <p><b>Main difficulties for implementation:</b></p> <ul style="list-style-type: none"> <li>- lack of field data and of financial resources for carrying out study drives</li> <li>- lack of standard methodologies for monitoring certain groups of species</li> </ul> <p><b>Support from international and/or regional organisations:</b> Most of the assessments of the conservation status of species done in the Mediterranean were carried out with the support of IUCN, and ACCOBAMS and other organizations for cetaceans, turtles, fishes, algae.</p>
<p>3) Promote the adequate monitoring and survey of the effectiveness of marine and coastal protected areas</p>	<p>a) Implement sound scientifically-based monitoring programmes on the effectiveness of marine and coastal protected areas</p> <p>b) Improve methods of management planning,</p>	<p><b>Achievements:</b> Monitoring programmes have not yet been set up for most of the Marine and Coastal Protected Areas in the Mediterranean; the main gaps are linked to a lack of regularity. Only few pilot initiatives were conducted mainly in the ASPIMs. An analysis of the situation of the Marine Protected Areas done in 2012 by MedPAN and RAC/SPA shows that monitoring of MPAs does not reach the required level and does not permit their efficacy to be assessed. For the case of protected wetlands, the MedWet Initiative and the</p>

	<p>implementation and monitoring</p>	<p>Tour du Valat launched in 2009 the Mediterranean Wetlands Observatory as a major regional tool for the long-term assessment of the conservation status and trends of these ecosystems</p> <p><b>Main difficulties for implementation:</b></p> <ul style="list-style-type: none"> <li>- lack of financial and human resources to carry out the monitoring</li> </ul> <p><b>Support from international and/or regional organisations:</b> Except for training managers on certain monitoring methods and producing methodological guides for monitoring, there is still not much support from international and regional organisations in the Mediterranean.</p>
<p>4) Identify, develop, and validate adequate biological and socio-economic indicators to assess the ecological health of sensitive habitats and species, and to evaluate the effectiveness of management measures</p>	<ul style="list-style-type: none"> <li>a) Elaborate a regional strategy on SAP BIO indicators</li> <li>b) Elaborate a list of useful SAP BIO indicators</li> <li>c) Existing and new data collected to construct selected SAP BIO indicators</li> <li>d) Construct SAP BIO indicator set starting from the collected data</li> <li>e) Validate selected SAP BIO indicators</li> </ul>	<p><b>Achievements:</b> Very little work has been done on specifically SAP BIO-related indicators. However, as part of the Ecosystem Approach promoted in the context of the Barcelona Convention, a set of ecological objectives and indicators was crafted and adopted, of which 26 indicators have a link to the conservation of habitats and species. A similar exercise was carried out in the context of implementing the European Directive on Marine Strategy. Furthermore, ongoing work on the development of climate change impact indicators for monitoring in MPAs is being led by RAC/SPA (see UNEP (DEPI)/MED WG.382/Inf.13. 2013. Current Status of Climate Change Impact Indicators on Marine Biodiversity in the Mediterranean Marine Protected Areas)</p>

CATEGORIE	TARGET
<p><b>II. CONSERVATION OF SENSITIVE HABITATS, SPECIES AND SITES</b></p>	<p><u>General objective</u>                      Contribute to achieving the WSSD targets concerning the establishing of Marine Protected Areas consistent with international law and based on scientific information, representative networks, by 2012, and time/area closures for the protection of nursery grounds and periods, proper coastal land use<sup>2</sup></p> <p><u>Specific targets</u></p> <ul style="list-style-type: none"> <li>✓ Effective protection of endangered species by 2012 (relevant objectives 7a, b; 8d)</li> <li>✓ Increase (50%) by 2012 the surface area covered by MPAs (10 a, b, c, f)</li> <li>✓ Attain the protection of 20 % of the coast as marine fishery reserves by 2012 (10 e)</li> <li>✓ Set up a representative Mediterranean network of marine and coastal protected areas by 2012 (11 a, b)</li> </ul>

Activity (priority actions)	Aims	Assessment of implementation
<p>5) Update, coordinate and enforce legislation to conserve biodiversity</p>	<p>a) Fill in existing gaps in national legislation about the protection of such habitats, species and areas</p> <p>b) Ensure the completion, enforcement and implementation of existing and updated legislation</p>	<p><b>Achievements:</b> Most of the countries in the region have passed laws to protect biodiversity. This is obvious from the national reports the countries submit in the context of the Barcelona Convention and other pertinent agreements or conventions. Measures related to the application and execution of the existing legislation are, however, less evident.</p> <p>As regards the legislation on the coastal area, only a few countries have promulgated laws that deal specifically with the coast.</p> <p><b>Main difficulties for implementation:</b> Overlapping competences between different governmental bodies and the weight of certain sector-based lobbies with a strong impact on biodiversity constitute the main difficulties for application.</p> <p><b>Support from international and/or regional organisations:</b> Guidelines and other tools to help craft national laws on protecting the constitutive elements of biodiversity have been produced in the context of regional organisations such as RAC/SPA, ACCOBAMS and the GFCM.</p>

<sup>2</sup> Extract from Paragraph 31c "Plan of Implementation" of the World Summit on Sustainable Development - 4 September 2002, Johannesburg.

Activity (priority actions)	Aims	Assessment of implementation
6) Develop actions to conserve threatened and endangered (coastal and marine) Mediterranean species	a) Coordinate the implementation of National Action Plans (NAPs) for threatened and endangered species elaborated within the SAP BIO Project b) Increase knowledge on these species c) Establish a monitoring system for these species d) Harmonise, update, implement and enforce adequate legislation e) Protect Habitats on which selected protected species depend	<p><b>Achievements:</b> The species which have most benefited from protection actions are those for which the regional action plans have been adopted. Basically, attention is paid to beacon species, with data collection and awareness actions. Furthermore, actions to protect habitats of threatened or endangered species have been recorded. In many countries NGOs made a significant contribution to the actions being carried out. Implementation of NPAs has not been satisfactory for all countries.</p> <p><b>Main difficulties for implementation:</b> The great expectations aroused by SAP BIO have not been followed with the granting of funds to implement the NAPs. At regional level, the GEF contribution was very small for biodiversity-related actions. At RAC/SPA level, the funds allocated to implement the regional Action Plans for the conservation of species were drastically cut after 2012.</p> <p><b>Support from international and/or regional organisations:</b> Thanks to the financial support of several organisations concrete species protection actions have been able to be carried out in the Mediterranean over the past decade: European Commission, FGEF, AECID, MAVA Foundation, Total Foundation, Albert II of Monaco Foundation, etc.</p>
7) Protect marine and coastal sites of particular interest	a) Develop and coordinate protection actions for priority sites and areas identified by National Reports	<p><b>Achievements:</b> Since 2003, three major regional projects have been implemented in the Mediterranean to step up the protection and management of marine and coastal sites of particular interest. These are the MedMPA, MedPAN South and MedMPAnet Projects.</p> <p>These Projects aim at backing up the national authorities concerned in improving planning of Protected Areas.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>8) Declare and develop new coastal and marine protected areas including in the high seas</p>	<ul style="list-style-type: none"> <li>a) Identify of new areas deserving protection measures in the south and eastern Mediterranean</li> <li>b) Set up of new protected marine and coastal areas in the south and eastern Mediterranean</li> <li>c) Increase the number of C&amp;MPAs or reserves to conserve sensitive, highly endangered species</li> <li>d) Identify and protect of new areas offshore (including the high seas) deserving protection measures</li> </ul>	<p><b>Achievements:</b> In the southern and eastern Mediterranean, most countries have introduced programmes to identify sites on which they intend to create Marine and Coastal Protected Areas. These sites were included in the national programmes to develop protected areas.</p> <p>The number of Marine and Coastal Protected Areas has increased in the Mediterranean. A recent analysis done in 2012 by MedPAN and RAC/SPA showed that since 2008, 23 new Marine Protected Areas have been created in 10 Mediterranean countries, and 55 others are planned.</p> <p>To identify the sites that deserve out-at-sea protection measures, in total 11 Ecologically or Biologically Significant Areas (EBSA) were identified in the Mediterranean. Moreover, a total 4 areas were declared by the GFCM as Regulated Fishing Areas. They cover open sea areas.</p> <p><b>Main difficulties for implementation:</b> Procedures to set up Protected Areas are relatively lengthy in most of the countries in the region. For marine areas that lie outside the national jurisdiction, processes of negotiation between the states concerned are necessary. Coordination between the international bodies concerned is also necessary. In 2012, to facilitate such consultations, the Parties to the Barcelona Convention introduced the possibility of making preliminary declarations of proposals for SPAMIs presented in accordance with Article 9, Paragraph b or c, of the SPA/BD Protocol.</p> <p><b>Support from international and/or regional organisations:</b> Direct assistance was given by RAC/SPA and IUCN to some countries of the southern and eastern Mediterranean to help them identify marine and coastal sites that required protection measures. ACCOBAMS has identified sites of particular interest to cetaceans in the Mediterranean where it is desirable to create Marine Protected Areas.</p>

Activity (priority actions)	Aims	Assessment of implementation
9) Develop existing Marine and Coastal Protected Areas	a) Enhance the management of existing Protected Areas b) Establish and support protected area networks	<p><b>Achievements:</b> Despite the efforts of the countries and organisations concerned, the level of management of the Marine and Coastal Protected Areas is still weak. However, most of the countries state that they have crafted management plans for their Marine and Coastal Protected Areas.</p> <p>The MedPAN network has been strengthened and it now functions as a network between the managers of Mediterranean marine areas. It has the means to encourage exchanges between managers. In 2012, in collaboration with RAC/SPA, MedPAN made an assessment of the Mediterranean network of Marine Protected Areas.</p> <p><b>Main difficulties for implementation:</b> Lack of financial resources.</p> <p><b>Support from international and/or regional organisations:</b> Since 2003, three regional projects have been implemented by RAC/SPA, the WWF MedPOL and MedPAN to help the countries of the southern and eastern Mediterranean improve the management of Marine and Coastal Protected Areas. These projects, which enjoyed financial support from the European Commission, the FFEM, the AECID and the MAVA Foundation, gave support for the crafting of zoning and management plans and for training managers.</p>

CATEGORY	TARGET
<p><b>III. ASSESSING AND MITIGATING THE IMPACT OF THREATS ON BIODIVERSITY</b></p>	<p><u>General objective</u>                      Contribute to achieving the WSSD targets concerning significant reduction by 2010 in the current rate of loss of biological diversity<sup>3</sup>;</p> <p><u>Specific targets</u></p> <ul style="list-style-type: none"> <li>✓ Updated assessment of the potential impact of threats on Mediterranean marine and coastal biodiversity by 2008 (12a, b; 13a)</li> <li>✓ Maintain or restore fishery stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015<sup>20</sup> (21 a, b, c, d, e, f, g, h, i)</li> <li>✓ Urgently develop and implement national plans of action, to put into effect the FAO international plans of action, in particular the international plan of action for the management of fishing capacity by 2005 and the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing by 2004 (relevant objective/s: 21f). Establish effective monitoring, reporting and enforcement, and control of fishing vessels, including by flag states, to further the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing<sup>20</sup> (21a, c, e, f, h, i)</li> <li>✓ Control and regulate the urban development of coastal area, land use planning and aquaculture practices within a wider management plan by 2010 (16a; 17a; 20a, b, c)</li> <li>✓ Legal regulation of recreational activities by 2008 (18 b)</li> <li>✓ Reinforce control and mitigation of the introduction and spread of alien species by 2006 (15 a, b, c)</li> </ul>

Activity (priority actions)	Aims	Assessment of implementation
<p>10) Monitor of global trade and economic policies and trends from a Mediterranean perspective, to analyse their scope and probable effects on biodiversity</p>	<p>a) Implement monitoring systems for consequences of global trade and economic policies</p>	<p>No significant activities mentioned for implementing this priority action but UNEP/MAP started to address the issue in the frame of the Ecosystem Approach through BLUE PLAN</p>

<sup>3</sup> Extract from Paragraph 42 Plan of Implementation of the World Summit on Sustainable Development - 4 September 2003 – Johannesburg.



Activity (priority actions)	Aims	Assessment of implementation
11) Establish a regional monitoring programme following up the socio-economic impact of changes in biodiversity	a) Implement monitoring systems for socio-economic impacts of changes in biodiversity	No significant activities mentioned for implementing this priority action but UNEP/MAP started to address the issue in the frame of the Ecosystem Approach through BLUE PLAN
12) Assess the potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity	a) Inventory and monitor of biodiversity elements and/or areas likely to be impacted by climate change b) Acquire the necessary knowledge to model and forecast likely effects of climate change	<p><b>Achievements:</b> Projects have been started in some countries to monitor the variation in sea level (e.g. monitoring the sea level in Italy by ISPRA).</p> <p><b>Main difficulties for implementation:</b> Availability of data, analysis, models and scenarios are due to the limited financial, technical and human resources.</p> <p><b>Support from international and/or regional organisations:</b> RAC/SPA supported a regional study on the impact of climate change in the marine environment; international reports (IPCC suggest vulnerable sights likely to be impacted by climate change.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>13) Assess the potential impact of threats on Mediterranean coastal and marine biodiversity</p>	<p>a) Inventory of biodiversity elements and/or areas likely to be impacted by each of the following threats on biodiversity:</p> <ul style="list-style-type: none"> <li>o Pollution</li> <li>o Fisheries and other resource exploitation</li> <li>o Introduction and spread of non-indigenous species</li> <li>o Uncontrolled recreation at activities</li> <li>o Changes in land use</li> <li>o Effects of water management schemes</li> </ul>	<p><b>Achievements:</b> Most of the countries of the region have identified in their territories those marine areas that are undergoing major pollution (hot spots). For the other types of threat, the inventory of vulnerable areas has only been made on limited parts of the coast, often as part of the coastal management programmes.</p> <p>Furthermore, in the initial assessment made as part of implementing the Ecosystem Approach in the Mediterranean, RAC/SPA assessed the main threats to marine biodiversity in the Mediterranean.</p> <p>The Mediterranean countries that are members of the European Union have carried out, for waters under their jurisdiction, assessments of the state of their marine environment as part of implementing the European Directive on Marine Strategy (2008/56/EC).</p> <p><b>Main difficulties for implementation:</b> Lack of financial resources to make the inventories.</p> <p><b>Support from international and/or regional organisations:</b> The MedPOL programme in the context of the SAP MED helps countries to identify priority categories-targets of polluting activities and substances that the Mediterranean countries will have to eliminate or control, according to a predetermined timetable (by 2025), by implementing specific measures and actions to reduce pollution. The European Space Agency (ESA) launched the GlobWetland I (2003, completed) and GlobWetland II (2010, in progress) projects to support the implementation of the Ramsar Convention. The GlobWetland II project aims principally at developing a G-WOS pilot information system, also called the GlobWetland II information system. The system includes maps and system software, using remote sensing, indicator computation and a Web-GIS for the permanent access to the maps and information data that have been produced by the project. The GlobWetland II will produce of a number of wetland related geo-information maps and indicators, over 200 coastal wetlands from the</p>

		Southern and Eastern part of the Mediterranean basin, extending from Morocco to Turkey less than 100 km from the coastline ( <a href="http://dup.esrin.esa.it/prjs/prjs123.php">http://dup.esrin.esa.it/prjs/prjs123.php</a> ).
14) Mitigate the direct impact of international trade in endangered species	<p>a) Improve research and control on the impact of harvesting wild species</p> <p>b) Adopt market and awareness measures targeting stakeholders in the chain of catching and trade in alien species (from harvesters to consumers)</p>	<p><b>Achievements:</b> Considerable research results have been published mostly by Northern Mediterranean countries. Most of the Mediterranean countries have bodies to enforce the CITES measures concerning the checking of imports and exports of endangered species.</p> <p><b>Main difficulties for implementation:</b> Lack of means of checking and lack of training for the agents of the checking authorities at ports, airports, and other border crossing points.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>15) Control and mitigate the introduction and spread of alien and invasive species</p>	<p>a) Develop appropriate institutional measures to fight against particular sources of alien species</p> <p>b) Implement a regional coordination network to mitigate introduction and spread of alien species</p> <p>c) Fill in existing gaps in knowledge about alien species</p>	<p><b>Achievements:</b> One of the 4 regional projects recommended by SAP BIO concerning controlling the introduction of invasive non-native species has been started; this is GLOBALLAST project (2007-14), funded by the GEF. It aims to help countries gain the necessary tools and knowledge for integrating within their national systems measures to prevent and control invasive species transferred by ships' ballast water and sediments.</p> <p>In 2012, the Contracting Parties to the Barcelona Convention adopted a Regional Strategy on managing ships' ballast water and invasive species. The strategy was crafted by REMPEC in collaboration with RAC/SPA.</p> <p>To fill in the gaps in knowledge about exotic species, several Mediterranean scientists are monitoring the appearance and propagation process of non-native marine species in the Mediterranean.</p> <p>Some countries have undertaken initiatives at national level to elaborate guidelines to mitigate introduction and spread of alien species.</p> <p><b>Main difficulties for implementation:</b> For the 3 other regional projects recommended by SAP BIO, no organisation has taken the initiative of developing them. For RAC/SPA, budgetary restrictions explain this lacuna.</p> <p><b>Support from international and/or regional organisations:</b> REMPEC and RAC/SPA have been able to persuade the IMO and the GEF to extend the GLOBALLAST project to the Mediterranean and ensure its implementation in a concerted way.</p> <p>The CIESM has undertaken to prepare an Atlas of exotic species with the participation of several of the region's scientists. Four volumes of the Atlas have been produced (fishes, crustaceans, molluscs and macrophyta).</p> <p>In collaboration with the HCMR (Greece), RAC/SPA has set up a database of sightings of non-native marine species in the Mediterranean.</p>

Activity (priority actions)	Aims	Assessment of implementation
16) Control and mitigate coastal urbanization and construction of coastal infrastructure	a) Insert urban development of coastal areas into wider integrated management plans	<p><b>Achievements:</b> For most of the countries of the region, controlling coastal development remains a major challenge. Since 2003, more countries have passed national laws on the use of space in the coastal area. Integration of the urban development of the coastal regions within wider integrated management plans has only been done in certain countries</p> <p><b>Main difficulties for implementation:</b> The strong pressure on the coastal area and the overlapping of competence of the administrative bodies concerned</p> <p><b>Support from international and/or regional organisations:</b> In the context of the Barcelona Convention, RAC/PAP has coordinated the crafting of a new Protocol on the integrated management of the coastal area. The GIZC (IMCA) Protocol was signed in Madrid on 21 January 2008 and came into force on 24 March 2011 (8 countries and the European Union have already ratified this Protocol).</p> <p>RAC/PAP coordinates coastal development projects (CDPs). Since 2003, its CDPs have been achieved in Algeria, Lebanon, Malta, Montenegro, Morocco and Slovenia. These CDPs can be added to those implemented before 2003 in Albania, Croatia, Egypt, Greece, Syria, Tunisia and Turkey.</p> <p>As part of the SMAP Programme, some projects to craft integrated management plans for coastal areas have been funded since 2003.</p>
17) Control and mitigate the effect of changes in land use	a) Promote the integration of land used planning into wider integrated management plans.	See Activity 16 above

Activity (priority actions)	Aims	Assessment of implementation
<p>18) Promote eco- and soft tourism, control and mitigate impact of recreational activities</p>	<p>a) Increase sustainable tourism, including non-consumptive and eco-tourism taking into account the spirit of the International Year of Eco-tourism 2002, the United Nations Year for Cultural Heritage in 2002, the World Eco-tourism Summit 2002 and its Quebec Declaration, and the Global Code of Ethics for Tourism as adopted by the World Tourism Organization</p> <p>b) Control and mitigate the impact of recreational activities on coastal and marine Mediterranean biodiversity</p>	<p><b>Achievements:</b> The promotion of ecotourism is a priority in several countries of the region. Thus, many actions have been implemented over the past few years, including the revision of categories of tourist facilities by introducing ecotourism-specific categories.</p> <p>The introduction of labels linked to sustainable tourism and ecotourism remains limited in the Mediterranean.</p> <p><b>Main difficulties for implementation:</b> The strong pressure of mass tourism developed in many Mediterranean coastal areas.</p> <p><b>Support from international and/or regional organisations:</b> The Plan Bleu, as part of its 'Tourism' activities programme, has organised several workshops and crafted several documents on sustainable tourism in the Mediterranean.</p> <p>REMPEC has crafted guidelines for pleasure boating and marinas in the Mediterranean.</p> <p>ACCOBAMS, with financial support from France, has provided Morocco and Tunisia with help to do feasibility studies on whale watching as an ecotourist activity.</p> <p>ACCOBAMS is collaborating with the Pelagos Sanctuary to set up a label for the practice of whale watching.</p> <p>Several organisations (IUCN, WWF, MedPOL, MedPAN) help Mediterranean Protected Areas develop sustainable ecotourism activities.</p> <p>In 2006, the European Commission launched the EDEN (European Destinations of Excellence) project. This project encourages development models of sustainable tourism in the European Union. All the Mediterranean countries that are members of the European Union are participating in this project.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>19) Assess and elaborate of strategies to prevent the environmental impact of sources of pollution</p>	<p>a) Assess and prevent the impact of desalination techniques  b) Control the proliferation of floating plastic objects and debris  c) Achieve non-pollutant marine transport and navigation techniques; pay special attention to noise and hydrocarbon pollution</p>	<p>The issue of the environmental impact of seawater desalination operations is handled in many countries through the national legislation on environmental impact studies.</p> <p>The issue of plastic debris is handled by some international organisations (MedPOL, ACCOBAMS etc.), but very few actions are mentioned at national level in the countries' National Reports. A few countries have banned the selling and use of plastic bags.</p> <p>The issue of noise at sea is not yet given sufficient attention in the Mediterranean, but international organisations are working on the issue (guidelines, etc.). In addition this issue is treated in several countries by national legislations within environmental impact assessments framework.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>20) Control and regulation of aquaculture practices</p>	<ul style="list-style-type: none"> <li>a) Integrate of aquaculture practices into wider integrated management plans</li> <li>b) Develop research and measures to minimise the impacts of aquaculture practices on the marine and coastal environment</li> <li>c) Adopt measures to avoid the impacts of aquaculture on the marine and coastal environment</li> </ul>	<p><b>Achievements:</b> The widespread development of fish farming in the Mediterranean has been accompanied in most of the countries by measures to control the harmful effects of this activity on the environment, while encouraging this sector of activity to develop.</p> <p>In the Mediterranean countries of the European Union, environmental monitoring of fish farming is subject to the provisions of the Framework Directive on Water. In most of the Mediterranean countries, the setting up of fish farms is subject to an environmental impact study.</p> <p>Only some countries have integrated the setting aside of sites for fish farming in the context of integrated spatial planning of the marine area.</p> <p><b>Main difficulties for implementation:</b> The strong pressure of the sector, and managing clashes of use with other activities.</p> <p><b>Support from international and/or regional organisations:</b> IUCN has trained a group of experts in fish farming in the Mediterranean and has crafted environmental guidelines and sustainability indicators for this activity.</p> <p>GFCM has set up a Fish Farming Committee and launched several initiatives on indicators.</p> <p>In 2012, GFCM adopted guidelines for setting aside areas for fish farming.</p>



Activity (priority actions)	Aims	Assessment of implementation
21) Assessment, control and elaboration of strategies to prevent impact of fisheries on biodiversity	<ul style="list-style-type: none"> <li>a) Improve fishing statistics</li> <li>b) Mediterranean strategy for the conservation and sustainable management of vulnerable fish and invertebrates, including sustainable related fisheries</li> <li>c) Improve inter- and intra-specific selectivity of gear and fishing practices, addressing particularly the problems of by-catch, discard, and ghost-fishing</li> <li>d) Mediterranean strategy to reduce fishing-related mortality of marine mammals, turtles and sea birds</li> <li>e) Mediterranean strategy to reduce the impact of trawling and other towed gear on critical habitats</li> <li>f) Mediterranean strategy to eliminate particularly harmful fishing practices</li> <li>g) Develop and refine "traditional" control measures</li> <li>h) Develop new management techniques</li> <li>i) Increase the number of marine fishery reserves to manage fishery stocks to attain the protection of 20% of the coast</li> <li>j) Control recreational fishing activities</li> </ul>	<p><b>Achievements:</b> Since 2003, few new measures have been taken at national level to mitigate the impact of fishing on biodiversity. Nevertheless several European countries have carried out a few initiatives within the EU common fishery policy. Some research programmes (e.g. MEDITs) have increased the knowledge the status of vulnerable fish. A few countries undertaken projects on fishing technology to avoid/reduce by-catch.</p> <p>One of the gaps still not filled is the control of recreational fishing activities.</p> <p>However, recent recommendations made by GFCM and ICCAT could soon be followed by national measures (see the section on 'Support from international and/or regional organisations' below).</p> <p><b>Main difficulties for implementation:</b> Great reticence by stakeholders in the fishing sector as to introducing restrictions aimed at protecting biodiversity. Difficulty in the implementation of controls by in charged national authorities/institutions.</p> <p><b>Support from international and/or regional organisations:</b> In the context of this priority action, SAP BIO has provided for several specific actions that at present are the resort of the GFCM.</p> <p>GFCM being the body most concerned by fishing in the Mediterranean, RAC/SPA has since 2008 started collaboration with it to get measures adopted to reduce the impact of fishing on biodiversity. Thus, in 2011 GFCM adopted recommendations to mitigate bycatch of marine turtles and birds and in 2012 a recommendation on bycatch of cetaceans. It also launched activities for the conservation of elasmobranchs.</p>

CATEGORY	TARGET
<p><b>IV. DEVELOPING RESEARCH TO COMPLETE KNOWLEDGE AND FILL IN GAPS ON BIODIVERSITY</b></p>	<p><u>General objective</u>                      Improve the scientific understanding and assessment of marine and coastal ecosystems <sup>4</sup></p> <p><u>Specific targets</u>                      ✓ Launch research programmes before 2006 in order to fill in identified gaps (22a, b)                      ✓ Increase by more than 50 the number of PhD taxonomists in the Mediterranean region by 2010 (23 a, b, c)</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>22) Improve and coordinate research on biodiversity</p>	<p>a) Convene a workshop (under UNEP MAP coordination) to identify gaps in knowledge of Mediterranean coastal and marine biodiversity (at genetic, species and community/ecosystem level)</p> <p>b) Create and fund research programmes at regional level, aiming at filling in gaps and completing knowledge of coastal and marine biodiversity, as well as transferring knowledge between countries</p>	<p><b>Achievements:</b> In the context of implementing the Ecosystem Approach (EcAp), an integrated assessment of the state of the Mediterranean Sea was done by a group of experts. This assessment, <i>inter alia</i>, permitted gaps to be identified regarding knowledge of Mediterranean biodiversity.</p> <p>Despite the scientific programmes implemented to get a better knowledge of Mediterranean biodiversity, several areas in the Mediterranean are still little studied. Since 2003, a considerable contribution was made by techniques of acoustic prospecting (side sweep sonar and broadband), which in many countries have enabled important areas with meadows and coralligenous to be prospected. The use of satellite monitoring means has also been started recently in the Mediterranean to study the movements of certain species such as the marine turtles, Marine birds and the fin whale.</p> <p>Among many other scientific institutions, Tour du Valat and the Greek Biotope and Wetland Centre (EKBY) carry out scientific research applied to the conservation of Mediterranean Wetlands and their biodiversity</p>

<sup>4</sup> From paragraph 34 of “ Plan of Implementation “ of the World Summit on Sustainable development – Johannesburg, September 2002

		<p>The main gaps concern the southern and eastern Mediterranean, the sizes of the populations of certain species and their distribution (like the cetaceans) and the biodiversity of the deep sea areas.</p> <p><b>Main difficulties for implementation:</b> As regards scientific research, the main difficulties are linked to the lack of financial resources and of expertise.</p> <p><b>Support from international and/or regional organisations:</b> Support from international organisations for scientific research linked to marine and coastal biodiversity in the Mediterranean remains limited at financial level.</p>
<p>23) Improve taxonomic expertise in the region</p>	<p>a) Implement training programmes for modern taxonomists covering all groups, in order to increase the number of specialists</p> <p>b) Gather and circulate taxonomic bibliographic information</p> <p>c) Creation of sub-regional biodiversity centres to store representative collections of Mediterranean biodiversity, coupling published work, Internet-available descriptions and pictures of both preserved and live specimens, publication of genetic sequences identifying the species, etc.</p>	<p><b>Achievements:</b> Some training courses on taxonomy were organised with the support of RAC/SPA. They were practical courses and rather short. The Masters and Doctoral programmes on taxonomy recommended by RAC/SPA have not yet been introduced.</p> <p>Since 2003, some taxonomical works have been crafted in the Mediterranean on invertebrate and algal groups.</p> <p><b>Main difficulties for implementation:</b> Taxonomy does not seem to attract students. Taxonomy is not among the priorities when attributing Masters or Doctoral grants.</p> <p><b>Support from international and/or regional organisations:</b> Little support from these organisations for taxonomy.</p>

CATEGORY	TARGET
<p><b>V. CAPACITY BUILDING –</b></p> <p><b>COORDINATION AND TECHNICAL SUPPORT</b></p>	<p>Strengthen cooperation and coordination among global observing systems and research programmes for integrated global observation, taking into account the need for building capacity and sharing of data from ground-based observations, satellite remote sensing and other sources between all countries<sup>5</sup>(23a, b; 24 a, b)</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>24) Achieve 'clearing-house' mechanism to focus on marine and coastal conservation activities</p>	<p>a) The available clearing-house mechanisms (national, CBD, RAC/SPA, etc.) reinforced and developed within the framework of UNEP MAP</p> <p>b) Ensure permanent updating of the Mediterranean clearing-house mechanism</p>	<p><b>Achievements:</b> Clearing House Mechanisms (CHM) on biodiversity were set up in several countries. The following Parties to the Barcelona Convention have portals as part of the CBD's CHM: Egypt, France, Italy, Morocco, Spain, Tunisia, Turkey and the European Union.</p> <p>RAC/SPA has developed a CHM for the Mediterranean.</p> <p><b>Main difficulties for implementation:</b> Lack of financial resources. Dispersal of information on biodiversity between several administrations, research centres and other actors.</p> <p><b>Support from international and/or regional organisations:</b> Most of the Exchange Centres on biodiversity in the countries of the southern Mediterranean were set up with the support of the UNDP in the context of GEF funding.</p>
<p>25) Coordinate and develop of common tools to implement National Action Plans (NAPs)</p>	<p>a) Coordinate the implementation of NAPs elaborated within the SAP BIO Project (regarding the NAPs on threatened and endangered species cf. priority # 8)</p> <p>b) Common tools for implementing NAPs developed</p>	<p>This priority action has not been implemented mainly because of the non-availability of financial resources.</p>

<sup>5</sup> From Paragraph 119a Plan of Implementation of the World Summit on Sustainable Development - 4 September 2002, Johannesburg.

CATEGORY	TARGET
VI. INFORMATION AND PARTICIPATION	Increased public participation in conservation initiatives

Activity (priority actions)	Aims	Assessment of implementation
26) Facilitate the access to information for managers and decision-makers, as well as stakeholders and the general public	a) Enhance capacity building to ensure free access to Mediterranean environmental information b) Update and encourage right of access to environmental information	Very little has been recorded since 2003 for this priority action
27) Promote public participation, within an integrated management scheme	a) Promote public participation	<p><b>Achievements:</b> Under the urging of the Civil Society Organisation, in many Mediterranean countries the public has stepped up its participation in decisions concerning the environment. This has been seen in NGO participation in managing or decision-making on Protected Areas. In some countries public consultation is a phase in an Environmental Impact Study.</p> <p>But much remains to be done to reach a satisfactory level of public involvement in decision-making on the environment generally and the conservation of biodiversity in particular.</p> <p><b>Main difficulties for implementation:</b> The difficulties encountered are not specific to environmental actions and are rather linked to the systems of governance in place in the countries of the region.</p> <p><b>Support from international and/or regional organisations:</b> Most international or regional organisations, as well as backers, play a favourable part for public consultation and involvement, requiring steps in this direction for projects that they are funding or to which they are giving technical support.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>28) Conserving the traditional knowledge of the various actors</p>	<p>a) Conserving, as a heritage, traditional knowledge about marine and coastal elements</p>	<p>Very little has been recorded since 2003 for this priority action, except for the case of wetlands</p> <p>The MedWet Initiative has launched a MedWet Culture Network which will enable different Mediterranean actors to exchange practices and information.</p> <p>The Mediterranean Institute for Culture and Anthropos (Med-INA) aims to promote cultural values that benefit both man and nature and has published in 2011 the book "Culture and wetlands in the Mediterranean: an evolving story" (<a href="http://www.med-ina.org/PUBLICATIONS.aspx">http://www.med-ina.org/PUBLICATIONS.aspx</a>).</p> <p>In 2010 Med-INA started a project, supported by the MAVA Foundation and the MedWet Initiative, on the potential use of cultural values in catalysing and strengthening wetland restoration efforts, through better public sensitisation and attraction of visitors.</p>

CATEGORY	TARGET
VII. AWARENESS RAISING	Increase awareness raising on marine and coastal biodiversity conservation

Activity (priority actions)	Aims	Assessment of implementation
29) Develop international collaboration in order to enhance regional public awareness	a) International cooperation and coordination on educational and awareness programmes	Very little has been recorded since 2003 for this priority action.

Activity (priority actions)	Aims	Assessment of implementation
<p>30) Organise coordinated Mediterranean-level campaigns focusing on specific regional biodiversity issues (addressed both to specific stakeholders and to the general public)</p>	<p>a) Raise awareness on key themes                      b) Main issues discussed in SAP/BIO brought to the attention of a wide public, including decision-makers, NGOs, scientists and researchers, tourist operators, fishing industry</p>	<p><b>Achievements:</b> Public awareness and environment education are some of the most implemented actions for the conservation of species, habitats and biodiversity in general. Local and national NGOs are the main actors in this field.</p> <p><b>Main difficulties for implementation:</b> Lack of coordination between the actors and therefore a lot of duplication of effort and unbalanced distribution of the themes handled. A interesting exception provided on wetlands issues by MedWet, a forum of 27 Mediterranean countries, specialized wetland centres and international environmental organizations which collaborate for the conservation of Mediterranean wetlands through local, national, regional and international collaborations. Promoting and facilitating the implementation of activities that contribute to the conservation of Mediterranean wetlands, within the framework of the Ramsar Convention.</p> <p>Flagship species attract more attention, taking it away from the other species.                      Lack of training on communication and pedagogy.</p> <p><b>Support from international and/or regional organisations:</b> A large proportion of the awareness actions are carried out with the support of international or regional organisations. These also produce environment education and awareness material that they put at the disposal of local NGOs and other actors. They thus make a contribution to the training of environment education and awareness specialists and journalists.</p>



### 3. Implementation of the National Action Plans (NAPs)

In addition to the identified Priority Actions, the adopted SAP BIO included, upon adoption in 2003, 38 National Action Plans (NAPs) addressing issues of particular relevance for the countries:

#### Albania

1. Action Plan for the proclamation of the Marine National Park of Karaburuni area
2. Action Plan for the rehabilitation of the Kune-Vain lagoon system
3. Action Plan for the Dalmatian pelican in Albania
4. Action Plan for building and exploitation of artificial reefs for the fisheries along
5. the Albanian coast.

#### Algeria

1. Action Plan for setting up a network for monitoring of *Posidonia oceanica* meadows
2. Action Plan for setting up a programme to collect data on the Monk seal
3. Action Plan for reducing fishing activity pressure on coastal area biodiversity hot spots
4. Action Plan for inventorying and setting up marine and coastal protected areas in Algeria

#### Bosnia and Herzegovina

1. Action Plan for the identification and preservation of endangered marine, freshwater and terrestrial habitats and plant communities in the Mediterranean zone of Bosnia and Herzegovina
2. Action Plan for the sustainable development of the marine and adjacent waters of Bosnia and Herzegovina: cross border co-operation issue.

#### Croatia

1. Action Plan for a network of Mediterranean wetlands in Croatia – management and restoration
2. Action Plan to combat negative Impact of hunting, poaching and commercial collecting on coastal zone biodiversity, including introduction of new game species on islands
3. Action Plan for mapping, assessment and protection of submerged karstic phenomena;
4. Action Plan on biodiversity conservation as a part of integral coastal zone management planning.

#### Egypt

1. Bio-resources assessment of Mediterranean coastal waters of Egypt, development of Mediterranean Bio-Diversity Database, and public awareness for bio-conservation
2. Development and maintenance of the Matruh Nature Conservation Sector (MNCZ)
3. Bedouin operated bio-diversity conservation and restoration programme

#### Israel

1. Action Plan for the conservation of marine and coastal birds in Israel
2. Action Plan for the conservation of fish along the Israeli coast of Mediterranean

#### Lebanon

1. Action Plan for organising awareness campaigns for the Lebanese coastal communities and the public sector;
2. Action Plan for updating of legislation and development of for marine and coastal conservation;
3. Action Plan for determining the physical parameters of the Lebanese marine environment;
4. Action Plan for establishing conservation strategies for coastal habitats
5. Action Plan for developing monitoring strategies for coastal and marine biodiversity;
6. Action Plan for Palm Islands & Tyre Coast Nature Reserves.

#### Libya

1. Action Plan for the conservation of marine and coastal birds in Libya
2. Action Plan on proposed new marine and coastal protected areas and national parks
3. Action Plan for the conservation of marine turtles and their habitats in Libya

#### Malta

1. Action Plans for the conservation of cetaceans in Maltese waters
2. Action Plan for estimating the sustainability of grouper fishing in Malta
3. Action Plan for the conservation of sharks, rays and skate in the Maltese Islands
4. Action Plan for the micro-cartography, mapping and surveillance of the *Posidonia oceanica* meadows in the Maltese Islands.

#### Morocco

1. Action plan for mapping Morocco's Mediterranean coast
2. Action Plan for a research programme on Morocco's Mediterranean biodiversity
3. Action Plan for elaborating programmes and projects on education and awareness, and elaborating a guide to Morocco's endangered species and ecosystems
4. Action Plan for improving the national legislation
5. Action Plan for making best use of the Mediterranean marine biodiversity
6. Action for protecting species threatened by traditional fisheries

#### Slovenia

1. Action Plan on Habitat cartography supported by the Geographic Information System with special emphasis on seagrass meadows
2. Action Plan for biological invasions and possible effects on biodiversity
3. Action Plan on the impact of alien populations used in mariculture on genome of wild populations of same species
4. Action Plan on Slovene commercial fishery by-catch

5. Action Plan for Sensitive ecosystems – Posidonia oceanica meadow (ecological conditions, cartography and monitoring based on the GIS Posidonie methodology)

#### Syria

1. Action Plan for the conservation of sea turtles along the Syrian coast
2. Action Plan for marine and coastal protected areas
3. Action Plan on invasive species and their impacts on marine biodiversity
4. Action Plan for determination of physical parameters of national marine waters

#### Tunisia

1. Action Plan for the impact of fishing activity on littoral biodiversity
2. Action Plan for a pilot monitoring of Posidonia meadows
3. Action Plan for Protecting coralligenous communities
4. Action Plan for the co-ordination and training on legal and institutional aspects
5. Action Plan for studying invasive species
6. Action Plan on awareness raising and education on biodiversity
7. Action Plan for establishing Centre for the protection of sea turtles

#### Turkey

1. Conservation of marine turtles in Turkey
2. Creation of marine protected areas along the Turkish coasts
3. Reducing the negative impacts of detrimental fishing practices (trawl, purse seine, spear fishing, use of explosives) on sensitive ecosystems and on vulnerable species;
4. Conservation of cetacean species in the Turkish water of the Aegean Mediterranean Sea

The incorporation of Montenegro to the Barcelona Convention was followed by the production of 5 SAP BIO National Action Plans for this country in 2004 as follows:

1. Inventory and mapping of sensitive areas
2. Action plan for the Dalmatian pelican in Montenegro
3. Assessment – revision of the status, regime and management practice of protected areas
4. Identification of the new protected areas needing appropriate status of protection on the coastal zone
5. Analysis of opportunities for and formulation of an appropriate funding strategy for biodiversity conservation

The assessment of the implementation of SAP BIO at national level, showed that the most important weakness in the implementation of the SAP BIO is related to the low rate of achievements regarding the 38 NAPs. Indeed, only few NAPs were implemented, mainly because of non-availability of financial resources and limited human ones. During their forthcoming meeting (Rabat, 1 July, 2013) the SAP BIO National correspondents will be invited to revise the list of NAPs taking into account the present needs and priorities of their countries.

## **4. Proposals for the future SAP BIO orientations**

### **4.1 Background context**

The orientations proposed hereinafter for the future implementation of SAPBIO were elaborated taking into account (i) the analysis of the achievements and main difficulties faced in implementing the SAP BIO during the past ten years (2003-2013) presented in Section 2, (ii) the provisions of the priorities of the CBD's Strategic Plan (2011-2013) and (iii) the works being done under the Barcelona Convention for the implementation of the Ecosystem Approach (EcAp) in the Mediterranean. Furthermore, other recent works and initiatives of particular relevance for the conservation of the Mediterranean biodiversity were taken into account, in particular the work done at Mediterranean level for the identification of the Ecologically or Biologically Significant Areas (EBSAs) and the recommendations of the Roadmap "Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs) by 2020" proposed by the MAP Forum held in Antalya (Turkey) in November 2012.

#### The Strategic Plan for Biodiversity 2011-2020

The 2011-2020 Strategic Plan for Biological Diversity adopted in Nagoya aims at promoting more efficient implementation of the CBD. It is based on a vision of strategic goals and targets. It provides a flexible framework for crafting national and regional targets and also acts as a communication tool to attract the attention of all the stakeholders and facilitating the integrating of biological diversity in wider context and national programmes. It is based on the 5 following strategic goals:

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

For each of these 5 strategic goals, targets were set, in total 20 targets: the Aichi targets on biological diversity. They derive from the vision of the Strategic Plan: Living in harmony with nature where by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.

Based in this vision, the Strategic Plan has the following mission: to "take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures

on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach". This requires that:

- pressure on biological diversity is reduced
- ecosystems are restored
- biological resources are used in a sustainable way
- the advantages resulting from the use of genetic resources are shared justly and equitably
- sufficient financial resources are provided
- capacities are enhanced
- considerations related to biological diversity and the value of biological diversity are integrated and appropriate policies are effectively applied, and
- decision-making processes are based on solid scientific bases and the precautionary principle.

#### The EcAp process under the Barcelona Convention

The Contracting Parties to the Barcelona Convention adopted during their 15th Ordinary Meeting (Almeria, Spain, 2008) a roadmap composed by 7 steps for the application of the Ecosystem Approach in the management of human activities in the Mediterranean. In this context they adopted<sup>6</sup> during their Ordinary meeting, held in Paris in February 2012, eleven Mediterranean Ecological Objectives (EOs).<sup>7</sup>

Although all these EOs are relevant for the conservation of the Mediterranean Biological Diversity, five of them have particular relevance since the operational objectives associated with them relate to conservation of species and habitats. These are:

**EO1. Biological diversity is maintained** or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic, and climatic conditions.

##### Operational objectives:

- 1.1 Species distribution is maintained
- 1.2 Population size of selected species is maintained
- 1.3 Population condition of selected species is maintained
- 1.4 Key coastal and marine habitats are not being lost

**EO2. Non-indigenous species** introduced by human activities are at levels that **do not adversely alter the ecosystem**.

##### Operational objectives:

- 2.1 Invasive non-indigenous species introductions are minimized

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<sup>6</sup> (Decision 20/4 "Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap").

<sup>7</sup> The full list of Eos is annexed to this document

2.2. The impact of non-indigenous particularly invasive species on ecosystems is limited

**EO3. Populations of selected commercially exploited fish and shellfish are within biologically safe limits**, exhibiting a population age and size distribution that is indicative of a healthy stock.

Operational objectives:

3.1 Level of exploitation by commercial fisheries is within biologically safe limits

a. The reproductive capacity of stocks is maintained

**EO4. Alterations to components of marine food webs** caused by resource extraction or human-induced environmental changes **do not have long-term adverse effects** on food web dynamics and related viability.

Operational objectives:

4.1 Ecosystem dynamics across all trophic levels are maintained at levels capable of ensuring long-term abundance of the species and the retention of their full reproductive capacity

4.2 Normal proportion and abundances of selected species at all trophic levels of the food web are maintained

**EO6. Sea-floor integrity is maintained**, especially in priority benthic habitats.

Operational objectives:

6.1 Extent of physical alteration to the substrate is minimized

6.2 Impact of benthic disturbance in priority benthic habitats is minimized

#### **4.2 Proposed orientations**

Considering the importance of having the SAP BIO harmonised with the Aichi Strategic Plan as well as with the process of the application of Ecosystem Approach to the management of the Mediterranean environment, it is proposed to:

- Extend the implementation period of SAPBIO to 2020
- Revise the objectives and the priority actions of SAPBIO

Extend the implementation period of SAP BIO to 2020:

Initially the implementation period of SAP BIO was set to 15 years starting from its adoption in 2003. The analysis presented in Section 2 (Evaluation of SAP BIO implementation) revealed that many activities are not yet implemented or were implemented partially. The remaining five years in the implementation period will not allow completing these activities. Extending the SAP BIO implementation period for two more years will give more time for implementing the priority actions and will provide for better harmonisation with the timeline set for the CBD's Strategic Plan for Biodiversity 2011-2020 and for the implementation of the Ecosystem Approach in the Mediterranean.

### Revised objectives and the priority actions of SAPBIO

Harmonising the SAP BIO with the Aichi Strategic Plan and the EcAp process requires that:

- the priority actions identified in SAP BIO be streamlined with the Aichi Strategic Goals and the eleven Mediterranean Ecological Objectives adopted by the Contracting Parties
- the SAPBIO targets be reoriented to match those to be adopted by the Contracting Parties for the Ecological Objectives.

Most of the issues of relevance for the marine and coastal biodiversity covered by the Aichi Strategic Plan are also addressed by SAP BIO. However the compared analysis of both instruments shows that the following issues from the Aichi Strategic Plan deserve to be addressed by priority actions under SAP BIO:

- The economic value of services provided by the ecosystems and its mainstreaming into national policies. In this connection the Aichi Strategic Plan attaches great importance to awareness-creation amongst the decision-makers and recommends that awareness raising activities about the value of biodiversity and the services provided by the ecosystems be undertaken targeting high-level decision-makers, including governments and parliamentarians.
- The preservation of traditional knowledge and practices of local communities of relevance for the conservation and sustainable use of biodiversity. In this context Target 18 stipulates that, by 2020, such traditional practices should be respected and fully taken into account.

It is proposed that the SAPBIO be oriented during the period 2013-2020 towards achieving the five Strategic Goals of the Strategic Plan for Biodiversity 2011-2020 adopted within the framework of the CBD. The proposed Priority Actions presented in the following Table are grouped according to the proposed five Strategic Goals. They derive from both the Priority Action Categories I to VII of the SAP BIO (adopted in 2003) and the additional Priority Actions linked to climate change (adopted on November 2009) complemented/amended to adapt them to the Strategic Goals.

Three Priority Actions (items 9, 13 and 28 of the SAPBIO adopted in 2003) and 6 Priority Actions (items 2, 6, 7, 10, 13 and 14 of the SAP BIO climate change addendum adopted in 2009) were not inserted in the new updated version because already covered by similar Priority Action/s deriving from other initiatives or because already achieved.

Two Priority Actions (items 4 and 8 of the SAP BIO adopted in 2003) were maintained but updated according to new developments and countries implementation status.

In addition some of the Priority Actions deriving from the Aichi Strategic Plan, from the Mediterranean Ecological Objectives, from the Roadmap (Antalya 2012) and from the work done at Mediterranean level for the identification of the Ecologically or Biologically Significant Areas (EBSAs) were inserted in the Priority Actions for SAP BIO 2013-2020.

(I) to (VII) indicate the Priority Actions deriving from the Categories I to VII of the SAPBIO adopted in 2003

(I-CC) to (IV-CC) indicate the Priority Actions deriving from the Categories I to IV of the SAP BIO addendum adopted in 2009

(A) indicates the Priority Actions deriving from the Aichi Strategic Plan

(EO) indicates the Priority Actions deriving from the Mediterranean Ecological Objectives

(R) indicates the Priority Actions deriving from "Roadmap: Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs)

(mod) indicates modified

(EBSAs) indicates the Priority Actions deriving from the work done at Mediterranean level for the identification of the Ecologically or Biologically Significant Areas

**Proposed Strategic Goals and Priority Actions for consideration by relevant bodies for the period 2014-2020, in accordance with their competences and mandates for the conservation of Mediterranean marine and coastal biodiversity**

Strategic Goals	Priority Actions
<p>A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</p>	<ol style="list-style-type: none"> <li>1) Establish a regional programme for the monitoring of the socio-economic impact of changes in biodiversity (III)</li> <li>2) Mitigate the direct impact of international trade in endangered species (III)</li> <li>3) Strengthen national capacities to integrate the values of biodiversity in strategies and planning processes for development and poverty alleviation at national and local levels. (A)</li> <li>4) Identify subsidises and other incentive schemes that are harmful to or may have adverse effects on marine and coastal biodiversity and implement measures to have them gradually reduced, eliminated or phased out. The inventory is to be performed at the national level and also at the international or bilateral aid systems.(A)</li> <li>5) Interlink Integrated Coastal Zone Management and Climate Change (CC) Impacts on Biodiversity (I-CC)</li> <li>6) Set national bodies/committees, (I-CC), develop a regional programme of training/capacity building and a multilateral monitoring programme (II-CC) on issues dealing with CC and Biodiversity (I-CC)</li> </ol>



<p>B. Reduce the direct pressures on biodiversity and promote sustainable use</p>	<p>7) Assess the potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity (III)</p> <p>8) Control and mitigate the introduction and spread of alien and invasive species (III) including a regional early warning system for the identification of invasive species as a tool for managing pathways -except Suez Canal- and preventing introduction and establishment of invasive species (A)</p> <p>9) Control and mitigate coastal urbanization and construction of coastal infrastructure (III)</p> <p>10) Control and mitigate the effect of changes in land use (III)</p> <p>11) Promote eco- and soft tourism, control and mitigate impact of recreational activities (III)</p> <p>12) Assess and elaborate strategies to prevent the environmental impact of sources of pollution (III)</p> <p>13) Control and regulate aquaculture practices (III)</p> <p>14) Develop pilot projects for the application to the marine environment of spatial planning of activities (aquaculture, tourism, fishing, etc.). (A)</p> <p>15) Mitigate adverse impact of fisheries on biodiversity (III)</p> <p>16) Ensure that:</p> <ul style="list-style-type: none"> <li>- commercially exploited fish and shellfish species are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock (EO3)</li> <li>- Sea-floor integrity is maintained, especially in sensitive substrates and priority benthic habitats (EO6 mod)</li> </ul>
<p>C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</p>	<p>17) Update, coordinate and enforce legislation to conserve biodiversity (II) and reinforce legislation on coastal land use by adapting it to CC predictions (I-CC)</p> <p>18) Develop actions to conserve threatened and endangered (coastal and marine) Mediterranean species (II)</p> <p>19) Protect marine and coastal sites of particular interest (II), especially those containing underrepresented habitats and species in the existing MPA network (for instance, deep-sea habitats)</p> <p>20) Identify and designate new coastal and marine protected areas including in Ecologically or Biologically Significant Areas (EBSAs)</p> <p>21) Encourage the implementation of the "Roadmap: Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs) by 2020" (R)</p>

<p>D. Enhance the benefits to all from biodiversity and ecosystem services</p>	<p>22) Develop awareness raising programmes targeting the general public and decision makers on the economic value of biodiversity, ecosystem services (A) and protected areas (R)</p> <p>23) Identify and implement measures for the preservation of knowledge, scientific information, innovations and practices of local communities relevant for the conservation and sustainable use of biodiversity and their customary use (A mod)</p> <p>24) Promoting pilot actions to safeguard, rehabilitate and improve sustainability of artisanal fisheries (A mod)</p> <p>25) Improve the integration of Marine and Coastal Protected Areas into their social and economic context (R)</p> <p>26) Promote, in Marine and Coastal Protected Areas and in their surrounding zones, the development of new sustainable income generating opportunities for local populations taking into account MPA objectives and zoning (R)</p>
<p>E. Enhance implementation through participatory planning, knowledge management and capacity-building</p>	<p>27) Make a complete and integrated inventory using standardized methodologies (by sub-region) of Mediterranean coastal, wetland, and marine sensitive habitats (I-mod) and of more endangered sites and areas by CC in coastal and marine zones (II CC)</p> <p>28) Establish monitoring programmes for endangered and threatened species and habitats (I- mod) and for species communities and habitats potentially affected by CC (I-CC mod)</p> <p>29) Promote the adequate monitoring and survey of the effectiveness of marine and coastal protected areas (I)</p> <p>30) Verify the suitability of the biological indicators already developed within the EcAp and European Directive on Marine Strategy to assess the ecological health of sensitive habitats and species, and to evaluate the effectiveness of management measures within SAPBIO(I mod)</p> <p>31) Improve and coordinate research on biodiversity (IV)</p> <p>32) Improve taxonomic expertise in the region (IV)</p> <p>33) Coordinate and develop common tools to implement National Action Plans (NAPs) (V)</p> <p>34) Facilitate the access to information for managers and decision-makers, as well as stakeholders and the general public (VI)</p> <p>35) Promote public participation, within an integrated management scheme (VI)</p> <p>36) Develop international collaboration in order to enhance regional public awareness (VII)</p> <p>37) Organise coordinated Mediterranean-level campaigns focusing on specific regional biodiversity issues (addressed both to specific stakeholders and to the general public) (VII)</p> <p>38) Prepare National CC and CC/Biodiversity Strategies and Action Plans (I-CC)</p> <p>39) Implement a regional awareness raising programme on CC and Biodiversity (IV-CC).</p>

#### **4.3 Propositions for modalities of implementation**

The implementation of the priority actions of SAP BIO applies to relevant national bodies. International organizations are invited to provide technical, scientific and financial support. The institutional arrangements (national correspondents and advisory committee) adopted for SAP BIO in 2003 have been effective in guaranteeing the monitoring of SAP BIO activities during the latest decade. They will be re-enacted for the period 2013-2020.

On the basis of the new orientations adopted for SAP BIO by the Contracting Parties, and in agreement with the budgetary decisions taken by the Contracting Parties at COP 17 (Paris 2012), RAC/SPA will work in collaboration with the Focal Points for the Specially Protected Areas, the national correspondents for SAP BIO and the partner organizations to prepare an updated list of National Action Plans and portfolios of projects addressing the priority actions of SAP BIO. These projects could include (i) national projects targeting national priorities in the framework of SAP BIO and (ii) regional projects that support countries in areas of regional interest.

The portfolios of projects thereby formulated will be used to access different funding mechanisms and will be presented during a meeting of the potential donors that RAC/SPA will organize during the last quarter of 2014.

The partner organizations are invited to play an important role in formulating the portfolios of projects, taking initiatives with the donors, and coordinating the implementation of actions on a regional level, in line with the decisions of the Conference of the Parties.



## **Annex V**

**Draft Proposals of areas for inclusion in the List of Specially Protected Areas of Mediterranean Importance (SPAMI List)**



## Draft Proposals of areas for inclusion in the List of Specially Protected Areas of Mediterranean Importance (SPAMI List)

During the biennial period 2012-2013 and prior to the Eleventh meeting of Focal Points for SPAs, only Cyprus has submitted to the RAC/SPA Secretariat a proposal for inclusion in the SPAMI List. It is the Lara – Toxeftra Turtle Reserve.

The executive summary of the Presentation report of the Lara – Toxeftra Turtle Reserve proposed for inclusion in the SPAMI List is presented here after, whereas the full Presentation report is annexed in its original version (English).

### EXECUTIVE SUMMARY (Lara – Toxeftra Turtle Reserve)

The turtle conservation project started in 1976, with beach surveys after the first turtle tracks were noticed. In 1978 the Lara Turtle Station was set up on the west coast of the island. The Project evolved with time from a primarily hatchery project, with some head-starting, to a much wider project involving habitat protection, which started in 1989 with the setting up of the Lara/Toxeftra Reserve. *In situ* protection of nests on all the beaches in and outside the Reserve followed the implementation of the management measures foreseen by the legislation which was introduced with the setting up of the Reserve. The Reserve covers the foreshore and the adjacent sea. The project is a government project, run by the Department of Fisheries and Marine Research (DFMR). The Cyprus Wildlife Society (CWS) helps with the project with experienced biologists (Demetropoulos and Hadjichristophorou 2004).

#### A BRIEF HISTORY OF TURTLE CONSERVATION IN CYPRUS

##### Benchmarks

1971	Turtles were protected by law (Fisheries Law and Regulations)
1976-1977	First beach surveys
1978	Launching the Turtle Project and setting up the Lara Turtle Station
1989	Habitat protection with Lara/Toxeftra Reserve set up under the Fisheries Legislation, with Management Regulations included in the law. The protected area includes the foreshore and the adjacent sea down to the 20 m isobaths
1989	Training courses for other Mediterranean countries started, with trainees from RAC/SPA (UNEP/MAP) mainly.
2002	Polis/Limni was declared a “Shore for Ecological Protection” (Town and Country Planning legislation) – it includes conditions for the adjacent area regarding lights and no permits for commercial use of beach, no breakwaters or marinas
2005	Polis/Limni/Yialia area (foreshore and sea to the 50 m isobath) proposed to EC as a Natura 2000 site (management plan pending). This was accepted.
2011	Akamas Peninsula has been included in the Natura 2000 network. Lara – Toxeftra area is located within the Akamas Peninsula.

In 1989 the west coast nesting area (10 km of coastline) was declared as a turtle reserve, the Lara/Toxeftra Turtle Reserve. This included the foreshore and the sea area down to the 20 m isobath (0.4 to 1 km from the coast). It includes the five main green turtle nesting beaches, which have a total length of about 3.5 km. There is also loggerhead nesting on these beaches. The following three years were focused on implementing the management

regulations that were passed by law, which was no easy task. After some court cases (and other battles) this succeeded and the management measures for the area were generally accepted.

In the Protected Area from the 1<sup>st</sup> June to the 30<sup>th</sup> September of every year it is forbidden to:

- Stay on the beaches or the coastal area at night (one hour before sunset until sunrise)
- Place any sun-bed, umbrella, caravan, tent, etc. on, or near, the beaches
- Use or anchor a boat without a special permit or tolerate such action, in the adjacent sea area where the sea is shallower than 20 m
- Drive any vehicle on a beach or tolerate such action
- Fish, except with a rod and line (to the 20 m isobath)

## **WHAT THE PROJECT IS DOING NOW**

The project and the activities, methods and strategies used, evolved with time following:

- a. the knowledge and experience gained through the project
- b. the knowledge gained by the scientific community elsewhere
- c. changing circumstances and opportunities

The main activities of the project are summarised below:

- Management of the Lara/Toxeftra Reserve coastal area and adjacent sea. This includes law enforcement by the DFMR. Management also of the Chrysochou Bay beaches and adjacent sea and law enforcement (though some of the specific management regulations for the area are pending).
- All beaches are monitored and all nests are protected *in situ* on all the beaches they were laid on. Non-magnetic, self releasing cages are used.
- Nests laid too near the sea are relocated up the same beach (about 5% of the nests)
- Nests from intensive tourism beaches, mainly from the two beaches in Coral Bay on the west coast, where they have no future, are relocated to the "hatchery" at Lara. About 10-20 nests p.a. are relocated from there.
- The egg chamber is located with an aluminium tube/rod when the nests are fresh – and the nest is not dug at this stage so as not to destroy the structure of the "lid" of the chamber.
- All green turtle nests are dug up after emergence of hatchlings from the nest has finished, to ascertain the fate of the eggs. Most loggerhead nests are also dug the same way.
- Turtles are double tagged on the front flippers with plastic Dalton tags. Tagging is on the soft trailing part at the distal end of the flipper. This ensures that the tag will tear off the flipper if it gets entangled in nets. Tagging is undertaken when egg laying and covering up of the chamber have finished.
- A rescue facility is run at the Meneou Experimental Mariculture Station of the DFMR.
- Hands-on training courses are held for scientists and protected area managers and rangers. Most trainees are sponsored by RAC/SPA (UNEP/MAP).
- The project is a government project, run by the DFMR, with no volunteers. The Cyprus Wildlife Society (CWS) has been helping with the project with experienced biologists since 1989. The CWS has been running training courses for RAC/SPA (UNEP/MAP) in cooperation with the DFMR. This has recently been subject to an agreement following tender procedures.



There is no regular habitation in the Lara/Toxeftra Turtle Reserve but visitation is high, especially in the summer season, largely due to the Turtle Project and the opportunity for people to see live turtle hatchlings in the Information Centre at the Lara Turtle Station where some are kept in tanks for this purpose. Guided ecotourism trips are common during daylight hours in the breeding season. No night visits are allowed.

Small scale fishing (artisanal) with trammel nets is frequent from a small number of boats stationed at the Ayios Georgios fishing shelter about 1 km south of the Reserve.



**Presentation report of the Lara – Toxeftra Turtle Reserve proposed  
for inclusion in the SPAMI List**



**ANNOTATED FORMAT FOR THE PRESENTATION  
REPORTS FOR THE AREAS PROPOSED  
FOR INCLUSION IN THE SPAMI LIST**



## **OBJECTIVE**

The objective of this Annotated Format is to guide the Contracting Parties in producing reports of comparable contents, including the information necessary for the adequate evaluation of the conformity of the proposed site with the criteria set out in the Protocol and in its Annex I (Common criteria for the choice of protected marine and coastal areas that could be included in the SPAMI List).

## **CONTENTS**

The presentation report shall include the following main information on: (i) identification of the proposed protected area (ii) site description (iii) its Mediterranean importance (iv) the activities in and around the area and their impacts (v) legal status (vi) management measures (vii) human and financial resources available for the management and the protection of the site.

## **SUBMISSION OF REPORTS**

The reports should be submitted to the RAC/SPA two months before the meeting of National Focal Points for SPA in English or in French.

Dossiers should be compiled on A4 paper (210 mm x 297 mm), with maps and plans annexed on paper with a maximum size of an A3 paper (297 mm x 420 mm). Contracting Parties are also encouraged to submit the full text of the proposal in electronic form.

The requested annexes should be submitted on paper and, if possible, also in electronic form. They are the following:

- Copies of legal texts
- Copies of planning and management documents
- Maps: administrative boundaries, zoning, land tenure, land use, and distribution of habitats and species, as appropriate
- Existing inventories of plant and fauna species
- Photographs, slides, films/videos, CD-ROMs
- List of publications and copies of the main ones concerning the site

**N.B.:** All the following sections have to be in the report submitted, even those sections or elements that do not apply to the proposed area. Where that is the case, please put “not applicable to the proposed area”.

**1. AREA IDENTIFICATION**

**1.1. COUNTRY/COUNTRIES** (in the case of transboundary areas)

CYPRUS

**1.2. ADMINISTRATIVE PROVINCE OR REGION**

PAFOS

**1.3. NAME OF THE AREA**

Lara – Toxeftra Turtle Reserve

**1.4. GEOGRAPHIC LOCATION**

Describe its geographical boundaries, e.g. rivers, roads, geographical or administrative boundaries (do not describe the co-ordinates here; please make a separate annex with a map and a description of geographical co-ordinates as stated in the legal declaration of the area).

The Lara – Toxeftra Reserve is located in the south-western part of the Akamas peninsula, 15 Kilometers north of the town of Pafos. The Protected Area starts at *Aspros stream* (north of Ayios Georghios) in the south and extends to *Argaki tou Yousouphi* in the north, covering about 10 kilometers of coastline.

It extends inland to 90 meters from the sea (from the mean sea level) and extends seaward to the 20 meter isobath, which is about 0.4 to 1 km from the coast.

A map of the area is provided in Annex I.

**1.5. SURFACE OF THE AREA** (total)

650 ha	(in national unit)	650 ha	(in ha)
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**1.6. LENGTH OF THE MAIN COAST** (Km)

The Reserve covers about 10 Km of coastline.



## 2. EXECUTIVE SUMMARY (maximum 3 pages)

Supply a summary of the information contained in sections 3 to 9.

The turtle conservation project started in 1976, with beach surveys after the first turtle tracks were noticed. In 1978 the Lara Turtle Station was set up on the west coast of the island. The Project evolved with time from a primarily hatchery project, with some head-starting, to a much wider project involving habitat protection, which started in 1989 with the setting up of the Lara/Toxeftra Reserve. *In situ* protection of nests on all the beaches in and outside the Reserve followed the implementation of the management measures foreseen by the legislation which was introduced with the setting up of the Reserve. The Reserve covers the foreshore and the adjacent sea. The project is a government project, run by the Department of Fisheries and Marine Research (DFMR). The Cyprus Wildlife Society (CWS) helps with the project with experienced biologists (Demetropoulos and Hadjichristophorou 2004).

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- Use or anchor a boat without a special permit or tolerate such action, in the adjacent sea area where the sea is shallower than 20m

- Drive any vehicle on a beach or tolerate such action
- Fish, except with a rod and line (to the 20 m isobath)

## WHAT THE PROJECT IS DOING NOW

The project and the activities, methods and strategies used, evolved with time following:

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The main activities of the project are summarised below:

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Small scale fishing (artisanal) with trammel nets is frequent from a small number of boats stationed at the Ayios Georgios fishing shelter about 1 km south of the Reserve.

### 3. SITE DESCRIPTION

#### 3.1. TYPOLOGY OF THE SITE

3.1.1. Terrestrial surface, excluding wetlands (ha):

100 ha

3.1.2. Wetland surface (ha):

3.1.3. Marine surface (Sq. Km):

Marine internal waters

Territorial sea

High sea

5.5 Km<sup>2</sup> (550 ha)

#### 3.2. MAIN PHYSICAL FEATURES

##### 3.2.1. Geology/Geomorphology

Give a brief description of: (i) geological aspects (lithologic and tectonics); (ii) processes of sedimentation and erosion observable in the area; (iii) coastal geomorphology and (iv) island system. Indicate bibliographical sources.

- (i) The coastal strip is basically of limestone slopes and cliffs, fringed, on the interface with the sea, by vermetid shelves. Stretches of the allochthonous Mamonía melanges and serpentinites can be found just north of Lara in the coastal area. There are raised beaches in some areas (Toxeftra etc)
- (ii) There is little or no sedimentation or erosion.
- (iii) The protected area has a series of sandy beaches alternating with rocky shores and shingle beaches. Some of the beaches have sand-dunes adjoining them. The sea bed in front of the protected beaches is mainly sandy, with extensive rocky substrates especially around the cliffs and capes.
- (iv) There are no islands

3.2.2. Other interesting physical features: Such as hydrodynamics, volcanic formations, caves, underwater formations, etc.

There are sea cliffs with cracks and small caves in the Lara area, in the limestone areas. See also comments on Posidonia meadows in stretches of the coast.

3.2.3. Length of beaches (in Km), including islands:

a) Length of sandy beaches:

3.5 km

b) Length of pebble or stony beaches:

1.5km

c) Length, height and depth of active sand-dunes:

1km, 5 to 25m height, to 150m from the sea.

### 3.3. FRESHWATER INPUTS

3.3.1. Mean annual precipitation (in mm)

500 mm per year, seasonal

3.3.2. Main water courses (permanent and seasonal)

Aspros Potamos

Avakas and Kalamouli (Argaki ton koufon) – with a joint estuary

Argaki tou Mykhou, Argaki Kaskious, Argaki Rodhia, Mirrillis, Argaki tou Yousoufi

All seasonal.

Avakas (Avgas) is a permanent stream fed by springs, though there is no surface flow to the sea except during winter storms.

3.3.3. Estuarine areas: Existence and brief description

The small estuaries that exist are only temporary in nature and end up in pebble or sandy beaches

3.3.4. Freshwater springs: Existence and brief description, including marine offsprings

Mainly the springs in Avakas Gorge which give the Avakas stream a permanent flow for much of its length.

### 3.4. BIOLOGICAL FEATURES (B2, Annex I)

3.4.1. Habitats: A brief description of dominant marine and terrestrial habitats, on the basis of the habitat classifications adopted within the framework of MAP (and their coverage in ha)

*Posidonia oceanica* meadows (Habitat 1120) are present in the marine part of the protected area and they cover 630 ha. *Posidonia* mapping has been implemented recently and covered the marine area from the shallow down to 50 m isobath. Shallow meadows can be found in the protected area on big blocks, at depths as shallow as 1m depth.

The results of the mapping of *Posidonia* in the area can be found in Annex II.

### 3.4.2. List of regionally important species (flora and fauna) (B-2a, Annex I)

List here ONLY those species protected by international agreements, particularly those marine species included in Annex II of the Protocol, which are present in the area. Any other species may be listed if it is clearly considered of regional importance given its high representation in the area. Display the species list under the headings Marine Plants, Terrestrial Plants, Marine Invertebrates, Fish, Amphibians and Reptiles, Birds, and Mammals. For each species state:

- its relative abundance as Common (C), Uncommon (U) or Occasional (O),
- Its global status as rare (r), endemic (e) and/or threatened (t), and
- its status as an important resident population (R), or important for its breeding (B), feeding (F), wintering (W) or migratory passage (M)

SPECIES	Rel. Abundance (C) (U) (O)	Global STATUS (r) (e) (t)	Local STATUS (R) (B) (F) (W) (M)
Examples: BIRDS			
<i>Pelecanus onocrotalus</i>	(C)	(e) (t)	(R)
<i>Falco eleonorae</i>	(U)	(e) (t)	(B)
REPTILES			
<i>Caretta caretta</i>	(C)	(e) (t)	(B), (F)
<i>Chelonia mydas</i>	(C)	(e) (t)	(B), (F)
CRUSTACEA			
<i>Ocypode cursor</i>	(C)	(t)	(R), (B), (F)
BRYOZOA			
<i>Hornera cf. lichenoides</i>	(U)	(t)	n.a.

3.4.3. Flora: Describe in a few sentences the main plant assemblages significant in the area.

The vegetation of the protected area is to a large degree wind-shaven Maquis forest with *Pistacia lentiscus* (Lentisc) *Juniperus phoenicea* (Juniper), *Olea europea* (wild olive), *Myrtus communis* (Myrtle) and *Ceratonia* with *Cistus monspeliensis*. There are several species of Orchids (*Orchis pyramidalis*, *O. coriophora* ssp. *fragrans*, *Serapias vomeracea* etc.) as well as sand-dune vegetation, which includes the endangered *Panocratimum maritimum*, in places. Endemic plants include *Carlina pygmaea*, *Alyssum akamasicum* and *Gladiolus triphyllus*.

The marine vegetation includes extensive *Posidonia oceanica* meadows and *Cymodocea nodosa* as well as many algae.

3.4.4. Fauna: Describe in a few sentences, which are the main fauna populations present in the area.

The terrestrial fauna of the area is rich in diversity and includes the endemic *Crocidura cypria* (Cyprus White-toothed Shrew), as well as several species of bats. Foxes, hares and the Eastern Hedgehog (*Hemiechimus auritus*) live there. There are several reptiles in the area including the Spiny-footed Lizard (*Acanthodactylus schreiberi*), Vipers (*Vipera lebetina*), Montpellier snakes (*Malpolon monspessulanus*), Agama Lizard (*Agama stelio*) and many others. There are also many species of butterflies including some endemic varieties and species.

Monk seals have been reported in the area (1988, 89,90,91,92, 2010, 2011, 2012). The beaches of the area are some of the few nesting areas of the remaining populations of the Green Turtle (*Chelonia mydas*) in the Meiterranean. The Loggerhead Turtle (*Caretta caretta*) also nests there. Ghost crabs (*Ocypode cursor*) inhabit some of the beaches in the area and are also protected.

### 3.5. HUMAN POPULATION AND USE OF NATURAL RESOURCES

#### 3.5.1 Human population

a) Inhabitants inside the area:

	Number	Date of data
Permanent	none	2013
Seasonal number (additional to permanent)	none	2013

Description of the population

There is no human population in the protected area of Lara-Toxeftra

Main human settlements and their populations

There are no human settlements within the area.

#### 3.5.2 Current human use and development

a) Briefly describe the current use of the area by subsistence, artisan, commercial and recreational fishing, hunting, tourism, agriculture and other economic sectors.

The area is mainly used for fishing and leisure activities and ecotourism.

Small-scale fishing (artisanal), sport fishing (on boat), spearfishing and rod and line fishing are the main fishing activities that are generally practiced in the protected area - and in the western part of the Akamas Peninsula. These activities are prohibited (with the exception of rod and line fishing) in the Lara-Toxeftra Reserve, during the turtle breeding period i.e., from the 1st June to the end of September.

The beaches are accessible by boat and by car for sunbathing and swimming. Moreover, recreational activities such as scuba diving, snorkelling, sea-trips, boating, jet-skis and safari trips (ecotourism) are found in this area. Entry into the marine protected area of the Turtle Reserve by boat is prohibited during the summer season due to the marine turtle nesting period (June-September).

The management regulations for this area that are spelled out in the Consolidated Fisheries Regulations (273/90), prohibit during the nesting season which is from the 1<sup>st</sup> of June up to the 30<sup>th</sup> of September, the entry and anchoring of a vessel of any kind in the protected area, down to the 20 m isobath, as is any kind of fishing (except with a rod and line from the shore). The presence of the public on the beaches from sunset to sunrise is prohibited as is the use of umbrellas and sunbeds on the beach. Camping and driving on the beaches are also prohibited.

b) Enter how many of the users depend on these resources, seasonality, and assessment of the social and economic importance of their use and of the perceived impact on the conservation of the area, in a score of 0-1-2-3 (meaning null, low, medium, high).

ACTIVITY AND CATEGORY	ASSESS IMPORTANCE OF								Estimated No. of Users	Seasonality
	Socio-economic				Conserv. Impact					
<b>FISHING</b>										
Subsistence	0	1	2	3	0	1	2	3	14 boats	June - Sept.
Commercial, local	0	1	2	3	0	1	2	3		
Commercial, non-local	0	1	2	3	0	1	2	3		
Controlled recreational	0	1	2	3	0	1	2	3		
Un-controlled recreational	0	1	2	3	0	1	2	3		
Other	0	1	2	3	0	1	2	3		
<b>TOURISM</b>										
Regulated	0	1	2	3	0	1	2	3		June – Sept June - Sept
Unregulated	0	1	2	3	0	1	2	3		
Indicate the type of tourism										
-.....	0	1	2	3	0	1	2	3		
-.....	0	1	2	3	0	1	2	3		
.										
Tourism facilities	0	1	2	3	0	1	2	3		
<b>FOREST PRODUCTS</b>										
Subsistence	0	1	2	3	0	1	2	3		
Non-timber commercial, local	0	1	2	3	0	1	2	3		
Non-timber commercial, non-local	0	1	2	3	0	1	2	3		
Timber commercial, local	0	1	2	3	0	1	2	3		
Timber commercial, non-local	0	1	2	3	0	1	2	3		
Agriculture	0	1	2	3	0	1	2	3		
Stockbreeding	0	1	2	3	0	1	2	3		
Aquaculture	0	1	2	3	0	1	2	3		
<b>EXTENSIVE STOCK GRAZING</b>										
Subsistence	0	1	2	3	0	1	2	3		
Commercial, local	0	1	2	3	0	1	2	3		
Commercial, non-local	0	1	2	3	0	1	2	3		
<b>OTHER ACTIVITIES</b>										
-	0	1	2	3	0	1	2	3		
-	0	1	2	3	0	1	2	3		



### 3.5.3. Traditional economic or subsistence uses

Name any environmentally sound traditional activities integrated with nature, which support the well being of the local population. E.g. land, water use, target species, if closed seasons or closed zones are used as management techniques.

Closed seasons are used as a management technique.

#### 4. MEDITERRANEAN IMPORTANCE OF THE SITE

This Section aims at stressing the importance of the site for conservation at the regional or global scales, as set in Art. 8 para. 2 of the Protocol and B2-a, B2-b and B2-c in Annex I.

##### 4.1. PRESENCE OF ECOSYSTEMS/HABITATS SPECIFIC TO THE MEDITERRANEAN REGION

Name the type of habitats considered of Mediterranean specificity, on the basis of the habitat classifications adopted within the framework of MAP, and their estimated cover (Ha).

*Posidonia oceanic* meadows (Type 1120 of the Habitats Directive 92/43/EEC).

Estimated cover in ha: 630

##### 4.2. PRESENCE OF HABITATS THAT ARE CRITICAL TO ENDANGERED, THREATENED OR ENDEMIC SPECIES

A critical habitat is an area essential to the conservation of the species concerned. These species should be those included in Annex II of the Protocol. E.g. Islets and sea stacks, as small islands in the sea or in large bodies of water, mostly important for water-bird colonies; caves appropriate for monk seals; undisturbed sand beaches where marine turtle nesting occurs; coastal lagoons where threatened fish or bird species feed or breed; tidal flats, coastal or benthic substrates important for marine invertebrates, etc.

Name the habitat types and the species linked to it.

Undisturbed sandy beaches where Green turtle (*Chelonia mydas*) and Loggerhead (*Caretta caretta*) nesting occurs are critical to the survival of the two species - and to the survival of the Ghost crab.

### 4.3. OTHER RELEVANT FEATURES (Art. 8 paragraph 2 in the Protocol)

#### 4.3.1. Educational Interest (B-3 in Annex I)

E.g. particular values for activities of environmental education or awareness

Training courses in turtle conservation techniques and beach management have been held each year since 1989 for Mediterranean scientists, by the Cyprus Wildlife Society in close cooperation with the Department of Fisheries and Marine Research. These trainees are sponsored by the Regional Activity Center for Specially Protected Areas (RAC/SPA), UNEP. There have also been a few trainees, some from other regions, that have been sponsored by the Bern Convention and other supranational organizations.

#### 4.3.2. Scientific Interest (B-3 in Annex I)

Explain if the site represents a particular value for research in the field of natural or heritage sciences.

A marine turtle conservation project, set up by the Department of Fisheries and Marine Research, has been ongoing since 1978, covering both Green and Loggerhead turtles. The project aims at: a) protecting and managing the important nesting beaches, b) protecting eggs and hatchlings from predation and from human activities, c) protecting adult turtles, d) monitoring the turtle population and nesting activity in Cyprus, and e) raising public awareness in turtle conservation.

#### 4.3.3. Aesthetic Interest (B-3 in Annex I)

Name and briefly describe any outstanding natural features, landscapes or seascapes.

The Reserve is set up in a very spectacular stretch of coastline with cliffs, beaches and sand dunes

#### 4.3.4. Main cultural features

Indicate if the area has a high representative value with respect to the cultural heritage, due to the existence of environmentally sound traditional activities integrated with nature which support the well-being of local populations.

## 5. IMPACTS AND ACTIVITIES AFFECTING THE AREA

### 5.1. IMPACTS AND ACTIVITIES WITHIN THE SITE

#### 5.1.1. Exploitation of natural resources

Assess if the current rates of exploitation of natural resources within the area (sand, water and mineral exploitation, wood gathering, fishing, grazing...) are deemed unsustainable in quality or quantity, and try to quantify these threats, e.g. the percentage of the area under threat, or any known increase in extraction rates.

No exploitation of natural resources occurs in the protected area during the reproductive period of turtles. There are only minor artisanal fishing activities off season. Sand extraction from the area was stopped in the 1980s.

#### 5.1.2. Threats to habitats and species

Mention any serious threats to marine or coastal habitats (e.g. modification, desiccation, disturbance, pollution) or to species (e.g. disturbance, poaching, introduced alien species...) within the area.

Driving on beaches. There is also a threat from pressures for infrastructure for tourism and urban development in the hinterland of the currently protected coastal area. There is also a potential threat from disturbance of nesting turtles and hatchlings by humans if "development" goes ahead amassing human presence in the area.

#### 5.1.3. Demand by an increased population and infrastructures

Assess whether the current human presence or an expected increase in frequentation (tourism, passage of vehicles and boats) and any human immigration into the area, or plans to build infrastructures, are considered a threat.

Yes – please see 5.1.2 above

#### 5.1.4. Historic and current conflicts

Make a brief statement of any historic or current conflicts between users or user groups.

There has been a saga of conflict between developers and the government (and conservationists) over the use of the area for tourism development.

## 5.2. IMPACTS AND ACTIVITIES AROUND THE SITE

In Art.7.2-e the Protocol calls for the regulation of activities compatible with the objectives for which a SPA was declared, such as those likely to harm or disturb species or ecosystems (Art.6.h), while Section B4 in Annex I asks to consider “the existence of threats likely to impair the ecological, biological, aesthetic or cultural value of the area” (B4-a in Annex I), recommending the existence, in the area and its surroundings, of opportunities for sustainable development (B4-d) and of an integrated coastal management plan (B4-e).

### 5.2.1. Pollution

Name any point and non-point sources of external pollution in nearby areas, including solid waste, and especially those affecting waters up-current.

The real effect of debris on the nesting beaches is minimal and is mainly limited to wood and some large objects washed up by the prevailing westerly winds. Manual clean ups are carried out in the nesting season.

### 5.2.2. Other external threats, natural and/or anthropogenic

Briefly describe any other external threat to the ecological, biological, aesthetic or cultural values of the area (such as unregulated exploitation of natural resources, serious threats on habitats or species, increase of human presence, significant impacts on landscapes and cultural values, pollution problems, any sectorial development plans and proposed projects, etc.), likely to influence the area in question.

In the protected area, there has been no coastal development and photopollution is very limited, with the exception of some temporal incidents. Human presence on the beaches at night is strictly controlled as is driving on the beaches, though some minor problems still exist with driving. There is no mechanical beach cleaning in the Reserve area.

### 5.2.3. Sustainable development measures

Comment whether the area is covered by an integrated coastal management plan, or bordering upon a zone under such a plan. Are there other opportunities for sustainable development provided for in the neighbouring areas?

The Turtle Reserve is within the Akamas Natura 2000 site. The site was recently proposed to the European Commission and any development in this site will be subject to the provisions of the Habitats Directive. The management plan for the site is currently being elaborated.

There is also a management plan being elaborated (and in part implemented) for the part of the Akamas peninsula outside the Natura 2000 site, which covers issues of sustainable development.

## **6. EXPECTED DEVELOPMENT AND TRENDS<sup>1</sup>**

The foreseeable development and trends of the site do not appear in the list of common criteria for the choice of protected marine and coastal areas that could be included in the SPAMI list, as established in the Protocol and its Annex I. Moreover, this is not always easy to assess and it is necessary to have knowledge about the site, which is not always available to all managers of protected areas; Thus, it is not obligatory to fill in the boxes in this Section 6.

On the other hand, the assessment of this foreseeable evolution and trends constitutes a dynamic supplement to the static knowledge of the site, as it appears in Sections 3, 4 and 5 above. Moreover, it is of significant importance for the definition of the objectives and the management plan of the site.

It thus appears desirable to bringing out the main outlines at least in respect to the following points:

### **6.1. EXPECTED DEVELOPMENT AND TRENDS OF THREATS TO AND PRESSURES UPON THE AREA**

Deal briefly in succession with:

- The demographic development in and around the site
- The development of economic activities (other than tourism and recreation) within the area
- The development of local demand on tourism and recreation
- The development of tourism pressure on the area

No development is expected at the Lara-Toxeftra Reserve. Moreover, the Reserve is now also included in the wider Natura 2000 area of Akamas Peninsula (CY4000010: CHERSONISOS AKAMA), in which any future development is controlled.

See also 5.2.3. There will be incentives for suitable economic activities as well as related infrastructure projects. Funding is already earmarked for these though the present economic crisis is expected to affect this.

### **6.2. POTENTIAL CONFLICTS IN THE AREA**

Make a brief statement of potential use conflicts between the users or group of users of the site.

The existing and planned interventions are expected to manage and control the use of the area.

<sup>1</sup> By expected development and trends are meant the development, which is thought most likely to occur in the absence of any deliberate intervention to protect and manage the site.

**6.3. EXPECTED DEVELOPMENT AND TRENDS OF THE NATURAL LAND ENVIRONMENT AND LANDSCAPES OF THE AREA:** as expected arising from the evolution of the pressures

N/A

**6.4. EXPECTED DEVELOPMENT AND TRENDS OF THE MARINE ENVIRONMENT AND SEASCAPES OF THE AREA:** as expected arising from the evolution of the pressures

No development is expected in the marine environment

## 7. PROTECTION REGIME

### 7.1. LEGAL STATUS (General Principles “e” and Section C-2 both in Annex I)

#### 7.1.1. Historical background of the protection of the site

In Cyprus, turtles and their eggs have been protected since 1971 by the Fisheries Law. Recovery plans for turtles in the Mediterranean have been spearheaded by the Cyprus Turtle Conservation project, which started in 1978, with the setting up of a seasonal station/hatchery at Lara.

In 1989, the Lara-Toxeftra Reserve was legally established and includes the most important nesting habitats of Green and Loggerhead turtles, though the Chrysochou Bay beaches are also very important for Loggerhead nesting. The Fisheries Law and Regulations provide the statutory framework for their conservation.

#### 7.1.2. Legal texts currently ruling the protection on the site

Enter the national conservation category, the dates and the present enforcement status of the legal instrument declaring the protection of the area. Consider both the land and the marine areas of the site. Include the full text(s) as an annex.

1. Fisheries Law (CAP 135) and consolidated 1990 Fishery Regulations.
2. Law 153(I)/2003 for the protection of nature and wildlife, which transposed the Habitat Directive (92/43/EC) into national law.
3. Modification Law of the Convention for the Protection of the Mediterranean Sea against pollution and Relevant Protocols (i.e. SPA Protocol) Ratification Law 20(III)/2001.

The management regulations for this area are spelled out in the 1989 Fisheries Regulations (consolidated 273/90 regulations). The Foreshore Protection Law was also amended at the same time (1989) incorporating into it the notion of Ecologically Important areas. An Order was issued on the basis of the Foreshore Protection Law also declaring the Lara/Toxeftra coastal area as Ecologically Important, thus giving effect to some of the provisions of the Fisheries Law.

Annex III

#### 7.1.3. Objectives (General Principles “a” and D-1 in Annex I)

Name in order of importance the objectives of the area as stated in its legal declaration.

The main objectives of the area is to protect Green and Loggerhead turtles near or on the nesting beaches, including their nesting activity at night, as well as their nests and hatchlings from human impacts such as from fishing, driving on beaches, use of lights etc.

#### 7.1.4. Indicate whether the national protection regime arises from international treaties enforced or from implementation measures of treaties (Art. 6.a in the Protocol).

The protection regime originally (in the 1971, 1982 and 1989 regulations - now all in the consolidated 1990 Fisheries Regulations) did not arise from any supranational treaty. Nonetheless it has since come to cover the provisions of both the Protocol and the Habitats Directive (92/43/EC) of the EU. (These species are priority species under the Habitats Directive). It also now covers the provisions and recommendations of the Bern Convention.



## 7.2. INTERNATIONAL STATUS

### 7.2.1. Transboundary or high seas areas

Complete this section only if the area is transboundary, totally or partially in the high sea, or within areas where the limits of national sovereignty or jurisdiction have not yet been defined. In this case, mention the modalities of the consultation (Art. 9 para. 3A in the Protocol and General Principles “d” in Annex I).

### 7.2.2. International category

Mention if the area, or part of it, has been designated and on what date, with an international conservation category (e.g. Specially Protected Area, Biosphere Reserve, Ramsar Site, World Heritage Site, European Diploma, Natura 2000, Emerald network, etc.).

Lara-Toxeftra: National Marine/Coastal Reserve (Marine Protected Area): Officially declared as a protected area in 1989 on the basis of the Fishery Legislation.

Chersonisos Akamas (CY4000010) - SCI (Habitats Directive) & SPA (Birds Directive) - siteCode: CY4000023 : Officially Classified in 2011 as a Natura 2000 site.

## 7.3. PREVIOUS LEGAL BACKGROUND AND LAND TENURE ISSUES

Briefly mention if the area or part of it is subject to any legal claim, or to any file open in that connection within the framework of an international body. Describe the land tenure regimes within the area, and append a map if existing.

Much of the area was and is government owned land, as forest land, foreshore, or Hali-land (government land)

#### 7.4. LEGAL PROVISIONS FOR MANAGEMENT (Section D-1 in Annex I)

##### 7.4.1. Zoning

Briefly state if the legal text protecting the area provides for different zones to allocate different management objectives of the area (e.g. core and scientific zones in both land and sea, fishing zones, visitation, gathering, restoration zones etc) and in this case the surface area in ha of these zones. Include a map as an annex

No zoning exists – the protected area is considered as core area.

##### 7.4.2. Basic regulations

Mention the provisions, which apply to the area concerning the implementation of Article 6 of the Protocol (paragraphs a to i), Section D5 (a to d) in the Annex I and Article 17 of the Protocol.

The Lara/Toxeftra area was declared as a protected area by the Government of Cyprus in 1989, to protect the nesting of *Caretta caretta* and *Chelonia mydas*. The area is protected through Regulations of the Fisheries Law which were amended in 1989 (Fisheries Law, Cap 135, 1989 Regulations). According to Article 13 of the consolidated Fisheries Regulations (273/90), it is prohibited to capture, kill, buy, possess or sell a marine turtle, as well as their eggs, or attempt to do any of these..

The regulations prohibit from the 1<sup>st</sup> of June up to the 30<sup>th</sup> of September, camping, the use of umbrellas and sunbeds, the presence of people in the area at night, the use of vehicles on the beaches, entering and anchoring of boats and fishing (except with rod and line) in the sea area down to the 20m isobath. The Foreshore Protection Law was also amended to stop local authorities from granting leases (permits) for the use of the foreshore for umbrellas, sunbeds etc. on a commercial scale.

The Lara/Toxeftra nature reserve is managed by the Department of Fisheries and Marine Research of the Ministry of Agriculture, Natural Resources and Environment. The area has a management plan and a monitoring program during the turtle nesting season. This includes a small information center. Visitors are warned with notices at several points in the area. During the nesting / hatching season (1<sup>st</sup> June to 30<sup>th</sup> September) beaches are under permanent control and the legislation/regulations are enforced. Turtles are tagged and nesting is monitored. All eggs/nests are protected *in situ* by special aluminium cages, on the beach they were laid. The cages are mainly used to avoid predation by foxes. A small number of nests (10-20) from very touristy beaches are moved to the hatchery, which is a fenced off part of the beach. To avoid destruction by storms some nests are moved up the same beach they were made.

Through the management plan, the turtles are protected through at least part of their life cycle (nesting females, pre-nesting and nesting stage, eggs, incubation, hatchlings and resident young and adult turtles). Moreover it ensures the study and the monitoring of their population and their reproductive activity, along with the protection of their nesting sites.

Training courses in turtle conservation techniques and beach management are held each year since 1989 for Mediterranean scientists by the Cyprus Wildlife Society, in close cooperation with the Department of Fisheries and Marine Research. These trainees are mainly sponsored by the Regional Activity Center for Specially Protected Areas (RAC/SPA of MAP/UNEP). The project is financed by the government.

#### 7.4.3. Legal competencies

Section D4 in Annex I states that the competence and responsibility with regard to administration and implementation of conservation measures for areas proposed for inclusion in the SPAMI List must be clearly defined in the texts governing each area. Additionally Art.7.4. of the Protocol calls for the provision of clear competencies and co-ordination between national land and sea authorities, with a view to ensuring the appropriate administration and management of the protected area as a whole. Mention in which way do the legal provisions clearly establish the institutional competencies and responsibilities for the administration and conservation of the area, and if being the case, their co-ordination means, including those between land and sea authorities.

The Department of Fisheries and Marine Research is the responsible government department for law enforcement, both on land and in the sea area of the reserve. During the nesting period, both land and sea patrolling is carried out by the personnel of the Department, which is also responsible for compounding offences and/or for forwarding cases to the Attorney General's office for prosecution.

Moreover, the Port and Marine Police also works closely with the Department, as needed, in patrolling the sea area of the Reserve.

#### 7.4.4. Other legal provisions

Describe any other relevant legal provisions, such as those requiring a management plan, the establishment of a local participation body, binding measures for other institutions or economic sectors present in the area, allocation of financial resources and tools, or any other significant measures concerning the protection and management of the area or its surrounding zones.

These relate mainly to the provisions of the Habitats Directive of the EU for which a management plan is useful but not mandatory..

## 8. MANAGEMENT

Through the General Principles, para. (e) in the Annex I, the Parties agree that the sites included in the SPAMI List are intended to have a value as examples and models for the protection of the natural heritage of the region. To this end, the Parties ensure that sites included in the List are provided with adequate legal status, protection measures and management methods and means.

### 8.1. INSTITUTIONAL LEVEL

#### 8.1.1. Authority/Authorities responsible for the area

Department of Fisheries and Marine Research (DFMR) of the Ministry of Agriculture, Natural Resources and Environment

#### 8.1.2. Other participants in the management body

Such as other national or local institutions, as stated in Section D6 in Annex I.

#### 8.1.3. Participants in other committees or bodies

Such as a scientific committee, or a body of representatives from the local stakeholders, the public, the professional and non-governmental sectors, as in Sections B4-b and B4-c in Annex I.

The Cyprus Wildlife Society has been responsible for implementing the monitoring and conservation plan and is answerable to the DFMR on a biennial or annual basis for this.

#### 8.1.4. Effectiveness

As stated in Section B4 of Annex I, assess as very low, low, moderate, satisfactory, very satisfactory, and comment as needed on the following aspects:

a) Effectiveness of the co-ordination, where existing:

Satisfactory

b) Quality of involvement by the public, local communities, economic sectors, scientific community:

Mostly satisfactory

## 8.2. MANAGEMENT PLAN (as set out in D7 of Annex I)

### 8.2.1. Management Plan

State if there is a management plan (MP) and in this case include the document as an annex. In the absence of a MP, mention if the main provisions governing the area and the main regulations for its protection are already in place and how (D7 in Annex I) and if the area will have a detailed management plan within three years (D7 in Annex I).

The methods used are those prescribed in the “Manual for the Marine Turtle Conservation in the Mediterranean”. (A.Demetropoulos and M Hadichristophorou 1995 and “Addendum 1 to the Manual – Conservation Practices” by the same authors). Addendum 1 is attached (Annex IV).

### 8.2.2. Formulation and approval of the Management Plan

Mention how the MP was formulated, e.g. by an expert team and/or under consultation and/or participation with other institutions or stakeholders. State the legal status of the MP, whether it is officialised, and how, and if it is binding for other institutions and sectors involved in the area.

The Management Plan measures that affect the public are to very a large degree in the Fisheries Regulations of 1989. They were proposed by the Fisheries Department, approved by the Council of Ministers and debated and approved in the House of Representatives.

The scientific/monitoring/conservation component is in 8.2.1 above and is institutionalised by being mandatory in the Agreement signed with the Cyprus Wildlife Society that has been implementing the plan and its conservation practices.

### 8.2.3. Contents and application of the Management Plan

State the degree of detail in the MP by entering YES or NO in the following list of potential contents, and assess the degree of implementation of the MP by using the 0-1-2-3 score on the right hand side:

	Existing in MP		Degree of application			
	YES	NO	0	1	2	3
Detailed management objectives	<u>YES</u>	NO	0	1	2	<b>3</b>
Zoning	YES	NO	<b>0</b>	1	2	3
Regulations for each zone	YES	NO	<b>0</b>	1	2	3
Governing body(ies)	<u>YES</u>	NO	0	1	2	<b>3</b>
Management programmes as:						
Administration	<u>YES</u>	NO	0	1	2	<b>3</b>
Protection	<u>YES</u>	NO	0	1	2	<b>3</b>
Natural resource management	<u>YES</u>	NO	0	1	2	<b>3</b>
Tourism and Visitation	<u>YES</u>	NO	0	1	2	<b>3</b>
Education and Training	<u>YES</u>	NO	0	1	2	<b>3</b>
Research and Monitoring	<u>YES</u>	NO	0	1	2	<b>3</b>
Services and Concessions	YES	<u>NO</u>	<b>0</b>	1	2	3
Fund raising activities	YES	<u>NO</u>	<b>0</b>	1	2	3
Periodic revisions of the MP	<u>YES</u>	<u>NO</u>	0	<b>1</b>	2	3

### 8.3. PROTECTION MEASURES

By Art. 6 of the Protocol the Parties agree to take all the necessary protection measures required for the conservation of the area, particularly the strengthening the application of the other Protocols to the Convention, and through the regulation of any other activity likely to harm the natural or cultural value of the area, such as economic, recreation or research activities. As per Section D2 in Annex I, the protection measures must be adequate to the site objectives in the short and long term, and take in particular into account the threats upon it.

#### 8.3.1. Boundaries and signing

Briefly, state if the boundaries of the area and its zones are adequately marked in the field, both on land, in the sea, and at the principal points of access.

There are several signs on the land, at the entrance and near the beaches that describe the regulations in force, so that the public knows (and is warned) as to what is allowed and what is not. There is a map of the area on the main signs that indicates the boundaries of the Reserve on the land and at sea. No buoys are employed in the sea, since the site is clearly defined by the 20m isobaths in the maps.

#### 8.3.2. Institutional Collaboration

Name the different national and local institutions or organisations with legal responsibilities or involved in the protection and surveillance of land and sea zones, and any measures or mechanisms through which their co-ordination is pursued.

See 7.4.3

#### 8.3.3. Surveillance

Consider the adequacy of the existing protection means (human and material), and your present ability to survey land and sea uses and accesses

Surveillance of the area is effected during the nesting period, but there is a need to increase surveillance and enforcement of the law and regulations that cover the area (wardens).

#### 8.3.4. Enforcement

Briefly, consider the adequacy of existing penalties and powers for effective enforcement of regulations, whether the existing sanctions can be considered sufficient to dissuade infractions, and if the field staff is empowered to impose sanctions.

The existing penalties and powers of the DFMR are sufficient. The penalties are fines for contraventions are up to 8,560 euro and/or up to six months imprisonment. The DFMR can compound offences (i.e., fine the offender without court proceedings, provided the offender agrees to pay the fine). If he does not agree then the case is taken to court.

## 9. AVAILABLE RESOURCES

### 9.1. HUMAN RESOURCES (Art. 7.2.f in the Protocol)

#### 9.1.1. Available staff

Assess the adequacy of the human resources available to the management body, in number of employees and training level, both in central headquarters and in the field. Indicate if there are staff training programmes.

The staff of the Department of Fisheries and Marine Research (DFMR) is also involved in many other activities and are not exclusively working towards the management and protection of marine turtles. Therefore, during the nesting season, the DFMR, through tenders, assigns the monitoring/conservation programme of marine turtles to experts.

#### 9.1.2. Permanent field staff

Answer YES or NO on the current existence of the following FIELD staff categories. If YES, enter the number of staff either permanent or part-time in that category, and evaluate on a 0-1-2-3 score (0 is low, 3 is high) the adequacy of their training level.

	YES/NO		NUMBER Permanent/Part-time	ADEQUACY OF TRAINING LEVEL			
	YES	NO		0	1	2	3
Field Administrator	YES	NO		0	1	2	3
Field Experts (scientific monitoring)	YES	NO		0	1	2	3
Field Technicians (maintenance, etc)	YES	NO		0	1	2	3
Wardens	<b>YES</b>	NO		0	1	<b>2</b>	3
Of which marine wardens	<b>YES</b>	NO		0	1	<b>2</b>	3
Guides	YES	NO		0	1	2	3
Other	YES	NO		0	1	2	3

#### 9.1.3. Additional Support

Briefly, describe if the area currently has the advantage of other external human resources in support of its objectives, either from other national or local institutions, volunteer programmes, non-governmental organisations, academic or international organisations. Mention if there are any significant changes in prospect for the near future.

The turtle conservation programme has been assigned, through tender procedures, to turtle experts in an NGO over the last few years. This arrangement is foreseen to continue in the near future, subject of course to tender procedures. The experts that run the project are bound to report to the DFMR any contraventions of the legislation.

## 9.2. FINANCIAL RESOURCES AND EQUIPMENT

By Art. 7 in the Protocol, the Parties agree to adopt measures or mechanisms to ensure the financing of the specially protected areas (Art.7.2.d), and the development of an appropriate infrastructure (Art.7.2.f). The General Principles para. "e" in the Annex I call upon the Parties to provide the areas with adequate management means.

### 9.2.1. Present financial means

Note if the basic financing is ensured: a core funding for basic staff, protection and information measures. Who provides this core funding? Briefly assess the degree of adequacy of the present financial means for the area, either low, moderate, satisfactory; e.g. the implementation of the management plan, including protection, information, education, training and research.

The cost of the management of the area is provided by the national funds of the Department of Fisheries and Marine Research. The Cyprus Wildlife Society also contributes significantly to the project both in cash and in kind.

### 9.2.2. Expected or additional financial sources

Briefly describe any alternative sources of funding in use or planned, and the perspectives for long-term funding from national or other sources.

No long term changes in funding are currently planned, but the present economic situation cannot preclude changes.

### 9.2.3. Basic infrastructure and equipment

Answer YES or NO to the following questions, and if YES, assess with a score of 1-2-3 (1 is low, 3 is high) the adequacy of the basic infrastructure and equipment.

	YES/NO		ADEQUACY			
Office and/or laboratory in the field	YES	NO	0	1	2	3
Signs on the main accesses	YES	NO	0	1	2	3
Guard posts on the main accesses	YES	NO	0	1	2	3
Visitors information centre	YES	NO	0	1	2	3
Self guided trails with signs	YES	NO	0	1	2	3
Terrestrial vehicles	YES	NO	0	1	2	3
Marine vehicles	YES	NO	0	1	2	3
Radio and communications	YES	NO	0	1	2	3
Environmental awareness materials	YES	NO	0	1	2	3
Capacity to respond to emergencies	YES	NO	0	1	2	3
Comment on basic infrastructure and equipment						



### 9.3. INFORMATION AND KNOWLEDGE

By Section D3 of Annex I, the Parties agree that the planning, protection and management of a SPAMI must be based on an adequate knowledge of the elements of the natural environment and of socio-economic and cultural factors that characterize each area. In case of shortcomings in basic knowledge, an area proposed for inclusion in the SPAMI List must have a programme for the collection on the unavailable data and information.

#### 9.3.1. State of knowledge

a) Assess the general state of knowledge of the area.

0	1	2	3
---	---	---	---

b) Briefly describe the extent of knowledge of the area, considering at least specific maps, main ecological processes, habitat distribution, inventories of species and socio-economic factors, such as artisan fishing.

The area is well known and maps are available to the public along with information material and brochures. GIS maps of nesting beaches and annual nesting information are available.

#### 9.3.2. Data collection

Through the monitoring program which takes place every nesting season, the results show that the management, protection and the monitoring of marine turtle nesting are very effective.

#### 9.3.3. Monitoring programme

Section D8 in Annex I states that to be included in the SPAMI List, an area will have to be endowed with a monitoring programme having a certain number of significant parameters, in order to allow the assessment of the state and trends of the area, as well as the effectiveness and protection and management measures, so that they may be adapted if need be (indicators may, for instance, supply information about species status, condition of the ecosystem, land-use changes, extraction of natural resources -sand, water, game, fish-, visiting, adherence to the provisions of the management plan, etc.).

a) Is there a monitoring programme?

YES	NO
-----	----

b) If NO, are there plans to start one, and when?

--

c) If YES, assess as low, medium, satisfactory, its adequacy and present level of development.

Satisfactory
--------------

d) If YES, who is/are carrying out the monitoring programme?

The Department of Fisheries and Marine Research is the responsible for the monitoring program and it has been assigning the programme to experts through the process of a tender

d) If YES, briefly describe how the monitoring programme will be used in reviewing the management plan.

The monitoring program has been in effect since 1978 and it shows positive results with very significant increases in nesting and therefore, that the management plan works effectively. Fine tuning of the management plan have been effected at times on the basis of the results of the monitoring programme

**10. Other information, if any**

[Empty rectangular box for providing other information]

**11. CONTACT ADDRESSES** (name(s), position(s) and contact address(es) of the person(s) in charge with the proposal and that compiled the report)

1. Marina Argyrou, Senior Fisheries and Marine Research Officer, Department of Fisheries and Marine Research (DFMR), 101 Vithleem Street, 1416 Nicosia, Cyprus. (email: [margyrou@dfmr.moa.gov.cy](mailto:margyrou@dfmr.moa.gov.cy))
2. Melina Marcou, Fisheries and Marine Research Officer, Department of Fisheries and Marine Research (DFMR), 101 Vithleem Street, 1416 Nicosia, Cyprus. (email: [mmarcou@dfmr.moa.gov.cy](mailto:mmarcou@dfmr.moa.gov.cy))
3. Andreas Demetropoulos. President, Cyprus Wildlife Society, P.O. Box 24281, Nicosia 1703, Cyprus (email: [andrecws@logos.cy.net](mailto:andrecws@logos.cy.net)).

**12. SIGNATURE(S) ON BEHALF OF THE STATE(S) PARTY/PARTIES MAKING THE PROPOSAL**

**13. DATE**

# ΠΡΟΣΤΑΤΕΥΟΜΕΝΗ ΠΕΡΙΟΧΗ ΛΑΡΑΣ LARA RESERVE

## ΠΡΟΣΤΑΤΕΥΟΜΕΝΗ ΠΕΡΙΟΧΗ ΧΕΛΩΝΩΝ

### TURTLE PROTECTED AREA



Παραλιακή Περιοχή : 90 μέτρα από τη θάλασσα

Coastal Area : 90 metres from the sea.

Θαλάσσια Περιοχή : Μέχρι βάθους 20 μέτρων

Sea Area : To 20 metres depth.

Ο ΠΕΡΙ ΑΛΙΕΙΑΣ ΝΟΜΟΣ, ΚΕΦ. 135  
Κανονισμοί 1989

#### ΑΠΑΓΟΡΕΥΕΤΑΙ ΕΝΤΟΣ ΤΗΣ ΠΕΡΙΟΧΗΣ ΑΥΤΗΣ:

- Η τοποθέτηση ομπρελών, κρεβατιών, αντισειρών, τραγουπιών κ.λ.π.
- Η παραμονή πάνω στην παραλιακή περιοχή κατά τη νύκτα, αρχίζοντας μία ώρα πριν τη δύση του ήλιου.
- Το ψάρεμα, εκτός το καλάμι.
- Η χρήση ή σκυροβόλιση σκόφου χωρίς άδεια.
- Η οδήγηση οποιουδήποτε οχήματος πάνω στις παραλίες.

FISHERIES LAW, CAP. 135  
Regulations, 1989

#### IN THIS AREA IT IS FORBIDDEN TO:

- Place any sunbed, umbrella, caravan, tent, etc.
- Stay on the beaches or the coastal area at night, starting one hour before sunset.
- Fish, except with a rod and line.
- Use or anchor a boat without a permit.
- Drive any vehicle on the beaches.

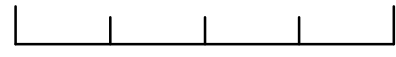
1 Km

ΤΜΗΜΑ ΑΛΙΕΙΑΣ  
FISHERIES DEPT.

# Περιοχή Προστασίας Λάρα - Τοξεύτρα

Κλίμακα: 1:25.000

0 0,5 1 km



**Δάσος  
Ακάμα**

**Δάσος  
Πέγεια**

**Δάσος  
Μελέτη**

## Υπόμνημα

- Ασφαλτόδρομος
- Χωματόδρομος
- - - Δευτ. Χωματοδρομος
- Ποτάμια/Αργάκια

## Περιοχή Προστασίας Λάρας - Τοξεύτρας

- Θαλάσσιο Μέρος
- Επίγειο Μέρος

3.870.000

3.870.000

3.865.000

3.865.000

435.000

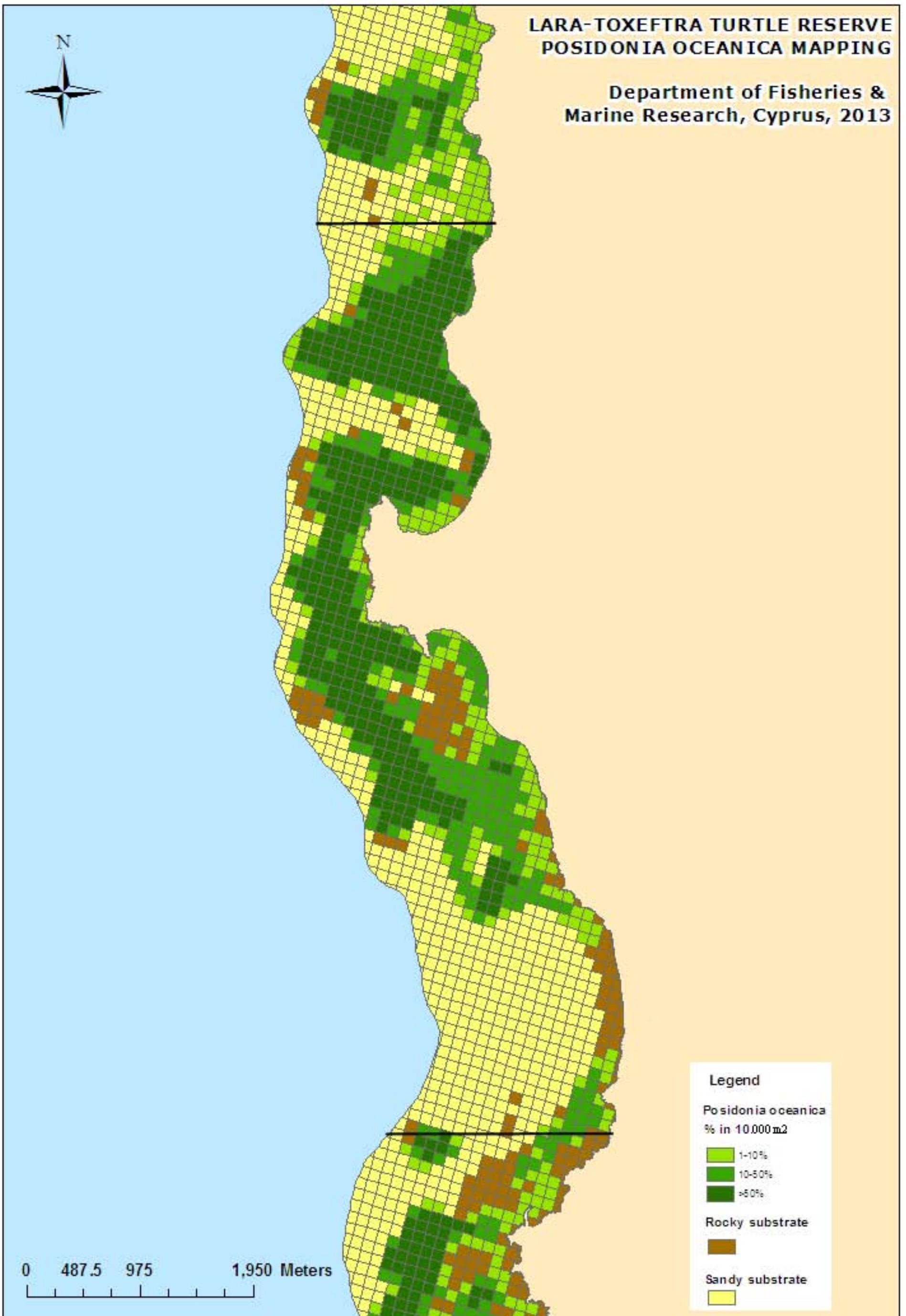
440.000

435.000

440.000

**LARA-TOXEFTRA TURTLE RESERVE  
POSIDONIA OCEANICA MAPPING**

**Department of Fisheries &  
Marine Research, Cyprus, 2013**



**Note: The black lines show approximately the boundaries of the Lara-Toxeftra Reserve.**

## **Annex VI**

**Roadmap - Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs) by 2020**

Note:

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of RAC/SPA and UNEP concerning the legal status of any State, Territory, city or area, or of its authorities, or concerning the delimitation of their frontiers or boundaries.

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## LIST OF ACRONYMS

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ABNJ:	Areas Beyond National Jurisdiction
ACCOBAMS:	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and neighbouring Atlantic Area
CBD:	Convention on Biological Diversity
CFP:	Common Fisheries Policy
CIESM:	Mediterranean Science Commission
COP:	Conference of Parties
EBM:	Ecosystem Based Management
EAF:	Ecosystem Approach to Fisheries
EBSA:	Ecologically or Biologically Significant Area
EC:	European Commission
EEA:	European Environment Agency
EU:	European Union
FAO:	Food and Agriculture Organization of the United Nations
FRA:	Fisheries Restricted Areas
GES:	Good Environmental Status
GFCM:	General Fisheries Commission for the Mediterranean
ICZM:	Integrated Coastal Zone Management
IUCN:	International Union for the Conservation of Nature
IMO:	International Maritime Organization
MAP:	Mediterranean Action Plan
MPA:	Marine Protected Area
MEDPAN:	Network of managers of marine protected areas in the Mediterranean
MSFD:	Marine Strategy Framework Directive
MSP:	Marine Spatial Planning
NGO:	Non Governmental Organization

RFMO: Regional Fisheries Management Organization

PSSA: Particularly Sensitive Sea Area

RAC/SPA: Regional Activity Centre for Specially Protected Areas

SAP BIO: Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean region

SPAMI: Specially Protected Areas of Mediterranean Importance

TEEB: The Economics of Ecosystems and Biodiversity

UNDP: United Nations Development Programme

UNEP: United Nations Environment Programme

WWF: World Wide Fund For Nature

## 1. FOREWORD

---

**Marine Protected Areas (MPAs)** are increasingly being globally recognized as one of the **most effective tools** for the conservation and protection of the marine environment when they are managed effectively and have sufficient resources to address the local management issues.

In addition to their biodiversity conservation role, **MPAs have proved their usefulness in recovering species, habitats and populations in decline** and are recognized as reinforcing ecosystems' resilience. Through a shared management approach (co-management), **they can contribute to the sustainable development of socio-economic activities such as artisanal fishing and eco-tourism.** They are a useful fishery management tool which the fishing sector is beginning to use as fishery reserves or MPAs. The services they provide contribute to the population's well-being and beauty of their surrounding territory which in turn contributes to their socio-economic development.

**The benefits and services provided by biodiversity conservation,** the difficulties associated with the management of MPAs and marine natural resources (particularly fisheries) now **brings conservation supporters closer to the fishing sector than ever before and in a broader sense includes biodiversity governance through an integrated process with other sectorial policies.** The period ahead offers a great opportunity for reconciliation and synergies, even if pressures exist and tensions are still high between some institutions. Indeed, some have evolved towards taking into consideration the issues and socio-economic stakeholders, whilst others tend to develop policies and management tools based on ecosystem or eco-responsibility approaches.

Several objectives in the Aichi **Strategic Plan for Biodiversity 2011-2020** now consolidated by decisions taken at Rio + 20 or at the Convention on Biological Diversity (CBD) COP 11 in Hyderabad in 2012 and reinforced by several Protocols of the Barcelona Convention and several European directives (see context) highlight the **commitments and international frameworks which show the efforts to be undertaken to improve the status of biodiversity and management of marine resources in the Mediterranean.**

Countries have made a commitment that by 2020, "10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures"<sup>1</sup>.

The MPAs in the **Mediterranean region** as a whole are not yet a regional ecological network of marine protected areas, despite the fact that a network of MPA managers exists (MedPAN). Given the magnitude of the pressures and challenges, achieving the objectives of the CBD, Barcelona Convention, or those associated with EU policies and frameworks will only be possible **in the short and medium term if there is a renewed, stronger, and coherent commitment from all the stakeholders** (international organizations, conventions, agreements), riparian states, NGOs, the scientific community, national institutions, MPA managers, private sector,

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<sup>1</sup> Target 11 of the Aichi Strategic Plan for Biodiversity 2011-2020.

local populations/communities, etc.), and on every geographic scale (local, national, Mediterranean, European and international).

Of all the oceans, the Mediterranean Sea is unique by its geography, the intense pressure from populations and pollution, but also because it suffers the most from the impacts of climate change. Consequently, it should not only receive more support than other areas of the world to restore its ecosystems, rebuild its resilience and continue to provide goods and services, but also remain a key innovative region and a model for other regions in the world.

**The following proposed aims to demonstrate the efforts which each Mediterranean country and stakeholder needs to deploy in their own way, for the short and medium term, in order for their MPA network to be operational and in accordance with international objectives.**

This roadmap will also contribute to identifying measures to be taken during future discussions (the Barcelona Convention COP 18, SAP BIO updating, European policies, IMPAC III, etc.).

## Why do we need a roadmap?

The complexity of spatial management and issues linked to the co-management of MPAs means that a synergy needs to be developed between different stakeholders because of their cultural, geographic diversity or their position on a local, national or transnational level in the governance of MPAs. It is thus essential to define a common vision and it is proposed to develop it through a roadmap which takes into account the following points:

- The needs of all the stakeholders and local populations are identified and taken into account,
- The constraints and obstacles which stakeholders encounter, at every level, are identified and solved,
- A given stakeholder must feel that they are being heard and understood by others,
- The coordination process is well informed and if necessary adaptable.

**This roadmap was developed** by the Secretariat of the MedPAN network jointly with RAC/SPA and in coordination with other regional partners (UNEP/MAP, WWF, IUCN) using a collaborative approach involving many representatives and stakeholders from the Mediterranean (donors, scientists, managers, fisheries representatives, NGOs,).

This proposed roadmap was drafted taking into account the provisions, targets and current recommendations on an international level to improve the network of MPAs (some of these elements are set out in the context section) and adapting them when appropriate to the Mediterranean context.

**Thus, this roadmap** aims to **define steps** that Mediterranean States, relevant

organizations and other stakeholders could individually and/or **jointly undertake to achieve**, by 2020, the objectives set for the network of MPAs.

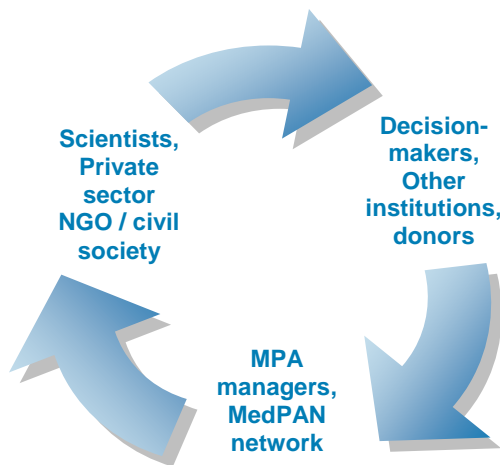
Despite the difficulties in achieving the assigned objectives many elements and examples of knowledge confirm that whatever the country it is possible to take action. However, political commitment needs to be re-affirmed and associated to actions.

**The roadmap could contribute to improving decision-making processes and programmes** already established under several conventions, agreements and policies (Barcelona Convention, Convention on Biological Diversity, European policies, etc.). It could also contribute to identifying actions to be undertaken during the process of updating the SAP BIO (Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean region) which is being led by the Regional Activity Centre for Specially Protected Areas (RAC/SPA) in 2012-2013.

The roadmap has been finalized based on the conclusions and recommendations made during an extensive **consultation process** between all the participants of the **MPA Forum** held in Antalya (Turkey) on 25<sup>th</sup> to 28<sup>th</sup> November 2012.

## For whom is this roadmap intended?

This roadmap is addressed to **national, European, Mediterranean and International** stakeholders who are involved in MPA policies, planning and management in the Mediterranean region; the different type of stakeholders are shown below.



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## 2. CONTEXT

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## 2.1 The Mediterranean Sea, a hotspot for marine biodiversity

The Mediterranean is a semi-enclosed sea whose waters bathe the coasts of twenty one countries of a region that has been for centuries the cradle of great civilizations. Its geological and human history has given the **Mediterranean region its richness** in terms of biodiversity, but also in terms of social, cultural and political diversity.



Known as one of the **planet's key areas for marine biodiversity**, the Mediterranean Sea hosts habitats, species and assemblages of particular ecological importance. Its richness and quality contribute to the populations' well-being and to the development of coastal areas.

Although there are still significant gaps in information and reliable data on the biodiversity of many Mediterranean zones, a recent scientific assessment coordinated by the RAC/SPA identified 10 unprotected pelagic areas that conform to the criteria<sup>2</sup> set out under the CBD for Ecologically or Biologically Significant Areas (EBSAs).

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<sup>2</sup> Uniqueness or rarity, Special importance for life history of species, Importance for threatened, endangered or declining species and/or habitats, Vulnerability, fragility, sensitivity, slow recovery, Biological productivity, Biological diversity, Naturalness (CBD Decision IX/20, Annex 1):



Other regional initiatives have contributed to identifying some key areas to be protected: WWF identified 13 key areas to protect (2001), Greenpeace identified 33 marine reserves (2004), ACCOBAMS identified 15 areas to protect (2007). More recently, Oceana, in the MedNet report, proposed 100 sites for a network of MPA (2011, 2012), CIESM identified 8 zones for future transnational Marine Peace Parks (2011).

A study was done in 2012 by MedPAN and RAC/SPA on the Status of MPAs in the Mediterranean<sup>3</sup>. This roadmap has used the study's results and conclusions to define its objectives.

## 2.2 Pressures

**Mediterranean** marine ecosystems are under significant pressure. The risks are linked to the intrinsic value of ecosystems, but also the loss of biodiversity and natural habitats which play a major role in human health, lifestyle, food production and availability of natural resources for the economic development and well-being of coastal populations.

The Mediterranean Sea is subjected to **anthropogenic disturbances** especially along the coasts and new potential or real pressures are emerging in the open sea. It is also faced by a transformation of its

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<sup>3</sup> Gabrié C., Meola B., Webster C. 2012. *The Status of the network of Marine Protected Areas in the Mediterranean*. MedPAN & RAC/SPA. Ed: MedPAN Collection.

environmental characteristics due to **global changes**.

**The impacts of coastal development** (agricultural, industrial) and **urbanization** are among its main threats and these have intensified over the last few years. 450 million people live in the Mediterranean basin, 40% of whom live on the coast. This significant coastal demographic growth contributes to degraded landscapes, soil erosion, increased waste discharges into the sea, loss and fragmentation of natural habitats as well as deteriorating the state of vulnerable or endangered species.

The development of activities in coastal areas (fishing industry, aquaculture, tourism, urbanization,...) has created economic opportunities, but also affected the local people's standard of living.

Being one of the world's most important **tourism** destinations, the Mediterranean region attracts about 30% of international tourism which, while generating benefits to the countries' economy, also generates significant negative impacts on the marine environment through uncontrolled coastal zone development, its impact on the degradation of seagrass meadows, increased use of water resources and production of solid wastes and sewage.



**Maritime transport** is another important economic activity for the region: it represents about 30% of the international shipping trade and 25% of maritime oil transport. The associated risks of

accidental or deliberate pollution, transport of exotic species are still poorly controlled.



**Fishing** is also an important activity in the Mediterranean in terms of employment, income and food security. Recreational fishing is an important sector for certain territories. Its continual development is poorly controlled. The uncontrolled rise in fishing efforts registered over the last decades in a number of Mediterranean countries has led to the decline of many fish stocks. According to recent evaluations made within the framework of the General Fisheries Commission for the Mediterranean (GFCM), 90% of the assessed fish stocks were overexploited.

The Mediterranean Sea is also considered to be one of the seas where the consequences of **climate change** will be the most visible in the years to come. Many areas are already affected by these impacts, particularly coastal erosion. Many scientists and sea users have observed the arrival and spatio-temporal evolution of **new marine species, some of which are invasive**.

**Aquaculture** puts a localized and relatively strong pressure depending on the site and its development which is backed by many public policies raises questions in terms of its impact especially on the environment, fisheries and the associated stocks of raw material required to supply it.

Ongoing changes in the availability of resources and the cost of **energy** has led to a growing variety of pressures and makes spatial planning more difficult for stakeholders interested in the area (desalination, wind/tidal turbines,...) or the deep sea resources (aggregates, oil, gas, rare minerals, biotechnology). This reduces the surface area available for MPAs or traditional stakeholders (artisanal fishing) and affects the required connectivity or representativity of the network of MPAs.

It is essential to take into consideration the vulnerability of coastal and marine ecosystems and to balance the socio-economic and cultural aspects of traditional stakeholders in such a pressurized context, to ensure the resilience of these ecosystems and to promote sustainable exploitation practices of renewable resources.

## 2.3 The current institutional framework

### 2.3.1 On an international level, applicable to all the Mediterranean countries

Within the Convention on Biological Diversity (CBD) framework, countries have committed to the "Aichi targets" which aim to ensure a better protection of biodiversity via a strategic plan for the 2011-2020 period.

**Through the Aichi Target 11 of the Strategic Plan for Biodiversity 2011-2020**, countries have pledged to improve the biodiversity's state by protecting ecosystems, species and genetic diversity.

Moreover, MPAs through their multiple functions are important tools to achieve the Aichi target n°14 by highlighting the

benefits of biodiversity and ecosystem services.

In addition to the Aichi targets, the commitments made at the 11th Conference of Parties of the CBD in Hyderabad (8-19 October 2012) confirmed the importance of developing economic approaches and to highlight ecosystem services and strengthen national and international funding mechanisms for biodiversity. A decision was taken to double the funding linked to biodiversity in developing countries by 2015 and maintain it to 2020 and to strengthen national policies and plans for biodiversity.

One of the elements at the CBD Conference in Hyderabad was also to recognise the importance of communities in supporting policies that integrate biodiversity. Moreover, to formally adopt the work on the State inventories of Ecological or Biologically Significant Areas (EBSAs) and helped to show the importance of quality information on Mediterranean EBSAs in order to achieve an effective setting-up of a global scientific inventory of these areas.

The Millennium Development Goals (MDGs) are strong international commitments that shape development policies in the Southern and Eastern Mediterranean countries. The targets and indicators of Goal 7 "Ensure environmental sustainability" will be adjusted in 2014 and 2015 to integrate MDG and CBD targets and indicators within a sustainable development indicator framework. These adjustments will no doubt have an impact on the regional variations of these commitments, especially in the Mediterranean.

The **Montego Bay Convention** (1982) on the Law of the Sea (UNCLOS) declared that marine resources are a common good and commits States to protect and preserve the marine environment and to

cooperate globally for this purpose. However, the development of ecosystem-based approaches, gaps in legal texts are regularly singled out demonstrating the difficulty of regional agreements, the risks in the context of growing appeal for deep sea resources.

The **international fisheries regulations** plan and implement, through RFMOs such as GFCM in the Mediterranean, the rules of exploitation/extraction in open sea areas and enable to assess whether these States comply with the regulations (prohibition of bottom trawling deeper than 1000 m, closed seasons for tuna fishing,...). Such measures do not exist for biodiversity or MPAs.

The limitations and challenges in developing **MPAs in the open sea** are important and are primarily of an institutional, political and regulatory nature. State positions are very varied and many discussions are underway to change measures or test options in certain sub-regions. Heads of State and governments made a commitment in the "**Declaration of Rio +20**" (*paragraph 162*) to implement the appropriate international instrument under the auspices of the United Nations Convention on the Law of the Sea (UNCLOS).

### 2.3.2 On a Mediterranean level

It is obvious that one of the challenges for Mediterranean States in the coming years is to **combine their efforts to reverse the degradation trends** in the marine and coastal environment and ensure the long term conservation of biodiversity. This needs a **multi-sector governance approach** using the most appropriate tools, in accordance with the globally and regionally agreed targets for the conservation and sustainable use of natural resources.

In this context, Mediterranean countries have embarked since 1975, through the **Barcelona Convention and its Protocols**, on a series of cooperative, coordinative and mutual assisted processes aimed at protecting the Mediterranean, conserving its biological diversity and combating pollution.

The Mediterranean countries thus dedicated one of the Convention's Protocols to the conservation of biodiversity, especially by developing MPAs. This protocol (SPA/BD) enables the creation of Specially Protected Areas of Mediterranean Importance which include areas beyond national jurisdiction.

Determined to give new life to their collaborative effort, the Parties to the Barcelona Convention started in 2008 a process that led in 2012 to a high level of commitment by the riparian States in applying an ecosystem-based approach to the management of the Mediterranean's marine environment.

In parallel to this process, the development of a strategy has been underway since 2008 to promote protected areas incorporating areas beyond national jurisdiction.

An important effort has been made by the Mediterranean States to ensure a harmonization with the European Union's Marine Strategy Framework Directive (MSFD).

During their 17<sup>th</sup> meeting, held in Paris (February, 2012), the Contracting Parties to the Barcelona Convention renewed their pledge to reinforce effective regional cooperation for the protection of the marine environment and to take all necessary measures to make the Mediterranean clean, healthy and productive with preserved ecosystems and biodiversity. They adopted **11 Ecological Objectives to be achieved by 2020** as part of the application of the Ecosystem Approach (Decision IG 20/4). They particularly emphasized:

- The need to implement the CBD recommendations regarding the designation of EBSAs and the use of MPAs as an instrument for protecting the marine environment, including in the open sea.
- The importance of taking into consideration innovative governance options promoting the concepts of “Blue Economy” and “Ecosystem services”. Many of the Mediterranean MPAs have the potential to serve as case studies for the application of these concepts.

There are other agreements which are applicable to the Mediterranean Sea and promote MPAs among the tools required to achieve their objectives.

The **ACCOBAMS<sup>4</sup> Agreement** provides for the establishment of MPAs in areas which serve as habitats for cetaceans and/or which provide important food resources for them.

The **General Fisheries Commission for the Mediterranean** (GFCM), one of the

regional fishery management organizations (RFMOs) created under the auspices of the FAO, recommends establishing **fishing reserves and Fisheries Restricted Areas (FRAs)** as tools for the management of fisheries and for the preservation of the marine environment, including in areas beyond the States' jurisdiction. To date four FRAs have been established by the GFCM. ICCAT (another RFMO to manage tuna) has established, particularly for bluefin tuna, various restrictions associated with stock recovery. Discussions among its members regularly address the relevance or not in using the "MPA" tool in the management of large pelagic species.

**The Convention on Wetlands, commonly known as the Ramsar Convention** is an international treaty which was adopted in 1971 and entered into force in 1975. Its purpose is the conservation and sustainable use of wetlands and aims to halt their degradation or disappearance by recognising their ecological functions and their economic, cultural, scientific and recreational value. A Mediterranean initiative for these wetlands called "MedWet" was started in 1991 and aims under the Ramsar Convention to stop the erosion and degradation of Mediterranean wetlands and promote their sustainable use. All the Mediterranean countries, the European Union, UNDP, NGOs and international scientists are involved in this initiative towards the conservation and management of these areas, several of which are key interfaces between land and sea.

**CIESM** is a scientific commission set up at the States' initiative and which has grown from its original eight founding countries to **22 Member States** today. These support a network of several thousand marine researchers, applying the latest scientific tools to better understand, monitor and

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<sup>4</sup> Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area

protect a **fast-changing, highly** impacted Mediterranean Sea. Its aim is to enhance knowledge, promote exchanges between scientists, improve the quality of scientific output in the region and give impartial advice on various topics relevant to the Mediterranean's marine area.

### 2.3.3 On a European level

As members of the European Union, 7 Mediterranean countries<sup>5</sup> are also bound to the **European Directives** applicable to the preservation and sustainable use of the marine environment.

The **Marine Strategy Framework Directive (MSFD)** is the most recent of them. It aims to achieve by 2020 a **Good Environmental Status (GES)** for the marine environment in European waters by following an integrated process involving initial assessments, descriptors, indicators, measures and monitoring programmes on a national level. It includes steps for establishing a **network of MPAs**, which will reconcile the protection of the environment with sustainable fishing practices.

This directive also complements the measures taken under the **Water Framework Directive (WFD)** and in the forthcoming years it will be necessary to develop strong synergies between the following two directives.

#### **The two European Directives "Birds" (EC 79/409) and "Habitats" (92/43).**

Faced with a significant erosion of marine biodiversity, the European Union has decided to provide an excellent and coherent network of natural sites which relies on the two European Directives:

"Birds" (EC 79/409) and "Habitats" (92/43): the Natura 2000 Network. It is a network of sites which are of European interest and whose management will balance the conservation of biodiversity and maintaining human activities through a local think tank consisting of all the stakeholders within each site. This network will complement the other networks of existing reserves or national parks.

The European Union's **Biodiversity Strategy** for 2020 shows the importance of protecting biodiversity, developing networks of MPAs and managing Natura 2000 sites (Objective 1). It also reflects a desire to integrate biodiversity and other policies and tools by specifying in one of its objectives (e.g. Objective 4) the importance of developing ambitious sustainable fisheries objectives, managing stocks *"through fisheries management without adverse effects on other stocks, species and ecosystems, in order to achieve a good ecological status by 2020, complying with the marine strategy framework directive"*.

The **Common Fisheries Policy (CFP)** is another instrument that involves binding measures and rules for the sustainable management of European fisheries for countries belonging to the European Union.

Established in 1983, the CFP has been revised to reverse the decline of European fish stocks and reduce the negative impact of fishing on the marine environment. The **new CFP** will enter into force in 2013 and specific measures are being finalized and raise many technical and political arbitrations.

## 2.4 The efforts to be undertaken

**Many initiatives were undertaken by international and national organizations**

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<sup>5</sup> Cyprus, France, Greece, Italy, Malta, Slovenia and Spain. Croatia will join European Union in 2013.

to help Mediterranean countries develop MPAs and improve their management, based on the measures and recommendations issued under the above international agreements.

The actions put in place include studies and field surveys to identify marine areas which are important to preserve, give assistance (scientific, technical and legal) and capacity building and awareness raising actions as well as networking initiatives aimed at promoting exchanges of experiences and lessons learned.

However, despite the efforts deployed and an existing network of MPA managers, **the Mediterranean's network of MPAs is still suffering from significant weaknesses<sup>6</sup>**, in particular the lack of coherence and representativity, as well as inadequate management in a number of existing MPAs. This observation shows that even if a group of individual sites exist, it is not a network yet. In addition, the difficulties to achieve the internationally defined objectives must lead us to develop new intervention methods and revise each and everyone's policies (managers, national authorities, institutions, donors, NGOs, researchers, etc.).

Improving the state of the Mediterranean MPA network requires **the following challenges to be met:**

- Make the current system of MPAs in the Mediterranean more ecologically representative and coherent in terms of its representativity, its geographical coverage and the connectivity between MPAs.

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<sup>6</sup> See the 2012 Mediterranean MPA Status Report (RAC/SPA, MedPAN)

- Increase human and technical resources (exchanges of experience, tools, methods, etc.) linked to the management of MPAs.
- Increase financial resources and mechanisms linked to biodiversity and MPAs.
- Manage effectively and efficiently existing MPAs in the Mediterranean.
- Strengthen the synergies between all stakeholders on a local, national and international level.
- Integrate governance and legal-institutional frameworks in order to clarify action plans and ensure the sustainability of measures and MPAs.
- Enhance the MPAs laboratory and innovative role (technical, social, governance).
- Ensure the sustainability and efficiency of a MPA managers' network.
- Contribute to a sustainable management of Mediterranean resources.
- Develop activities to inform and educate on the MPAs environment, marine biodiversity and the interaction with sea users.

Valuable **opportunities** which could help improve the Mediterranean network of MPAs are the following:

- The ongoing revision of the SAP BIO<sup>7</sup> within the Barcelona Convention's framework.

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<sup>7</sup> The SAP BIO is a comprehensive strategy for the conservation of Mediterranean biodiversity. Its objectives and orientations are derived from in-depth assessments carried out on national and regional levels to identify gaps and define priority actions. Although it was elaborated and adopted before COP 10 of the CBD, the SAP BIO provided

- Applying the ecosystem approach within the Barcelona Convention's framework.
- Implementing international agreements for the open sea associated to its biodiversity.
- The remaining steps for implementing the MSFD, Natura 2000 at sea, the new CFP by EU Member States.
- The implementation of recommendations made at the Rio+20 Conference and meetings of the Parties to the CBD, including the main commitments expressed at the conference ("The Future we want").

**strategy, but also develop synergies** and economise resources by working together in a more collaborative and significant way.



Furthermore, the momentum started by the **CBD Strategic Plan for Biodiversity 2011-2020** should be maintained and regularly reinforced to help Mediterranean countries achieve the Aichi targets and in particular Target 11<sup>8</sup>:

**The prospect of achieving the Strategic Plan for Biodiversity in the Mediterranean on time will only be possible if** national authorities, NGOs, scientific research organizations, national agencies responsible for MPAs, MPA managers, local communities, private sector stakeholders (fishing, tourism, etc.) as well as donors **not only renew and reinforce their commitment to this**

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elements for most of the Aichi Targets. The process being launched by RAC/SPA (2012) to revise the SAP BIO provides an excellent opportunity to incorporate this roadmap's recommendations into national and regional policies for biodiversity conservation.

<sup>8</sup> Target 11 of the Aichi Strategic Plan for Biodiversity: "By 2020, at least 17% of terrestrial and inland water areas, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes".



### 3. COMMON VISION

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#### THE COMMON VISION

*“To achieve by 2020 a connected, ecologically representative, effectively managed and monitored network of Marine Protected Areas in the Mediterranean which ensures the long term conservation of key elements of the marine biodiversity and gives significant support to the sustainable development of this region.”*

### 4. STRATEGIC OBJECTIVES FOR 2020

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Based on this vision and taking into account the context as summarized above, the activities presented in this roadmap will be geared towards achieving the following strategic objectives:

- **Strategic objective 1:** Establish an ecological network of MPAs which is representative and connected.
- **Strategic objective 2:** Establish an effective, efficient and sustainable management as well as good governance in Mediterranean MPAs.
- **Strategic objective 3:** Develop governance of Mediterranean MPAs which is integrated on a territorial level and with other sectors while promoting the sharing of environmental and socio-economic benefits.
- **Strategic objective 4:** Increase the allocation of financial resources to establish and maintain an ecological network of effectively managed MPAs.

*Note: The numbering of these objectives and associated actions do not correspond to a specific hierarchy.*



## 5. IMPLEMENTATION PRINCIPLES

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- Develop new **synergies** within the MPA community and between conservation and stakeholders from other sectors (among the different scientific fields of study, between stakeholders: decision-makers, socio-economic players, MPA managers, local communities or the civil society at large, donors, etc.).
- Develop synergies and an institutional coherence between the various management levels (local, national, transnational).
- Promote **collaborative approaches** for managing MPAs based on an ecosystem approach (EBM) and integrated coastal zone management (ICZM) and integrating them in the marine spatial planning process, particularly the land and sea link and their interfaces (coastal, wetlands, adjacent territories).
- Strengthen the commitment of the **local population, particularly artisanal fishermen** and other stakeholders in the management and monitoring process.
- Enhance the MPAs role as a **laboratory** for conservation and their innovative role in terms of management and territorial governance.
- Capitalise on examples of **good practice** in the sustainable development field (sustainable use of natural resources, implementation of policies and "green" activities).
- Strengthen collaboration, exchanges and mutual assistance between MPAs and ensure the sustainability and effectiveness of a **network of MPA managers**.
- Encourage Mediterranean countries' decision makers to **meet the commitments** made in relevant regional and international agreements.
- Plan and implement the activities proposed in the roadmap according to the **international and regional agreement measures in force**, taking into account the role of implicated international/national institutions.
- On the one hand, strengthen the effective collaborations between the respective national and international agencies responsible for biodiversity (and the environment) and on the other socio-economic development.
- Consider the evaluation and monitoring of MPAs, public policies, funding in the Mediterranean as a cornerstone for improving the network's performance. The roadmap's results will be assessed to define new targets beyond 2020.
- Take into account the differences and complementarities between the northern, southern and eastern parts of the Mediterranean.
- Develop an adaptive and shared management as well as policies made over the long term through frequent and progressive learning processes which are regularly evaluated and supported by results obtained.

## 6. PROPOSED ACTIVITIES

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The roadmap's proposed activities concern all stakeholders and every intervention level. Each level's integration is an important element of good governance. The details of each activity must be adapted to the stakeholders or countries' level of awareness and advancement, but are key to achieve the objectives.

In order to make each stakeholder more accountable, the roadmap has been built on three geographic levels: local, national and Mediterranean level. Depending on the geographic level, stakeholders are more or less mobilized especially those mentioned below, but not limited to just these:

- **Activities implemented on a local level**
  - The actions led in the MPAs and their surrounding areas will be implemented by MPA managers, but local populations, NGOs, local communities and authorities, socio-economic stakeholders, researchers and other stakeholders will also be involved.
- **Activities implemented on a national level:**
  - The actions will be implemented mainly by local/national authorities with support from NGOs, research institutes, national MPA agencies and organizations and networks representing the civil society, international organizations and donors.
- **Activities implemented on a Mediterranean level:**
  - The actions will be mainly implemented by competent international organizations (IGOs and NGOs), in partnership with donors and funding agencies with the support of national policies and local stakeholders. The Mediterranean level actions are essential to support and harmonize the actions suggested on a national and local level.

A transnational, bilateral or multilateral level applied to an intermediary geographical area situated between the national and regional level is essential and functional to develop agreements, particularly on the open sea or to manage an ecosystem approach which often does not take into account the administrative boundaries. It highlights activities implementing synergy and mutual recognition of national measures (transnational MPAs), defining common rules and institutional innovations. Despite these being developed, they have not been put forward here under the activities section in order to be concise and because feedback has shown that they generally require the mobilization of the same stakeholders as the actions on a national level with certain regional experts (lawyers, researchers, institutions, NGOs, etc.) and a strong political will. If one starts with the lowest common denominator it will facilitate the implementation. The consolidation of national management measures are a priority even in the context of developing transnational actions in order to make this transnational level more efficient and to facilitate the change of levels. Some activities refer to this on a regional or national level in the body of the roadmap.

Communicative activities are transversal and must be developed and adapted to all levels. Targets and messages are differentiated according to the roadmap's key objectives. They will need to be developed in relation to each objective.

The actions are sometimes listed with certain key points highlighted in italics.

*Note: The items mentioned in each activity's timetable are only there as an indicator. Sometimes, they indicate actions to be led by 2014 or 2015 and not over the full 2012-2020 period, but this is just to show the preliminary nature and essence of these actions compared to the next or the link between the action and an ongoing international timetable (European, other) without seeking to be specific to the nearest year. However, many of these activities should be carried out over time and these require a continuous effort.*



## 6.1 Strategic Objective 1: Establish an ecological network of MPAs which is representative and connected

From a regional perspective, the current MPA system is **not representative** of the Mediterranean's habitats and ecosystems diversity. Indeed, most Mediterranean MPAs are currently **coastal** and a number of coastal zones are still unprotected despite their essential ecological and socio-economical role on a national or Mediterranean level. **85% of the currently protected coastal sites are along the northern coasts of the Mediterranean basin** which emphasises the low number of MPAs on the southern and eastern coastlines.

Currently, the preservation of deep-sea ecosystems and the creation of MPAs in the **open sea** (high seas) are topics of growing importance due to the presence of key habitats and species which are little known and should be protected.

Deep sea and open sea ecosystems (canyons, abysses) are of great importance in terms of ecological connectivity with surface and coastal waters (sedimentation, terrigenous pollution, nutrient ascents, cycles linked to plankton...). These all play an essential role in supplying a food source for pelagic species such as threatened cetaceans and sharks. Also, they have the spatial capacity to fulfil the target (of 10%) set by international agreements for the creation of MPAs.

However, their size and distance from the shore specification require higher institutional arrangements and legislative harmonization as well as higher budgets to support recurrent management activities.

The expansion of several countries' EEZs can also interfere on some international actions planned for MPAs in the open sea.

Many MPAs in the Mediterranean are geographically and **ecologically isolated** as they were not established to serve a representativity and connectivity objective within a network, but as a scientific and political compromise. The distance between each of them is often too large to ensure their **ecological connectivity** and the viable functional maintenance of marine meta-populations.

All the MPAs created in the Mediterranean cannot be defined as being part of an **ecological network**, but are initial systems from which a consistent and coherent network must be established, particularly integrating some MPAs in the open sea.

Thus the **ecosystem-based approach and the gap analysis** will be reinforced for the selection and designation of future MPAs and their management.

An increasing amount of work on **MPA indicators and monitoring** has been carried out in the Mediterranean and worldwide in order to improve our knowledge on key marine biodiversity components. A major challenge for any network is to consolidate reliable monitoring measures.





Some countries have established **national agencies or put in place policies** which are specifically for MPAs.




In this context, the development/strengthening of marine **Natura 2000** MPA sites especially on a network level represents a major challenge for the **Northern or European** part of the Mediterranean.

For **Southern and Eastern Mediterranean** countries, strengthening the network, the effective management of MPAs, and creating new ones on solid ecological criteria represent real challenges.





### Expected Results:



- Coverage, quality and reliability of habitat and species inventories and quality mapping are strengthened to improve the representativity and connectivity and consolidate the monitoring of the Mediterranean MPA network.
- Standardized and quality measures are developed to improve on capitalization and monitoring (biological, socio-economical, governance).
- Under-represented ecosystems and other components of marine biodiversity in the existing MPA system (on a national and regional level) are identified and incorporated.
- National plans to achieve Aichi Target 11 of the CBD's Strategic Biological Diversity Plan 2011-2020 are elaborated.
- Representation of Mediterranean MPAs in the regionally and globally recognized protected areas networks is improved.
- Existing MPA governance systems are assessed with regards to their suitability for achieving Mediterranean MPA objectives.
- National and regional databases of MPA habitats and species are established and used as a tool for MPA planning and management.
- Maintaining the regional MPA database (MAPAMED) is guaranteed.

<b>Actions on a local level</b>	1.1	 <p>Assess, using the results of the activities conducted on a national level described in 1.3, the adequacy of the geographical and ecological coverage of MPAs with the view of proposing, where necessary, <b>adjustments to their surface and/or zoning</b>.</p> <p><i>Giving priority to habitats of special importance for threatened species and habitats that are essential for fishing resources (breeding grounds, nursery, etc.).</i></p>
	1.2	 <p><b>Ensure that monitoring systems comply with requirements</b></p> <p>referred to in activity 2.1 with the objective of reinforcing the representativity and connectivity of the network.</p>
<b>Actions on a national level</b>	1.3	 <p>Strengthen coverage, reputability and reliability of <b>habitat and species inventories</b> with the view of providing reliable information to improve the representativity and connectivity of the MPA network.</p> <p><i>Particular attention will be given to the development and capitalization on empirical knowledge and/or traditional users in the system based on the many existing methodologies and good governance in the field.</i></p>
	1.4	 <p>Undertake <b>national gap analyses</b> to identify the ecosystems and other components of marine biodiversity that are under-represented in the existing MPA system.</p> <p><i>The gap analyses will be based on methodological guidelines developed regionally and internationally. They should also be able to identify the necessary steps to ensure the <b>connectivity</b> between Mediterranean MPAs and therefore the actions to be undertaken to fill the gaps.</i></p>

	1.5	 <p>Establish and implement <b>national plans to designate and/or extend MPAs</b> to address the under-representation cases identified by the gap analyses, taking into account the Aichi target n°11.</p> <p><i>The gap analyses and the elaboration of the national plans should be conducted through a <b>scientifically-based process</b> that ensures the full and effective <b>participation of stakeholders</b> (local communities, sea users, scientists, etc.). Greater support must be given to research institutions in the marine field.</i></p>
	1.6	 <p>Regularly identify and propose <b>candidate MPAs</b> to be listed in regionally and globally recognized protected areas networks:</p> <p><i>SPAMI List, FRAs, Biosphere Reserves and World Heritage sites, Ramsar sites, IMO PSSAs. Also to continue efforts started in 2008 by UNEP/MAP, RAC/SPA and the European Commission to create SPAMIs taking into account open sea areas.</i></p>
	1.7	 <p>Carry out <b>information and communication</b> campaigns in order to promote environmental protection and associated biodiversity policies with decision makers, the general public and users of the marine environment to improve political commitments to meet the needs for consolidating the network.</p> <p><i>The MPAs role is not only a management tool for conservation, but also a tool for socio-economic development and to fight against poverty.</i></p>
<p><b>Actions on a Mediterranean level</b></p>	1.8	<p>Develop agreements to put in place harmonized methods to identify and then assess the representativity of the network, its connectivity and promote them nationally.</p> <p><i>We can build on methods developed for Natura 2000, for example, or those for MSFD.</i></p>



<p>1.9</p>	 <p>Compile existing data and encourage monitoring and harmonise protocols to establish <b>habitat and species</b> databases in support of the gap analysis on the representativity and connectivity of Mediterranean MPAs and as a tool for MPA planning and management.</p> <p><i>Strengthening the networks of taxonomists and promoting governance built on an effective and in depth research is preferred. Research on modelling habitat/species may be one of the avenues to be developed.</i></p>
<p>1.10</p>	 <p>Disseminate technical tools for MPA system planning and facilitate the <b>exchanges of experience and good practices</b>, providing assistance to national authorities.</p>
<p>1.11</p>	 <p>Offer assistance to national authorities and, where needed, facilitate the multilateral processes for the <b>identification of potential MPA sites in areas beyond national jurisdictions</b> taking into account the existing advances and constraints of countries' positioning, scientific work and international, transnational or multilateral agreements for open sea areas.</p>
<p>1.12</p>	 <p>Develop and maintain the <b>MPAs national and regional (MAPAMED) databases</b> and ensure that they are integrated into the IUCN and UNEP global protected area database (WDPA).</p> <p><i>Develop improvements based on the existing one, doing it in stages and on the basis of a progressive reliability of information. The databases should integrate:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Standardized information and indicators on habitats and species.</i></li> <li>▪ <i>Information on MPA management, governance, financing, budgets and environmental services.</i></li> <li>▪ <i>International standards used for MPA data.</i></li> </ul>

	1.13	 <p>Develop institutional agreements for the <b>protection of biodiversity and/or the management of MPAs in ABNJs</b> in transnational pilot sites:</p> <ul style="list-style-type: none"> <li>▪ By integrating advances in governance and international agreements.</li> <li>▪ By developing innovative and well-grounded governance.</li> <li>▪ By offering innovative institutional frameworks reinforcing the integration of Fisheries and Conservation governance in these types of territories.</li> </ul>
	1.14	 <p>Facilitate the establishment of monitoring-evaluation mechanisms for the actions mentioned in the roadmap and international and Mediterranean agreements in order to give regular information on the progress of policies and results.</p>

## 6.2 Strategic objective 2: Establish an effective, efficient and sustainable management as well as good governance in Mediterranean MPAs

MPAs **management effectiveness** requires a national political will which ensures the establishment of a clear institutional framework, proper planning as well as adequate human, technical and financial resources. Thus, good management requires developing integrated and coordinated policies, clarifying responsibilities, and legal, institutional and administrative frameworks (see Objective 3).

The most operational and effective mechanism of governance to manage natural resources and MPAs is co-management as it promotes stakeholders accountability and has useful adaptive management methods to manage complex systems such as ecosystems. It is essential that the different stakeholders and the communities are involved in the co-management processes.

Several mechanisms of governance and management exist like those developed by the populations. Contracting Parties to the CBD (decision XI/24) confirmed the importance of integrating a diversity of statuses and modes of governance in networks of MPAs. In addition, the implementation of management tools such as MPAs or reserves by artisanal fishermen are being developed and management measures already exist in several sectors. The conservation stakeholders, as those from other sectors, must recognize the existing measures which provide resource management and biodiversity to develop synergies rather than oppose them.

The effectiveness of MPAs is directly correlated to their status and its

associated rules. However, the protection status of Mediterranean MPAs is currently extremely variable if not complex and not only within MPAs (zoning often lacking), but also on a regional and national level.

In the Mediterranean, MPAs are not **managed effectively** and could be designated as being "paper parks". Indeed, only 50% of Mediterranean MPAs have a **management plan** and clear objectives.

Most of them have low quality monitoring which is not always done in and around the MPA. This is valid for biological monitoring, but even more so for socio-economic monitoring.

The key elements for developing a co-management process are a good knowledge on the usages and pressures found in MPAs and their surrounding areas, as well as anticipating the development of future activities or pressures in order to establish an initial state and elaborate and revise a management plan.

Thus, taking the **socio-economic aspects into consideration and improving the integration of the territory's stakeholders** is increasingly becoming a prerequisite for effective management in order to overcome the usual "MPA vs. users" opposition.

**Resources**, whether equipment, human or financial are often inadequate; Mediterranean MPA managers rarely have the necessary basic requirements in terms of qualifications and financial resources to put in place a proper management of the

sites they are in charge of (see also Objective 4).

**Poor surveillance** or a lack of laws and regulation enforcement is persistent and one of the MPAs great weaknesses in this region.

Although the involvement of managers in taking into account the ecosystem approach is important, one of the major challenges lies in consolidating control measures and surveillance, law enforcement and management funding. Without management and without control and effective law enforcement, trust is lost and MPAs cannot be managed.

Faced with anthropogenic pressures linked to the density of the local population, increasing demand from companies and more important climate changes than elsewhere, the stakeholders involved in the Mediterranean Sea are confronted by a major challenge: how to maintain the ability to secure goods and services which benefit the people and economic stakeholders?





Faced by these challenges, which are stronger in the Mediterranean region than in other regions of the world, this region must become a leader in long-term sustainable management of biodiversity, respecting its territories, populations and ecosystems.










### Expected results :

- Mediterranean MPAs management and governance systems' effectiveness is assessed regularly (around every 4-5 years).
- The entire system of governance and management is reinforced by an integrated approach and by the implementation of actions under Objective 3 and 4 (integration of policies, stakeholders, territories, synergies and taking into account existing frameworks, funding synergies).
- Mediterranean MPAs have implemented management plans which are regularly updated and incorporate sustainable management tools developed by other sectorial plans.
- Involvement of stakeholders in the management of Mediterranean MPA is strengthened.
- Institutional frameworks governing Mediterranean MPAs are clarified and barriers to the proper institutional functioning of MPAs are identified and removed.
- Mediterranean MPA managers and national authorities' skills are improved for better governance and management.
- National business plans and one for each MPA are prepared, adapted to management needs and regularly updated.










<b>Actions on a local level</b>	2.1	 <p>Strengthen the <b>active participation of local stakeholders</b> in national and regional networking initiatives.</p> <p><i>Exchanges of experience, mutual technical/scientific assistance etc.</i></p>
	2.2	 <p>Strengthen the <b>MPAs monitoring system</b> and its capacities:</p> <ul style="list-style-type: none"> <li>▪ <i>By establishing a minimum of monitoring.</i></li> <li>▪ <i>Using harmonized international standards and by standardizing monitoring between MPAs, in support of management decisions and national and regional consolidations especially for representativity and connectivity monitoring.</i></li> <li>▪ <i>Covering all aspects of MPA governance, but also socio-economic and biological monitoring as well as any aspects linked to climate change and the arrival and evolution of invasive species in and around the MPA.</i></li> <li>▪ <i>Establishing reliable ‘zero states’.</i></li> <li>▪ <i>The implementation of national agreements, dashboards and harmonized systems must support the local implementation of such monitoring which is useful for measuring the evolution of the network and decision making.</i></li> </ul>
	2.3	 <p>Assess <b>MPAs staffing needs</b> and develop short and medium term recruitment plans, so that all MPAs have competent management teams with adequate staffing.</p>
	2.4	 <p><b>Develop and regularly update MPA management plans and business plans</b> according to management needs and management effectiveness objectives, in a format that can be integrated on a national level.</p> <ul style="list-style-type: none"> <li>▪ <i>In assessing in advance the needs of each MPA in terms of management and resources (competent staff, needs, appropriate equipment, etc.).</i></li> <li>▪ <i>These plans are useful for management monitoring and setting up funding and governance measures on a national and regional level (see Objective 3 and 4).</i></li> </ul>


	2.5	 <p><b>Evaluate MPA management efficiency</b> and enhance the visibility of measurable results and evolutions.</p> <p><i>Thus, supporting more effectively priority interventions and the prioritization of objectives which are still undeveloped.</i></p>
	2.6	 <p>Involving stakeholders by highlighting what already exists and local populations then establish formal <b>consultation processes</b> to involve them in the management planning and decision-making, so that they adhere to and participate in the formulation of the MPAs management objectives.</p>
	2.7	 <p>Strengthen the State's decentralized institutions and local authorities in their <b>surveillance duties</b>, regulation enforcement and local governance mechanisms in synergy with national resources and measures</p>
<b>Actions on a national level</b>	2.8	 <p><b>Assess management effectiveness</b> and governance system for the whole network of existing MPAs:</p> <ul style="list-style-type: none"> <li>▪ <i>Using and further developing the set of management effectiveness indicators elaborated for Mediterranean MPAs, as well as management dashboard systems.</i></li> <li>▪ <i>By putting in place mechanisms to harmonize national indicators which are relevant to management and national observatories. Test and improve them in order to compare the situations of MPAs over time and support monitoring via a national system of successful MPAs. A peer review may also be put in place to back this system.</i></li> <li>▪ <i>The evaluations will be done taking into account the opinion of MPA managers, scientists, users of the marine environment and local communities.</i></li> <li>▪ <i>Including the potential associated with the SPA/BD Protocol for governance in open sea.</i></li> </ul>

2.9	 <p><b>Improve national policies and strategies relevant to the management of MPAs</b> and ensure that each MPA has a management plan with clear objectives and based on the best available knowledge.</p> <ul style="list-style-type: none"> <li>▪ <i>In seeking clarification and simplification of the governance and administrative frameworks, including in terms of synergy and development of institutional bridges between different ministries (see Objective 3).</i></li> <li>▪ <i>In particular integrating local knowledge and governance through co-management and also giving a clear decentralization role.</i></li> <li>▪ <i>Ensuring that national authorities adhere to global and regional legal instruments on the development of MPAs.</i></li> <li>▪ <i>Testing innovative management approaches.</i></li> </ul>
2.10	 <p>Involve stakeholders in the planning and management of MPAs by enhancing participatory management, particularly by setting up <b>consultation mechanisms on a national and local level and by increasing raising awareness actions and giving more information on the conservation of the marine environment.</b></p>
2.11	 <p>Develop and/or strengthen effective and ongoing national <b>capacity building</b> mechanisms for local or national authorities in charge of MPAs, MPA managers and the main stakeholders.</p> <p>It is important to include the exchanges of experience among stakeholders (<i>including the financial mechanisms, the management's effectiveness, fishing management tools, etc.</i>)</p>



	2.12	 <p>Review and, if necessary, amend the existing <b>legal and national institutional systems</b> applicable to MPAs.</p> <p><i>Particular attention will be paid to the following points:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Identify and remove barriers which block the good functioning of institutions and other authorities responsible for the management of MPAs.</i></li> <li>▪ <i>Establish institutional arrangements that enhance and ensure surveillance, effective control and enforcement of legal measures.</i></li> <li>▪ <i>Test new partnerships to improve the effectiveness of pilot sites.</i></li> <li>▪ <i>Define the co-management bodies associated to the different levels and links between the co-management levels.</i></li> <li>▪ <i>Provide the right framework for the involvement of local communities and tools to develop community MPAs.</i></li> </ul>
	2.13	 <p>Develop <b>additional communication campaigns</b> to those undertaken in Objective 1, 3 and 4 and aimed at promoting good examples of management and results in order to stimulate the development of well-managed MPAs.</p>
<p><b>Actions on a Mediterranean level</b></p>	2.14	 <p>Develop and make available <b>technical tools</b> including guidelines, standards and indicators for the MPA management and MPA evaluation.</p> <p><i>The guidelines and other technical tools should be adapted to the Mediterranean context and, where necessary as appropriate, to sub-Mediterranean levels.</i></p>

2.15	 <p>Provide assistance to the relevant national authorities in conducting MPA management <b>effectiveness evaluations</b>:</p> <ul style="list-style-type: none"> <li>▪ <i>Based on existing methodologies for assessing MPAs effectiveness, evaluation of management plans, as well as the network's management (Natura 2000, other).</i></li> <li>▪ <i>Supporting the development and implementation of national harmonized measures associated to assess management (indicators, dashboards, ...).</i></li> </ul>
2.16	 <p><b>Compile and disseminate information</b> on lessons learnt in the context of MPA management, including success and failure stories (capitalization, exchanges of experience,...).</p>
2.17	 <p>Develop exchanges of experience linked to the elaboration and/or the review of existing MPA <b>management plans</b> and business plans in existing MPAs.</p>
2.18	 <p>Establish a <b>regional capacity building</b> mechanism for MPA managers.</p> <ul style="list-style-type: none"> <li>▪ Using a wide range of training approaches (training courses, in the field training, on the job training, online training modules, exchange visits, study tours, training of trainers, exchanges of experience, etc.).</li> <li>▪ The mechanism should also target other stakeholders and decision makers.</li> </ul>

	2.19	 <p>Facilitate the elaboration of:</p> <ul style="list-style-type: none"><li>▪ A <b>common categorization system</b> for Mediterranean MPAs based on their main objectives and methods of management and regulation taking into account the need to harmonize this kind of system with those used internationally (IUCN categories, etc.).</li><li>▪ <b>Common approaches for the management of MPAs.</b> <i>This will promote harmonization and complementarities between MPAs on a regional level and will allow the outcome of comparable elements between countries for regional assessments.</i></li></ul>
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### 6.3 Strategic Objective 3: Develop governance of Mediterranean MPAs which is integrated on a territorial level and with the other sectors while promoting the sharing of environmental and socio-economic benefits

The preservation of biodiversity contributes significantly to the sustainable development of territories and economic activities. In addition to their central role in the conservation of marine biodiversity, MPAs are increasingly called upon to **play a role in the economic and social development** on a regional, national and local level as well as for the sustainable management of living marine resources and developing sustainable tourism and other **rational uses** of the marine environment. In fact, MPAs provide goods and services that are essential for many resident or passing communities.

However, managers should improve the integration of their MPA in its surrounding territory and its **territorial governance** by ensuring that there is a broad vision of the role of the MPA among the other local governance bodies. This will provide the right conditions for a stronger commitment from key stakeholders and local representatives so that there is less conflict and an instigation of shared management (co-management). In the coming years, one of the challenges of a co-management approach for Mediterranean MPAs will be to improve their **integration into their social and economic context**, in order to understand better and unite the different economic stakeholders in the MPA's co-management and not be perceived as an obstacle to socio-economic development.

The involvement of key stakeholders in areas located beyond the MPAs boundaries will reinforce the MPAs





position in **marine spatial planning processes** and facilitate the implementation of **ecosystem based approaches**.






Certain policies and subsidies can have adverse effects on MPAs and ecosystems; and can generate negative socio-economic effects over the long-term for local and national communities (fisheries, tourism, land use, etc.).






Understanding the multiple values of ecosystems and biodiversity for man's well-being, the economy and local communities can inspire countries to launch actions and policies needed to achieve social and environmental objectives.

### Expected results :





- National policy frameworks on shared management (co-management) principles, MPA zoning based policies and various key principles relevant to European and Mediterranean policies are clarified and improved.
- MPAs and biodiversity are better integrated into sectorial policies.
- The interaction between MPAs and other sectors, as well as co-management are improved.
- Institutional agreements between fisheries and MPA institutions on all geographical levels allowing synergies and/or shared responsibilities are clarified.
- MPA management plans and fishery policies meet territorial integration and EBM (ecosystem-based management) objectives.
- The work developed by the fishing sector regarding EBM and creation of fisheries reserves is integrated into regional assessments.
- Integration of MPAs in a broader coastal and marine spatial planning, in national policies and in national and regional databases is improved.
- Wetlands, the areas and stakeholders around the MPA, the land-sea links are better understood in the MPA's governance and in integrating the MPA to its territory.
- Sustainable activities within and around MPAs which give socio-economical benefits to local communities and respect the MPAs status, objectives and specificities are developed.
- The MPA ecosystem's services and function and the services provided by the MPA are regularly evaluated and promoted on a local, national and regional level; the data is integrated into national statistics, regional databases and is taken into account in creating national policies.
- National harmful subsidies for the marine and coastal environment are identified and progressively replaced.
- Investment programmes and innovative public procurement procedures and/or innovative "green" incentives are developed.

<b>Actions on a local level</b>	3.1	 <p>Establish adequate <b>MPA zoning</b> through consultation processes to conciliate habitat conservation requirements and the need for maintaining and/or developing human activities, provided they can be controlled and maintained while remaining within the MPA management plan's objectives.</p> <p><i>Develop zoning in MPAs which is linked to multi-usages, but where non-extractive zones are also included and which are defined with the stakeholders.</i></p>
	3.2	 <p><b>To understand and integrate better the sustainable socio-economic activities</b> (fishing, recreational, tourism) within the MPA, taking into account conservation objectives and good "green" practices, as well as cultural and sustainable sectorial practices.</p>
	3.3	 <p>Improve <b>MPA staff skills</b>, particularly in:</p> <ul style="list-style-type: none"> <li>▪ Managing fishery (including recreational fishing) and tourism activities.</li> <li>▪ Dealing with evolving territories.</li> <li>▪ Liaising with stakeholders and establishing conditions for shared management.</li> <li>▪ Integrating monitoring measures on biological, socio-economic and governance aspects.</li> <li>▪ Evaluating the management's effectiveness and adaptive management.</li> <li>▪ Developing innovative tools for self-funding management.</li> </ul>
	3.4	 <p>Promote the development of <b>new sustainable income</b> generating opportunities for local populations taking into account MPA objectives and zoning agreements, including through the use of ICT and other relevant innovative technologies.</p>

	3.5	 <p>Highlight the <b>natural and cultural heritage</b>, including sustainable traditional practices and local knowledge.</p>
	3.6	 <p>Develop <b>communication and raising awareness activities</b> targeting the local population, visitors, schools, fishermen, decision makers, donors, etc.</p> <p><i>Particularly to highlight the MPA's values, functions and potential to contribute to the social and economic development, with the view of gaining stakeholders' support and getting a wide range of allies.</i></p>
	3.7	 <p><b>Develop innovative policies on the local authorities' initiative</b> which integrate biodiversity and give support to MPAs and their management in coastal territories.</p>
<p><b>Actions on a national level</b></p>	3.8	 <p>Establish adequate <b>zoning systems for MPA</b>, through consultation processes, to improve the conciliation between habitat conservation requirements and the need for maintaining and/or developing human activities.</p> <p><i>It is important that all the activities can be controlled and maintained while remaining within the MPA management plan's objectives.</i></p>
	3.9	 <p>Integrate policies, build institutional bridges and clarify governance frameworks between <b>sectorial policies and policies relevant to MPAs on every geographic level</b>.</p> <p><i>This action is particularly for synergies and to develop agreements with the fishing industry, but also tourism, surveillance, taxation, finance sectors, reinforcing the legal side and territorial development policies.</i></p>

3.10	 <p>Take into account the issues of representativity and connectivity of MPAs and the MPA network in an ecosystem based approach, associated with the <b>marine spatial planning process</b>.</p>
3.11	 <p>Where possible and appropriate encourage the <b>equitable sharing of social and economic benefits</b> derived from MPAs, <i>including for poverty alleviation and improving the standard of living of local populations based on rigorous evaluations of various cost-benefits associated with MPAs.</i></p>
3.12	 <p>Develop <b>evaluations on ecosystem services and values</b> using TEEB (The Economics of Ecosystems and Biodiversity) approaches on coastal and marine issues and promote a better understanding of the local and national economic services provided by marine ecosystems.</p> <p><i>This work could be developed in conjunction with monitoring, but also be integrated into national statistics, national and regional databases and supply the mapping of ecosystem services linked to marine biodiversity and human activities.</i></p> <p><i>Case studies of economic evaluation of Mediterranean MPAs have shown that the prospective side can incorporate uncertainty in the scenarios. They stressed the importance of qualitative assessment and recommended an evaluation approach directed more towards the relationship between MPAs and territorial development.</i></p>
3.13	 <p>Annually <b>review national subsidies</b> and progressively phase out harmful elements linked to marine and coastal habitats degradation (including those corresponding to activities and territories where the quality of the marine environment is important such as watershed). Also promote financial incentives for conservation and sustainable use of marine resources.</p>
3.14	 <p><b>Develop “green” public procurement procedures</b> around marine and coastal issues and linked to the development of the "Blue Economy" which respects biodiversity.</p>



	3.15	 <p>Promote the role of <b>MPAs as laboratories</b> and/or showcases for environmental best practices and territorial governance.</p>
<b>Actions on a Mediterranean level</b>	3.16	 <p>Promote the implementation and development of tools, better policies, guidelines and <b>exchanges of experience and information</b> linked to the integration of policies, improved co-management at local, national and transnational levels (associated with MSP, EBFM and ICZM)</p> <p><i>Particularly through promoting the setting up of alliances and synergies between "fisheries" and "MPA" governance systems, ecosystem management, integration of MPAs in spatial planning policies, clarification of legal and institutional frameworks, etc.</i></p>
	3.17	 <p><b>Facilitate stakeholder networking</b> to promote alternative and/or innovative economic activities.</p>
	3.18	 <p>Coordinate case studies and pilot actions for the <b>evaluation of MPA services</b> and prospects for a blue economy which respect biodiversity.</p>

## 6.4 Strategic Objective 4: Increase the allocation of financial resources to establish and maintain an ecological network of effectively managed MPAs

The development of funding mechanisms for MPA management is particularly important in the current economic crisis context where budgets have been reduced, especially for ministries of the Environment and major funding bodies.

It has become vital to support and develop local or national initiatives to elaborate and manage national and local funding mechanisms in order to ensure an effective management for MPAs.

In addition to public funding, other options need to be investigated and assessed.

In this context, applying a “polluter/payer” principle and the use of “users/contributors” and “payment for ecosystem services” concepts may provide significant resources for MPAs.



**Raising additional and diversified financial sources** for MPAs on both national and local levels are recognized as some of the best ways to reduce the risk of inadequate funding and to improve MPA management effectiveness through:



- Private contributions and corporate sponsorships,
- Government budget allocations,
- Special taxes that are legally earmarked to support protected areas,
- Sea user fees and fines that are earmarked to directly support protected areas and/or where an important part is returned to the local territory,
- Debt-for-nature measures in exchange for actions in favour of nature.





Different national policies and financing mechanisms for protected areas have been developed throughout the world (*including the establishment of legally independent foundations and trust funds for protected areas*) opening great opportunities for developing similar mechanisms in the Mediterranean countries.



### **Expected Results:**




- Systematic "business plans" for MPAs, but also for national MPA systems are elaborated and improved following a gap analysis of the MPAs national funding system. They rely on a reasonable management which is based on efficiency, transparency and monitoring by an adequate reporting system.
- Institutional frameworks on financing mechanisms are evaluated then improved in order to mobilize self-financing and financial sources for national MPA systems and on an individual MPA level.
- New financial mechanisms on a local, national and regional level in support of MPA management efficiency improvements and MPA network sustainability are developed or consolidated.
- The status of funding mechanisms for MPAs is periodically evaluated and is one of the indicators used in assessing the status of Mediterranean MPAs.
- Donors help to finance conservation or MPA management in the Mediterranean, and new donors are mobilized.

<p><b>Actions on a local level</b></p>	<p>4.1</p>	 <p>Endeavour to apply <b>more sound financial management</b> giving more importance to cost effectiveness, transparency and adequate financial reporting.</p> <p><i>The development, implementation and systematic evaluation of business plans on a local, national or regional level can help assess the financial management situation, its needs and optimize the support for MPAs.</i></p>
	<p>4.2</p>	 <p>Identify and test opportunities for the <b>diversification of funding sources on a local level based on known, innovative or potential principles and mechanisms.</b></p> <ul style="list-style-type: none"> <li>▪ <i>Conduct a gap analysis which will support the definition of sustainable financing strategies.</i></li> <li>▪ <i>Some of these actions may be part of those mentioned in the MPAs management plans/business plans.</i></li> <li>▪ <i>Focus on mechanisms which reduce transaction costs.</i></li> <li>▪ <i>Strengthen the implementation of long-term funding mechanisms dedicated to MPAs and provide direct local feedback.</i></li> <li>▪ <i>Develop pilot projects, testing on an MPA level and/or local communities (payment for services, taxes, sponsor, donation systems, trust funds, ...) which will be capitalized on.</i></li> <li>▪ <i>Funding mechanisms associated with tourism activities must be compatible with the site capacity within each MPA and its management plan's objectives.</i></li> </ul>

<p><b>Actions on a national level</b></p>	<p>4.3</p>	 <p><b>Train</b> the key stakeholders on a local, national level and influential institutions on a national level on sustainable financing systems for MPAs and links between business plans and management performance, including training on the implementation of existing financial or known systems.</p> <p><i>The capacity building tools will be as varied as the training of managers (exchanges of experience between countries and managers, developing tools, methods, capitalization, training-action ...)</i></p>
	<p>4.4</p>	 <p><b>Review national finance mechanisms, clarify the legal framework, investigate and test options for national long-term financing mechanism for MPAs.</b></p> <ul style="list-style-type: none"> <li>▪ <i>With the view of securing and diversifying the sources of funding for MPAs, through innovative funding approaches for national and local MPA systems and through new financial sources, including mechanisms supported by local territorial institutions as well as investment or special assignment funds.</i></li> <li>▪ <i>Funds supplied by revenue from tourism or recreational activities in MPAs could help diversify sources of funding. However, it is important to consider each MPA capacity and put in place appropriate legal and institutional frameworks for such funds.</i></li> <li>▪ <i>Gap analyses on existing information help to produce national strategies for sustainable funding directed towards the long-term financing of MPAs and the national system of MPAs, on developing national initiatives to fill in the gaps.</i></li> </ul>

	4.5	 <p><b>Establish national experiments</b> for innovative financing mechanisms which will contribute to funding the national system of MPAs and/or financing individual MPAs.</p> <ul style="list-style-type: none"> <li>▪ <i>Focus on mechanisms which reduce transaction costs and provide long-term local funding mechanisms for MPAs with a direct local feedback.</i></li> <li>▪ <i>Innovations in polluter/payer contributions integrating the land-sea link would dedicate funding to restoration and marine conservation actions.</i></li> </ul>
<p><b>Actions on a Mediterranean level</b></p>	4.6	 <p><b>Improve spatial jurisdictions</b> (delimitation of marine areas) and its impact on the States financial actions/skills.</p> <ul style="list-style-type: none"> <li>▪ <i>Encourage negotiated EEZs settlement processes in order to extend to national jurisdictions and their funding mechanisms beyond territorial waters.</i></li> <li>▪ <i>Identify possible funding mechanisms associated with open sea sites, including in terms of compensation and recognition of ecosystem services (exploitation of the seabed, wind, bluefin tuna, etc.).</i></li> </ul>
	4.7	 <p>Support the dissemination of information, <b>exchanges of experience and capacity building</b> on financing mechanisms and diversification of financial sources for MPAs on a national and local level, as well as planning national and local activities.</p>
	4.8	 <p>Undertake a regional consolidation on the <b>gap analysis</b> of national systems based on existing information and support the development of regional and national plans to address these gaps and focus on a long-term funding to help the sustainable financing of MPAs.</p>

<p>4.9</p>	 <p>Undertake a feasibility assessment and set up a Mediterranean fund to finance the improvement of the network of Mediterranean MPAs and reinforce the existing MPAs management.</p> <p><i>This could be done through an investment fund or a special trust fund which has an institutional base with one or more regional organizations. This would help to develop regional actions which give support to reinforcing the network of MPAs, a development of national funds for MPAs taking into account each country's specificities and promote activities linked to the creation and management of MPAs in Mediterranean zones beyond national jurisdictions. It will be able to rely on institutional funding, but also benefit from innovative mechanisms associated with the following actions:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Develop financial incentives-conditions for the industrial exploitation sector of land or underwater mineral resources in the Mediterranean.</i></li> <li>▪ <i>Define legal mechanisms allowing to apply model sanctions which would contribute to national and regional biodiversity funds when offshore accidents (oil platforms, gas, boats) occur.</i></li> <li>▪ <i>Develop new taxation/contributive mechanisms associated with the maritime transport and cruise sectors, recognizing the services rendered by the Mediterranean ecosystems.</i></li> <li>▪ <i>Define a contribution from the sector associated with the bluefin tuna industry and large pelagics in general, recognizing the services rendered by the Mediterranean (to be promoted within ICCAT) with a support for MPAs.</i></li> </ul>
<p>4.10</p>	 <p>Develop <b>sustainable and innovative financing mechanisms</b> in support of <b>regional networking</b> activities dedicated to strengthening knowledge, capacity and policies on a local and national level on MPA issues (regional taxes, payment for environmental services, private contributions, and compensation measures).</p>

<p>4.11</p>	 <p>Regularly capitalize on innovative experiences and assess the status of national, regional and local financial mechanisms initiatives</p> <ul style="list-style-type: none"> <li>▪ <i>Indicators linked to the evaluation of innovative and sustainable financial measures and the level of funding for MPAs can complement the management effectiveness evaluation and contribute to MAPAMED regional database's consolidation.</i></li> <li>▪ <i>Periodically providing the status of funding mechanisms and MPA funding will allow to develop measures put in place by governments, donors and MPA managers.</i></li> </ul>
<p>4.12</p>	 <p><b>Improve the coordination of funding policies between donors</b> and suitable measures for complex processes (what is the sustainability, what funding is available after projects, how to manage transitional periods?).</p> <p><i>These coordinated funding mechanisms are likely to reduce competition between agencies, dissipation and the effects of income or recurrent funding without results when linked with effective management, good governance and political will.</i></p>
<p>4.13</p>	 <p>Encourage the creation of <b>income-generating activities</b> based on ICT (such as mobile technology to inform and guide the public) through pilot actions linked to MPAs.</p>



## **Annex VII**

### **Draft Regional Strategy for the conservation of Mediterranean Monk Seal**



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## **Draft Regional Strategy for the conservation of Mediterranean Monk Seal**

### **Executive Summary**

The Mediterranean monk seal, one of the most endangered mammals in Europe and one of the world's most endangered marine mammals, has been classified as Critically Endangered in IUCN's Red List for the past 17 years. On the one hand this condition is of great concern, because it testifies to our evident inability of keeping the species away from under the Damocles' sword of imminent extinction, but on the other hand it is also good news, because the species in fact is not extinct yet, particularly as far as the eastern Mediterranean is concerned. Such status quo, however, cannot be taken as a reason for complacency. In spite of the species' dire conservation status, monk seal recovery in the Mediterranean is still possible, but success will demand uncompromising determination and greater commitment than in the past from the part of the concerned governments and civil societies.

Faced with the perspective of investing the considerable amount of time, effort and resources needed to reverse the critical conservation status of monk seals in the Mediterranean, many could find it legitimate to question the ethical aspects of dedicating to a single species far greater attention than to most of the region's other marine organisms. Indeed, dedicating to monk seal conservation extraordinary attention and resources is legitimate for a number of reasons: a) because the species is protected by legislation at all levels (national, regional, international, and where appropriate European); b) because the species has high intrinsic value under many respects; c) because conservation actions favouring monk seals are likely to extend their benefits to several other species and to the environment they are part of; and finally, d) because the extinction of this highly symbolic and charismatic animal would cause a devastating loss of credibility to Mediterranean institutions, national and supra-national. This is why a forceful and effective monk seal conservation strategy, embraced regionally as a best practice example, should become solidly integrated within a wider strategy for the conservation of the Mediterranean marine environment.

During the past decades, with few very localised exceptions no discernable progress was achieved in the effort of recovering monk seals in the Mediterranean, probably due to a combination of shortcomings which include the failure to implement their conservation commitments by many countries, lack of coordination and continuity in monk seal conservation action, and insufficient attention to the human component of the monk seal conservation problem. An Action Plan adopted two decades ago by the Contracting Parties to the Barcelona Convention, while still valid in terms of its general contents and stated principles, must urgently be replaced by a Strategy

based on a clear Vision, to be attained through interconnected Goals, Objectives and Actions which are specific, measurable, attainable, relevant, and time-bound.

This document proposes a draft Strategy, having the following Vision: *“Over the next two decades, the ecological recovery of monk seals in the Mediterranean will deem to have occurred, when multiple colonies have become established within all major habitats of their historic range, interacting in ecologically significant ways with the fullest possible set of other species, and inspiring and connecting human cultures”.*

The human threats that are jeopardising monk seal survival are many, however a few of these are overwhelmingly important, and addressing them with the greatest energy and determination is likely to create the greatest and fastest benefits. Accordingly, this draft Strategy recommends the adoption by Range States of a triaging approach, recognising that the two top-ranking threats to monk seals in the Mediterranean are the unchecked deterioration of the species' critical habitat (including disturbance), and deliberate killings. Here is where the greatest attention is urgently needed.

A second character of the draft Strategy derives from the need of tailoring action to geographical differences in the conservation status of monk seals across the region, and the consequent different priorities and responsibilities saddled onto the various monk seal Range States. To handle this challenge, Mediterranean countries were assigned to three groups: A: countries where monk seal breeding has been reported after year 2000; B: countries with evidence of monk seal presence, but with no breeding reported after year 2000; and C: countries where no monk seals have been reported since at least year 2000. Group A countries is where action is most urgent, because at the moment these countries offer the greatest hope for the survival of the species in the Mediterranean. Group B countries are also important, because they contain monk seal critical habitat which is likely to be re-colonised if conditions are favourable, particularly if actions in Group A countries are successful. Finally, Group C countries are important as well because they contain monk seal critical habitat, and because the return of monk seals there will become more likely if actions in Group B countries are successful.

To fulfil the Vision, the draft Strategy identifies four Goals. The first Goal relates to the creation of a solid, long-term conservation support structure at the international level, whereas the other three Goals relate to each of the three Groups the various countries have been assigned to. More specifically:

**Goal 1.** Mediterranean Range States implement this Strategy in pursuance of the Vision, through the expeditious development and adoption of appropriate national policies and administrative frameworks, and with the effective, coordinated support from relevant international organisations and civil society.

**Goal 2.** Monk seal breeding nuclei in sites located in “Group A” countries are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and seals are able to disperse to the surrounding areas.

**Goal 3.** Monk seal presence in sites where they are occasionally seen today in “Group B” countries is permanently established and breeding resumes. “Group B” countries are upgraded to “Group A”.

**Goal 4.** Monk seal presence is again reported in the species’ historical habitat in “Group C” countries, and these “Group C” countries are upgraded to “Group B”. Once all “Group C” countries are upgraded, Group C is deleted.

The suggested time horizon of the draft Strategy is six years: 2013-2019. A mid-term assessment in 2016 is also recommended.

## 2. Background

### 2.1. Introduction

Since 1985 the Mediterranean monk seal was recognised within the framework of the Barcelona Convention as a species to be protected as a matter of priority. In that year, during their fourth ordinary meeting, the Contracting Parties adopted a declaration – referred to as the Genoa Declaration – which included, amongst the priority targets to be achieved in the decade 1986-1995, the “protection of the endangered marine species” with a specific reference to the monk seal. Following the Genoa Declaration, an “Action Plan for the Management of the Mediterranean Monk Seal (*Monachus monachus*)” was adopted by the Convention’s Contracting Parties (UNEP-MAP-RAC/SPA & IUCN 1988, UNEP-MAP-RAC/SPA 2003a). The main aims of the Barcelona Convention’s Monk Seal Action Plan were: to reduce adult mortality; to promote the establishment of a network of marine reserves; to encourage research, data collection, and rehabilitation programmes; to implement information programmes targeting fishing communities and various other stakeholders; and to provide a framework for the coordination, review and financing of relevant activities.

The Regional Activity Centre for Specially Protected Areas (RAC/SPA) of Tunis is the body charged with facilitating the implementation of the species’ Action Plans within the Barcelona Convention context. Accordingly, in addition to assisting countries to carry out actions for the protection of monk seals through data collection, research, training and public awareness, during the past decades the RAC/SPA also organized meetings, produced documents on the status of the species, and promoted studies to identify potential monk seal critical habitat in so-called low-density areas (e.g., Albania, Algeria, Croatia, Cyprus, Libya, Morocco, Syria and Tunisia).

While all these efforts so far have served mostly the purpose of making progress in terms of greater knowledge and awareness, no discernable advance is yet apparent in the improvement of the species’ conservation status. As a consequence, the Mediterranean monk seal has continued to be listed as Critically Endangered in IUCN’s Red List since 1996 (Aguilar & Lowry 2008).

A strategy shift is clearly necessary if monk seals are to be saved from extinction in the Mediterranean. With this view, and with the aim of reinforcing the commitment of the Mediterranean countries and their active participation to the recovery of the species, in 2009 the Contracting Parties to the Barcelona Convention approved during their 16<sup>th</sup> Meeting in Marrakesh the proposal by the RAC/SPA of preparing a set of subregional<sup>1</sup> and national programmes for the conservation of monk seals in the Mediterranean. Such programmes are intended to promote and undertake concerted and effective actions at the local level to reverse the species’ critical status, and to encourage the concerned states to implement a

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<sup>1</sup> Subregional = concerning a sub-set of the Mediterranean region.



series of joint measures aiming at re-establishing the favourable conservation status of monk seal populations and their natural habitat in the region.

While targeted actions that are locally grounded and tailored to specific peculiarities and needs are likely to be more effective than more general statements of purpose having a very wide horizon, a strong need remains of framing all these separate actions under the coordination of a regional umbrella. Monk seals are a highly mobile species, their habitat is shared by many nations, and includes international waters as well.

In this document a region-wide set of strategic actions is drafted to support monk seal conservation actions in the region, taking into account the shared character of monk seal ecology and its conservation concerns, at the same time allowing for the existing significant differences of the species' conservation status across the Mediterranean.

## 2.2. Summary of the status of and threats to monk seals in the Mediterranean

The Mediterranean monk seal, *Monachus monachus*, is classified as Critically Endangered in IUCN's Red List (Aguilar & Lowry 2008). It is considered one of the most endangered mammals in Europe and one of the world's most endangered marine mammal.

The species is present in the Mediterranean Sea, in the Marmara Sea (probably <10 individuals, C. Kiraç, pers. comm.) and in the North-eastern Atlantic Ocean, but is considered extinct in the Black Sea (Kiraç 2001)<sup>2</sup>. Atlantic monk seals have been geographically separated from Mediterranean seals for sufficient time to develop noticeable morphological (Van Bree 1979) and genetic (Pastor et al. 2007) differences. Accordingly, in this document monk seals in the Mediterranean will be treated as an "evolutionarily significant unit" (ESU), whose conservation can be addressed independently from the population(s) living in the Atlantic.

This document will make no attempt at describing in detail the status of *Monachus monachus* throughout its Mediterranean range, because such descriptions already abound (e.g., Sergeant 1984, Sergeant et al. 1979, UNEP-MAP-RAC/SPA 1994, UNEP-MAP-RAC/SPA 2003b, UNEP-MAP-RAC/SPA 2006a, Aguilar & Lowry 2008), and it would now seem advisable to concentrate efforts on conservation action rather than on repetitive academic analyses (Notarbartolo di Sciara 2010).

What follows is a concise summary of the latest distributional knowledge which is instrumental to the construction of a meaningful region-wide conservation strategy. The treatment of locations where breeding nuclei of monk seals still persist is here separated from that of the rest of the Mediterranean, where individual seals have only episodically appeared in recent years.



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<sup>2</sup> Although Güçlüsoy et al. (2004) hypothesized that 2-3 individuals might still be surviving there at the time of their writing.

Surviving breeding nuclei are the last remaining significant assets of the species in the Mediterranean and should be given the highest priority as far as conservation action is concerned. To the best of the currently available knowledge such nuclei can still be found in the following countries:

- **Greece.** Notable breeding concentrations of monk seals exist in the following locations (Notarbartolo di Sciara et al. 2009b, supplemented by more recent information where available):
  - Northern Sporades (52 individuals, with a mean annual pup production of >8);
  - North Karpathos and Saria (23 indiv., mean pups/year <4);
  - Kimolos and Polyaiagos (49 indiv., mean pups/year <8);
  - Gyaros (60 indiv., mean pups/year 10: MOm, pers. comm.);
  - Ionian Islands: Kefallinia, Lefkada, Ithaca and Zakynthos (about 20 indiv. according to Panou 2009).

In addition to the above locations, monk seals are widely, albeit thinly distributed over the entire maritime territory of Greece, with occasional pupping occurring in many places. This makes it extremely hard, for the time being, to produce a realistic total population estimate of monk seals in Greece.

- **Turkey.** Monk seals are scattered along the Turkish Aegean and Mediterranean coasts, all the way from the Dardanelles to the border with Syria, with three main breeding concentrations (Güçlüsoy et al. 2004, UNEP-MAP-RAC/SPA 2011c):
  - Northern Aegean (35 indiv.);
  - Southern Aegean (28 indiv.);
  - Mediterranean coast (Levantine Sea)(42 indiv.: Gucu et al. 2009b).

Although no genetic proof is provided, evidence exists that due to habitat contiguity the seals found in Greek and Turkish Aegean waters are intermixing (Kıraç & Güçlüsoy, pers. comm.).

- **Cyprus.**
  - probably 6-7 individuals left; evidence of pupping still occurring, although solely based on the finding of one dead newborn in 2009 (UNEP-MAP-RAC/SPA 2011b);
  - from 3 to 17 individuals estimated in 2006-7; a young seal observed there was likely to have been born locally (Gucu et al. 2009a).

To conclude about locations where monk seal breeding still occurs, two countries (Greece and Turkey) stand out as the most important repositories for the species in the Mediterranean, where the greatest effort should be invested to ensure the survival of a critical mass, able to eventually support the future recolonisation of the entire region. Quite importantly, it must be noted that population estimates in Greece and Turkey, in spite of continuing high concern for the very low absolute numbers, have not significantly decreased during the last quarter of century (e.g., compare with Marchessaux 1989).

The recent (i.e., post-2000) evidence of breeding having occurred in Cyprus also requires the greatest attention, considering the very small and fast declining number of seals still present on that island



Evidence of monk seal episodic occurrence elsewhere in the Mediterranean - albeit with no conclusive sign of breeding success - was provided by a remarkable number of recent sightings. These are a powerful testimony of the species' potential for recolonising its former habitat in several countries, if only such countries were to give it a chance.

Notable appearances included (listed clockwise from the west):

- **Spain.** Reliable information exists of an individual photographed in 2008 at Isla del Toro, Mallorca, Balears, the first documented presence in European Spain in 50 years (Anon. 2008). More sightings in the area are reported by Font & Mayol (2009), summarised by Gazo & Mo (2012). By contrast, the small colony of seals known to have been surviving in the Chafarinas archipelago, along the African coast, is presumed extinct (Anon. 2004).
- **Italy.** Mo (2011) presents information on 81 observations documented between 1998 and 2010, corresponding to a minimum of 35 distinct sighting events. During the last decade monk seals made their appearance in Liguria, Tuscany, Sardinia, Latium, Sicily, Calabria and Apulia.
- **Croatia.** Antolovic et al. (2007), based on numerous sighting reports, considered that monk seals were still present in Croatian coastal waters during the 2000-2005 period, particularly around the offshore islands of the Dalmatian Archipelago. Gomerčić et al. (2011) list 31 sightings of monk seals in Croatia since 2005, including an adult female repeatedly photographed and filmed in the Kamenjak Natural Reserve, near the southern tip of the Istria peninsula.
- **Albania.** Although very little information exists about the status of monk seal habitat in the country (UNEP-MAP-RAC/SPA 2005c, UNEP-MAP-RAC/SPA 2012), a very recent documented sighting in the area south of Vlore on 4 August 2012 testifies to the presence of the species (Anon. 2012).
- **Syria.** The continued presence of the species is mentioned by Mo et al. (2003) and Gucu (2004). More recently, documented proof was provided by Jony & Ibrahim (2006), with a sighting 10 km north of Latakia in April 2005, combined with several reports by local fishermen.
- **Lebanon.** Two separate monk seal encounters were filmed underwater in Northern Lebanon, on 15 August and 4 September 2010, likely involving the same individual seal (Anon. 2010).
- **Israel.** After an absence from the country of more than 50 years, monk seals were reported along the Israeli coast 45 times between November 2009 and September 2010; one report included photographs of a young female resting inside the breakwater of Herzliya Marina (Scheinin et al. 2011). Although it is unclear whether

all the sightings mentioned above referred to only one individual or more, Scheinin et al. (2011) suggest that there likely were at least two.

- **Egypt.** Formerly considered as having disappeared from the country for about 20 years, the presence of at least one monk seal was documented from Marsa Matrouh, western Egypt, in March 2011 (UNEP-MAP-RAC/SPA 2011a, Notarbartolo di Sciarra & Fouad 2011).
- **Libya,** particularly in Cyrenaica (the eastern-most portion of the coast), apparently had an estimated 20 individuals around the 1970s, as reported by Sergeant et al. (1979). Although current numbers are unknown, in spite of the considerable effort invested in finding out (Hamza et al. 2003), the recent finding (25 March 2012) of a dead young female in the area of Ain El Ghazala, near the Egyptian border, testifies to the continued presence of the species in that country (RAC/SPA 2012, Alfaghi et al. 2013).

Other Mediterranean countries where monk seals are presumed to still occasionally occur, although no recent sightings have been reported to our knowledge, include **Tunisia** (UNEP-MAP-RAC/SPA et al. 2001), **Algeria** (UNEP-MAP-RAC/SPA 2006b, UNEP-MAP-RAC/SPA 2012), and **Morocco** (Mo et al. 2011). However, and in stark contrast with the situation in the Eastern Mediterranean, the decline of the species has been particularly spectacular in north-west African countries, considering that only three decades ago estimates of monk seal numbers from that area probably exceeded 140 individuals, of which about 20 in Tunisia (Marchessaux 1986), 100 in Algeria (Marchessaux 1977), and 20 in Morocco (Avella & Gonzalez 1984, Marchessaux 1989).



Locations not listed above include those where monk seals are today sadly considered extinct (**France, Monaco, Malta**), as well as countries where the presence of monk seals has not been reported in recent years (**Slovenia, Bosnia Herzegovina, Montenegro**). However, the condition in the latter countries is likely more similar to that of neighbouring States (e.g., Croatia, Albania) than to that of the former countries, and could be explained in part by insufficient levels of sighting effort.



Threats to monk seal survival in the Mediterranean have been listed in minute detail by many authors (e.g., Ronald & Duguay 1979, Ronald 1984, UNEP-MAP-RAC/SPA 1994, UNEP-MAP-RAC/SPA 1998, Israëls 1999, UNEP-MAP-RAC/SPA 2003b, Aguilar & Lowry 2008). For example, an expert meeting held in Latakia, Syria, in September 2002 listed no less than 21 types of different threats to monk seals, grouped under four main headings: negative interactions with fishing activities, degradation and loss of habitat, disturbance, and pollution (UNEP-MAP-RAC/SPA 2003b).

While such exhaustive analyses might have been useful in past decades, when the conservation status of monk seals in the Mediterranean was not as dreadful as it has

become lately, a strategic shift is recommended (Notarbartolo di Sciara 2010), with the adoption of a **triaging approach** by the countries where monk seals are still present in substantive numbers and breeding. A triaging approach involves identifying and singling out the top-ranking threats acting in the different locations, and intervening upon these with the greatest energy and determination, thereby taking the maximum advantage of the limited resources that are customarily made available by most Mediterranean governments to the protection of their marine environment and biodiversity. Such strategy may not allow to address all the threats that monk seals are facing, but will help countries to concentrate efforts on the pressure factors which are creating the greatest problems, and are likely to be more cost-effective than squandering the scarce available resources in too many directions, some of which are likely to be of minor relevance to conservation.

As already recognised decades ago in the “Action Plan for the management of the Mediterranean monk seal (*Monachus monachus*)”, the two top-ranking threats to monk seals in the Mediterranean are a) **mortality from deliberate killings**, and b) the **deterioration of critical habitat (including disturbance)**. Here is where the greatest attention is urgently needed. A new strategy should recognise that the relative importance of such threats is not evenly distributed. For example, deliberate killings is one of the greatest problem in Greece (Androukaki et al. 1999); however, although this was also the case of Turkey decades ago (Berkes et al. 1979), the threat which ranks highest today in that country is habitat degradation, which takes many different forms (e.g., recreational boating, swimming, snorkelling and diving in prime habitat including caves, overfishing and intensive and illegal fishing such as with dynamite), but most importantly coastal development irreversibly destroying pristine coasts (Kiraç 2011). This reaffirms the need of tailoring strategic actions to local conditions, on the basis of a careful, location-specific threat analysis.

While the triaging strategy recommended above is intended for adoption by individual countries, actions having a wider, region-oriented scope (e.g., devising and implementing a contingency plan for single disastrous events such as a lethal epizootic outbreak or a massive oil spill within the species’ critical habitat, or conditions which may derive from catastrophic environmental change; support to awareness campaigns; support to rescue and rehabilitation programmes; coordination of and support to research and monitoring, including monitoring of mortality causes and levels) should be best implemented within a wider, supra-national coordination framework, in which national responsibilities are supported by international conservation organisations.

Undeniably, other threats such as bycatch<sup>3</sup>, prey depletion due to overfishing, illegal fishing practices (e.g., with dynamite), and pollution, can and do take their toll on monk seals, however these are pressure factors that all countries are supposed to address anyway, within their clear duty of ensuring that human activities at sea be sustainably managed. Failure to effectively pursue the sustainability of fisheries and the good health of the seas is a serious flaw in Mediterranean marine governance having also dire socio-economic implications, and the loss of species, even charismatic ones such as monk seals, is just one of the many consequences of this malaise. Therefore, while combating overfishing, illegal fishing and marine pollution remain actions of paramount importance in terms of monk seal

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<sup>3</sup> A significant mortality factor in Greece and Turkey, although less relevant than deliberate killings in Greece, and mostly affecting juvenile seals (Ververi et al. 2001, Karamanlidis et al. 2008).

conservation concerns, these should be implemented as part of each nation's marine management and conservation policy rather than as part of a monk seal conservation strategy.

### **2.3. Why a change of strategy is needed if monk seals are to be saved from extinction**

As noted above, Mediterranean monk seals have been listed in IUCN's Red List as *Critically Endangered* since 1996, i.e. now for 17 years. This is at the same time bad news, because it is a testimony of our evident inability of keeping the species away from under the Damocles' sword of imminent extinction. However, it is also good news, because the species in fact is not extinct yet, particularly as far as the eastern Mediterranean individuals are concerned. One factor that could have slowed down the disappearance of monk seals where pupping nuclei still exist today involves the geography of the Aegean Sea, where thousands of remote, uninhabited islets becoming particularly impervious during the windy Aegean summers, offer appropriate habitat to the seals, as well as partial refuge from human encroachment and disturbance. Another potential factor, which however should be subject to detailed socio-economic investigation, concerns the evolving and possibly declining importance of artisanal fishing in many small island economies in favour of tourism development, which undeniably impacts less on monk seal survival.

Such considerations, however, cannot be taken as a reason for complacency. In spite of the species' dire conservation status, monk seal survival in the Mediterranean can still be secured, but success will demand hard work and uncompromising determination from the part of the concerned governments and civil societies.



Past initiatives to save Mediterranean monk seals have clearly been inadequate, in spite of the impressive list of international meetings dedicated to the cause. These include:

- 1972: 18-19 August. Guelph, Canada. IUCN working meeting of seal specialists on threatened and depleted seals of the world (Israëls 1999);
- 1974: 5 October. London. Monk seal meeting ((Israëls 1999);
- 1976: May. Rome. Meeting "The monk seal along the Italian coasts: problems and perspectives for its positive protection" (Israëls 1999);
- 1978: 2-5 May. Rhodes. First International Conference on the Mediterranean monk seal (Ronald & Duguy 1979);
- 1979: 11-13 October. Conference on the protection of Greek flora – fauna biotypes (Israëls 1999);
- 1984: 5-6 October. La Rochelle. Second International Conference on the Mediterranean Monk Seal (Ronald & Duguy 1984);
- 1985: 13-14 June. Port-Cros, France. "Séminaire International sur la stratégie de conservation du phoque moine" (Israëls 1999);
- 1986: 15-16 September. Strasbourg. First meeting of the monk seal Expert Group convened by the Council of Europe.

- 1986: 30 October. Bruxelles. Meeting of experts on the Mediterranean monk seal held under the auspices of the Directorate of the Environment, Consumer Protection and Nuclear Safety Commission of the European Communities.
- 1987: 2-6 November. Antalya, Turkey. Third International Conference on the Mediterranean monk seal.
- 1988: 11-12 January. Athens. Joint expert consultation on the conservation of the Mediterranean monk seal, organised by UNEP/MAP in co-operation with IUCN (UNEP/MAP & IUCN 1988).
- 1988: 26 May. Port-Cros, France. Meeting of the International Scientific Committee on the monk seal (Israëls 1999);
- 1988: 30-31 May. Strasbourg. Second meeting of the monk seal Expert Group convened by the Council of Europe (Israëls 1999);
- 1989: 20-22 September. Madeira. Meeting of coordination of national and international programmes on the conservation of the Mediterranean monk seal. Organised by the Council of Europe in coordination with UNEP-MAP-RAC/SPA, IUCN, CMS, the Portuguese Government and the Regional Government of Madeira (Israëls 1999);
- 1990: 6 November. Bruxelles. Sixth Meeting of the monk seal Specialist Group (Israëls 1999);
- 1990: 10-11 December. Texel, The Netherlands. "Urgent action meeting for safeguarding the Mediterranean monk seal as a species" (Israëls 1999);
- 1991: 1-4 May. Antalya, Turkey. Seminar on the conservation of the Mediterranean monk seal (Council of Europe 1991);
- 1994: 7-9 October. Rabat, Morocco. Meeting of experts on the evaluation of the implementation of the Action plan for the management of Mediterranean monk seals (UNEP-MAP-RAC/SPA 1994);
- 1998: 19-20 January. Monaco. The World Marine Mammal Science Conference. Workshop on the biology and conservation of the world's endangered monk seals, Monaco, 19-20 January 1998. The Society for Marine Mammalogy & The European Cetacean Society;
- 1998: 29-31 October. Arta, Greece. Meeting of Experts on the Implementation of the Action Plans for Marine Mammals (monk seal and cetaceans) adopted within MAP (UNEP-MAP-RAC/SPA 1998);
- 2002: 29-30 September. Lattakia, Syria. Meeting of experts on the conservation of the Mediterranean monk seal: proposal of priority activities to be carried out in the Mediterranean Sea (UNEP-MAP-RAC/SPA 2003b);
- 2006: 17-19 September. Antalya, Turkey. International Conference on monk seal conservation (UNEP-MAP-RAC/SPA 2006a);
- 2008: 14 November. Monaco. First meeting of the Working Group: "Reintroduction of the monk seal to the Western Mediterranean", organised by the Foundation Albert II, Prince of Monaco.
- 2009: 30 January. Monaco. Second meeting of the Working Group: "Reintroduction of the monk seal to the Western Mediterranean", organised by the Foundation Albert II, Prince of Monaco.
- 2009: 28 February. Istanbul. "Who are our seals? Moving towards a standardised population estimate approach for *Monachus monachus*". Workshop conducted within

the framework of the European Cetacean Society Annual Conference, sponsored by the RAC/SPA and the Principality of Monaco (UNEP-MAP-RAC/SPA 2009);

- 2009: 30 March – 3 April. Maui, Hawai'i. First International Conference on Marine Mammal Protected Areas. Workshop on MMPAs and MMPA networks for monk seal conservation (Reeves 2009);
- 2010: 10 June. Monaco. Third meeting of the Working Group: "Reintroduction of the monk seal to the Western Mediterranean", organised by the Foundation Albert II, Prince of Monaco.
- 2011: 9 November. Martinique, French Antilles. Second International Conference on Marine Mammal Protected Areas. Workshop on the conservation of monk seals (Hoyt 2012).

Many of the meetings listed above have produced declarations and action plans. All the recommendations that could be possibly excogitated have already been recommended. Many resolutions and recommendations concerning monk seal conservation have also been adopted in meetings not strictly dedicated to the species' survival (e.g., UNEP-MAP-RAC/SPA 2005a, UNEP-MAP-RAC/SPA 2009, IUCN 2009, GFCM 2011). Furthermore, in addition to international initiatives, monk seal conservation action plans and strategies have also been drafted and adopted at the national level, sometimes under the impetus of proposals from NGOs. Examples of such documents exist, amongst others, in Algeria (UNEP-MAP-RAC/SPA 2006b), Cyprus (UNEP-MAP-RAC/SPA 2011 b), Egypt (Notarbartolo di Sciara & Fouad 2011), Greece (Anon. 1996, superseded by Notarbartolo di Sciara et al. 2009a; Anon. 2009), and Turkey (Kıraç et al. 2011).

**Unfortunately such declarations, action plans, resolutions and recommendations, year after year, are now collecting dust without the surviving monk seals being able to take much notice. Until there is a clear and unequivocal understanding of why meeting and resolutions do not produce intended action, and why conservation actions to counteract monk seal decline in the Mediterranean have consistently failed, there is little hope that things will change for the better.**

Certainly, the old pretext of "not knowing enough" about the species' ecology no longer stands. Ecological and veterinary knowledge, although incomplete, is substantive and helpful. Threats are well identified, and the measures to address them straightforward. Not even regulatory insufficiency can be blamed, given that legal provisions at all possible levels (national, regional, European and international) could not be more adequate.



Three main reasons are envisaged below to explain such resounding failure in securing monk seal survival in the Mediterranean.

First, the difficulties encountered by many governments in implementing their commitments in terms of conservation and sustainable use of marine resources certainly remain at the forefront. Saying "sustainable" is easy, but bearing the short-term socio-economic and political costs that true sustainability involves is far more difficult, and therefore rarely done.



This includes even simple and straight-forward actions such as enforcing the prohibition of carrying guns and/or dynamite aboard fishing vessels; such enforcement could certainly carry highly beneficial effects to monk seal conservation.

Second, efforts of conserving the Mediterranean monk seal, a natural asset which is uniquely shared by all the region's riparian states, have sorely lacked in coordination and continuity. Too many action plans have been produced that have remained on paper instead of becoming the backbone of a concerted effort, seeing the active involvement and cooperation of all the components of Mediterranean civil society at large, public and private, national and international. Funds for monk seal conservation have been allocated piecemeal instead of being invested to support a science-based, long-term, region-wide strategy. Although the greatest achievements in monk seal conservation in the Mediterranean during the past few decades were secured thanks to the laudable commitment of a handful of NGOs, in the end the lack of institutional interest, leadership and support from within the most concerned nations has resulted in the erosion of civil society's goodwill, and occasionally stimulated squabbling instead of constructive cooperation towards a shared goal. Quite regrettably, the commendable prescriptions by the Barcelona Convention Action Plan (UNEP/MAP/RAC/SPA 2003a), that: a) an expert be employed with the specific task of facilitating such coordination (Art. 30); and b) the status of monk seals be reviewed every two years, with a report submitted to the Contracting Parties of the Barcelona Convention for endorsement (Art. 31), were never implemented as stated. The need for coordination is particularly acute in an arena which sees so many players, as well as many major international bodies, taking interest in such highly mobile animals as monk seals, which are rarely confined to waters within the jurisdiction of any single nation. Monk seals offer an exemplary case in which conservation needs cooperation amongst range states and concerned international bodies, which include, in addition to the Barcelona Convention, the Convention on Migratory Species (which lists Mediterranean monk seals in its Appendix I), the General Fisheries Commission for the Mediterranean (e.g., GFCM 2011), the Bern Convention (Mediterranean monk seals listed in Appendix II), and the European Union (which lists Mediterranean monk seals as *priority species*<sup>4</sup> in Annex II of Council Directive 92/43/EEC, known as the "Habitats Directive"). UNEP/MAP has the mandate of fulfilling in the best possible way the coordinating functions required by such a complex and challenging region-wide conservation strategy through its various regional bodies, and most notably the RAC/SPA.

Third, until now the overwhelming emphasis of monk seal conservation actions has been on the species rather than on the human beings who interact with it. However, the root of monk seal conservation has a social rather than an ecological nature, because problems to the species derive from its devastating interactions with people rather than from its intrinsic natural characteristics. Early players in the monk seal conservation arena - naturalists, biologist, ecologists and veterinarians – now urgently need to team up with social scientists, economists, as well as legal, media and education experts if actions are to become more incisive where the problems are most acute. Even merely advocating greater stakeholder participation may no longer be sufficient to achieve appreciable results. The solution of monk seal conservation problems must be perceived as residing in, and fully coinciding with, the solution of the wider environmental and socio-economic problems of the involved human

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<sup>4</sup> "Species of Community interest which is endangered, for the conservation of which the Community has particular responsibility in view of the proportion of its natural range which falls within the European territory."

communities. It is only from within such communities that the solution to monk seal conservation problems can originate.

#### **2.4. Monk seal functions and values in the Mediterranean**

Faced with the perspective of investing the considerable amount of time, effort and resources needed to reverse the critical conservation status of monk seals in the Mediterranean, many could find it legitimate to question the ethical aspects of dedicating to a single species far greater attention than to most of the region's other marine organisms.

The reply to such question is that dedicating to monk seal conservation extraordinary attention and resources is indeed legitimate, for many reasons.

The first reason is legal: *Monachus monachus*, as mentioned previously, is protected by numerous national, regional, and international legislation, and failing to do so is against the law.

Second, the Mediterranean monk seal is a species that possesses intrinsic values under many aspects, such as: a) non-consumptive use value (e.g., as an apex predator in the maintenance of ecological balance; as a potential ally in combating the diffusion of noxious alien fish species; as a resource for ecotourism); b) option value (i.e., "a means of assigning a value to risk aversion in the face of uncertainty", McNeely 1988); and c) clearly perceived existence value (e.g., Langford et al. 2001).

Third, protecting monk seals is important not only because of their intrinsic values, but also because conservation actions favouring monk seals are likely to extend their benefits to other species and to the environment they are part of, given the monk seals' qualities of both umbrella and flagship species (Leader-Williams & Dublin 2000).

Finally, witnessing impotently the extinction in the Mediterranean of charismatic monk seals also carries political significance, because such extinction would create a devastating loss of institutional credibility. This is why a forceful monk seal conservation strategy, embraced regionally as a best practice example, should become solidly integrated within a wider strategy for the conservation of the Mediterranean marine environment.

Ultimately, the effort to conserve the marine environment and its biodiversity - and in particular monk seals that can be so easily identified as symbols of such effort - must be driven by values (Wilhere et al. 2012). While conserving monk seals and their habitat in the Mediterranean is an obligation that the region's nations have explicitly committed to, on the basis of a large number of national, regional, international and, where appropriate, European legal instruments, the species' future will be secured only if a) the region's civil society will attribute to the seals the value they deserve, and b) saving monk seals from extinction will be seen as the epitome of the effort of reversing the devastating trend of loss of naturalness which is plaguing the Mediterranean.

Ideally, monk seals should become the symbol of a renewed effort towards Mediterranean marine conservation. Therein lies the importance of implementing an effective and successful strategy for the conservation of this species.



### **3. A region-wide Strategy for the Conservation of Monk Seals in the Mediterranean**

#### **3.1. Rationale for the Strategy**

The draft Strategy presented below (Section 3.2) differs from the Barcelona Convention's "Action plan for the management of the Mediterranean monk seal (*Monachus monachus*)" (UNEP-MAP-RAC/SPA 2003a) chiefly in terms of its method, considering that the old Action Plan continues to be valid as far as its contents and general principles are concerned<sup>5</sup>.

In structuring the draft Strategy, guidelines were followed which are detailed in the manual for the construction of Species Conservation Strategies (IUCN/SSC 2008). Accordingly, this draft Strategy is structured as follows:

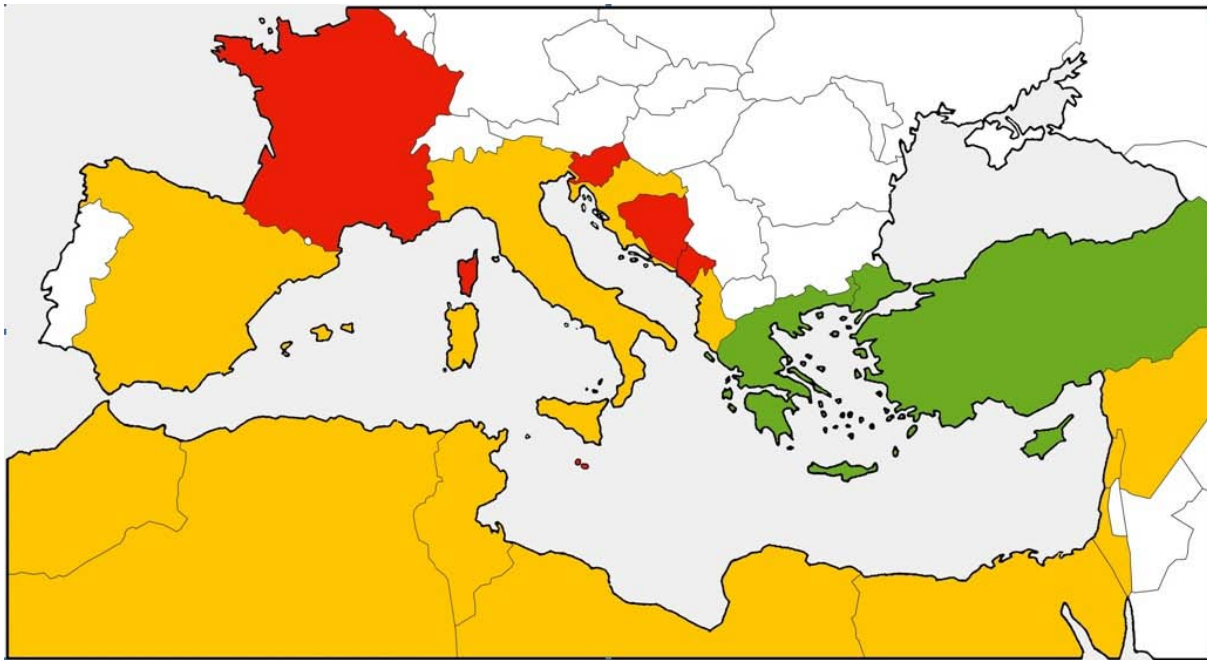
- a. a Vision, with associated Goals and Goal Targets that are SMART<sup>6</sup>;
- b. the Objectives needed to achieve the Goal Targets within the stated time span, with associated SMART Objective Targets.

The definition of Actions to attain Objective Targets, i.e., the activities which need to be performed in order to achieve the Objectives, Goals, and ultimately the Vision, will be amongst the first tasks of the Monk Seal Task Force, as soon as it will start functioning.

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<sup>5</sup> With few exceptions; e.g., concerning knowledge of the species, which is no longer as poor as it was in 1988 (Art. 3), and the fact that scientific opinion is no longer divided concerning conservation strategies (Art. 4).

<sup>6</sup> Specific, Measurable, Achievable, Relevant, Time-bound.



**Figure 1.** Monk seal conservation status by country in 2011. Green: “Group A” countries. Yellow: “Group B” countries. Red: “Group C” countries.

The main problem encountered in envisaging a region-wide Strategy derives from the quite diverse conservation status of monk seals in the different portion of the Mediterranean, as clearly evident from the Section 2.2 in this document, and by consequence the quite different priorities and responsibilities saddled onto the various monk seal Range States.

To handle this challenge, it is here proposed to assign Mediterranean countries to three groups (Figure 1 and Table 1):

- A. Countries where monk seal breeding has been reported after year 2000<sup>7</sup>;
- B. Countries with evidence of monk seal presence, but with no breeding reported after year 2000;
- C. Countries where no monk seals have been reported since year 2000.

Group A countries is where action is most urgent, because at the moment these countries are our best hope for the survival of the species. Group B countries are also important, because they contain monk seal critical habitat which is likely to be re-colonised if conditions are favourable (as demonstrated by the frequent appearances of monk seals in many locations), particularly if actions in Group A countries are successful. Group C countries are also important because they contain monk seal critical habitat, and because the return of monk seals will become more likely if actions in Group B countries are successful.

To fulfil the Vision, this draft Strategy identifies four Goals. The first Goal relates to the creation of a conservation support structure at the international level, whereas the other three Goals relate to each of the three Groups the various countries have been assigned to.

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<sup>7</sup> Year 2000 was arbitrarily selected as a criterion to separate present from past.

Section 3.2 was drafted in a way to allow it to be eventually excerpted from this document and submitted for adoption as a separate document.

Country	Group A: Monk seals present, breeding occurring (reported after year 2000)	Group B: evidence of monk seal presence, but no breeding reported after year 2000	Group C: no monk seals reported since year 2000	References	Notes
Spain				Anon. 2008, Font & Mayol 2009	Individual sighted in 2008 Isla del Toro, Mallorca. More sightings in 2009.
France				UNEP-MAP-RAC/SPA 1994	No recent reports.
Monaco					No recent reports. Monk seal habitat no longer present.
Italy				Mo 2011	
Slovenia				UNEP-MAP-RAC/SPA 2003b	No recent reports.
Croatia				Antolovic et al. 2007, Gomercic et al. 2011	
Bosnia Herzegovina					No recent reports.
Montenegro					No recent reports.
Albania				UNEP-MAP-RAC/SPA 2003b, UNEP-MAP-RAC/SPA 2005c, Anon. 2012	
Greece				Notarbartolo di Sciara et al. 2009b, Panou 2009	
Turkey				Güçlüsoy et al. 2004, Gucu et al. 2009b	

Cyprus				Gucu et al. 2009a  UNEP/MAP/RAC/SPA 2011b	Young of the year observed in 2006-7.  Evidence of a newborn pup found dead in 2009.
Syria				Gucu 2004, Jony & Ibrahim 2006, Mo et al. 2003	
Lebanon				Anon. 2010	
Israel				Scheinin et al. 2011	
Egypt				Notarbartolo di Sciara & Fouad 2011	
Libya				Sergeant et al. 1979, Hamza et al. 2003, RAC/SPA 2012	
Malta				UNEP-MAP-RAC/SPA 2003b	No recent reports.
Tunisia				UNEP-MAP-RAC/SPA 2001 UNEP-MAP-RAC/SPA 2003b	
Algeria				UNEP-MAP-RAC/SPA 2006b	The seal pup reported in 2006 was not <i>M. monachus</i> (Bouderbala et al. 2007)
Morocco				UNEP-MAP-RAC/SPA 2003b, Mo et al. 2011	

**Table 1.** Summary of monk seal presence in the different Mediterranean countries (listed clockwise from the west).

## 3.2. The Strategy

### 3.2.1. Vision

“Over the next two decades, the ecological recovery of monk seals in the Mediterranean will deem to have occurred, when multiple colonies have become established within all major habitats of their historic range, interacting in ecologically significant ways with the fullest possible set of other species, and inspiring and connecting human cultures”.

### 3.2.2. Goals

**Goal 1.** Mediterranean Range States implement this Strategy in pursuance of the Vision, through the expeditious development and adoption of appropriate national policies and administrative frameworks, and with the effective, coordinated support from relevant international organisations and civil society.

**Goal 2.** Monk seal breeding nuclei in sites located in “Group A” countries are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and seals are able to disperse to and re-colonise the surrounding areas.

**Goal 3.** Monk seal presence in sites where they are occasionally seen today in “Group B” countries is permanently established, and breeding resumes. “Group B” countries are upgraded to “Group A”.

**Goal 4.** Monk seal presence is again reported in the species' historical habitat in "Group C" countries, and these "Group C" countries are upgraded to "Group B". Once all "Group C" countries are upgraded, Group C is deleted.



### 3.2.3. Goal Targets, Objectives and Objective Targets

**Goal 1. Mediterranean Range States implement this Strategy in pursuance of the Vision, through the expeditious development and adoption of appropriate national policies and administrative frameworks, and with the effective, coordinated support from relevant international organisations and civil society.**

**Goal Target 1.1.** A framework for the implementation of the Mediterranean Monk Seal Conservation Strategy is established by the Mediterranean Range States. The framework will include the establishment of a Monk Seal Task Force (MSTF) and the selection of a Monk Seal Conservation Officer (MSCO).

**Objective 1.1.1.** Mediterranean Range States establish a **Monk Seal Task Force (MSTF)** tasked to recommend actions a) for the implementation of the Strategy, and b) to update, adapt and improve the Strategy itself (e.g., by defining the Actions needed to attain the different Objective Targets). The MSTF is composed by a small (ideally,  $\leq 10$ ) group of monk seal conservation experts, whom the Range States designate, selected amongst national and international monk seal conservation experts. The MSTF will include ecological as well as social and economical expertise. The MSTF functioning is supported by the RAC/SPA, and may benefit from the technical support of IUCN's Pinniped Specialist Group, the GFCM and other relevant international organisations.

**Objective Target 1.1.1.1.** MSTF TOR adopted, Task Force established by March 2014. The Task Force meets at least once a year to review the status of monk seals in the region, and to support the implementation of the appropriate Actions foreseen in the Strategy.

**Objective Target 1.1.1.2.** First meeting of MSTF in June 2014. Recommendations adopted are submitted to Contracting Parties to the Barcelona Convention through the SPA Focal Points<sup>8</sup>.

**Objective Target 1.1.1.3.** MSTF activities are harmonised with efforts by UNEP-MAP within the Ecosystem Approach process for the attainment of Good Environmental Status in the Mediterranean, i.e., to attain Ecological Objective EO1 "Biodiversity" and Operational Objectives 1.1 ("Species distribution is maintained"), 1.2 ("Population size of selected species is maintained"), 1.3 ("Population condition of selected species is maintained"), 1.4 ("Key coastal and marine habitats are not being lost"), as far as monk seals are concerned.

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<sup>8</sup> As prescribed in Art. 31 of the Action Plan (UNEP-MAP-RAC/SPA, 2003a).



**Objective 1.1.2.** A **Monk Seal Conservation Officer (MSCO)** is selected by the Range States from within the MSTF, tasked of coordinating the MSTF work and of supporting the conservation activities implemented by Range States and concerned international organisations through the implementation of this Strategy<sup>9</sup>.

**Objective Target 1.1.2.1.** TOR for MSCO adopted, MSCO engaged by March 2014.

**Objective 1.1.3.** The Parties to the Barcelona Convention ensure that the MSTF and the activities it recommends are supported by adequate resources.

**Objective Target 1.1.3.1.** The Parties to the Barcelona Convention adopt a resolution to support the MSTF functioning.

**Objective 1.1.4.** The Parties to the Barcelona Convention ensure that the activities that the MSTF recommends, insofar as it is possible, are implemented.

**Objective Target 1.1.4.1.** The Parties to the Barcelona Convention adopt resolutions in support of specific MSTF recommendations concerning the implementation of this Strategy.

**Goal Target 1.2.** Based on this Strategy, the MSTF provides support to Mediterranean Range States in the development and implementation of specific conservation actions having a regional scope.

**Objective 1.2.1.** A contingency plan for single disastrous events (e.g., a lethal epizootic outbreak, a massive oil spill within monk seal critical habitat), and for emergency conditions which may derive from catastrophic environmental change, is developed by the MSTF in cooperation with equivalent bodies dealing with the conservation of Mediterranean monk seals in the Atlantic, with the conservation of cetaceans in the Mediterranean (i.e., within the ACCOBAMS framework), and with the appropriate bodies within the “Barcelona System” (e.g., REMPEC). The contingency plan will include the collection and safe storage of Mediterranean monk seal germplasm which may support in the future the recovery of the species should it become extinct.

**Objective Target 1.2.1.1.** Contingency plan developed by the MSTF in 2014, and adopted by the subsequent Barcelona Convention CoP.

**Objective 1.2.2.** Capacity building and awareness activities are planned by the MSTF, and promoted in monk seal Ranges States so that monk seal protection and recovery is effectively embraced at the national level. This will include the preparation of a dedicated

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<sup>9</sup> As prescribed in Art. 30 of the Action Plan (UNEP-MAP-RAC/SPA, 2003a).

web site and the regular issuing and widely distributed monk seal information newsletter in an adequate number of different languages.

**Objective Target 1.2.2.1.** Capacity building: the main groups of stakeholders in monk seal conservation are identified by the MSTF, tailored to each different monk seal Range State (with first priority given to “Group A Countries” and second priority given to “Group B Countries”), and training courses are prepared and planned (see Goal Targets 2.2. and 3.8). Preferably, training events will be developed *in situ* at selected locations having special relevance to monk seal conservation, in collaboration with the local groups, and will be followed by a constant “advice service” or accompanying process to ensure that full and long-lasting advantage derives from the effort.

**Objective Target 1.2.2.2.** In order to facilitate collaboration and communication amongst monk seal conservation experts throughout the region, the MSTF promotes periodical workshops on best practices of monk seal monitoring and conservation techniques, preferably taking advantage of other meetings being periodically organised (e.g., CIESM Congresses, ECS Annual meetings). Proceedings are edited and widely diffused (e.g., by pdf through the Internet) in formats that will serve as “best practice guidelines”.

**Objective Target 1.2.2.3.** Awareness actions are promoted by the MSTF, with first priority given to “Group A Countries” (with the exception of Greece) and second priority given to “Group B Countries”, in cooperation with local groups, targeting special-interest stakeholders such as fishermen and local coastal communities. Awareness actions, preferably supported through national fundraising efforts, could be modelled (*mutatis mutandis*) on the experience of the EC-funded “Thalassa” LIFE+ Information Communication project carried out in Greece in 2010-2013.

**Objective Target 1.2.2.4.** A website dedicated to monk seal conservation and information at the regional level is prepared by RAC/SPA in close collaboration with “The Monachus Guardian” and posted online by the end of 2014.

**Objective Target 1.2.2.5.** Monk seal newsletter issued twice a year by RAC/SPA in close collaboration with “The Monachus Guardian”, starting in 2014.

**Objective 1.2.3.** Monk seal rescue and rehabilitation programmes are planned by the MSTF and supported in Range States (with priority given to “Group A” countries) through capacity building and structural and operational funding.

**Objective Target 1.2.3.1.** The “National Rescue and Information Network” (RINT) in Greece is supported and strengthened. The construction and operation of a state-of-the-art rehabilitation facility (operational by 2015) is supported.

**Objective Target 1.2.3.2.** The national rescue and rehabilitation network called AFBKA, to be enhanced and further supported in Turkey, is operational by August 2014. Capacity building programmes with international expert support facilitated by the MSTF are implemented in 2015.

**Objective Target 1.2.3.3.** A national rescue and rehabilitation network is established and supported in Cyprus. Capacity building programmes with international expert support facilitated by the MSTF are implemented in 2015. Arrangements are made for a) the local rescue and release of seals in need of minor support, and b) the transfer of seals needing major support to the rehabilitation facility in Greece or in Turkey.

**Objective 1.2.4.** Monitoring of monk seal distribution and abundance, as well as advances in knowledge important for monk seal conservation, are promoted and supported by the MSTF through training, workshops and the facilitation of research and monitoring programmes. The monitoring process is made to coincide with the similar monitoring requirements within the framework of the Ecosystem Approach process by UNEP-MAP, and (where appropriate) with the Marine Framework Strategy Directive of the EC.

**Objective Target 1.2.4.1.** MSTF supports the completion of monk seal breeding site inventories in “Group A Countries” by 2016.

**Objective Target 1.2.4.2.** MSTF supports the yearly monitoring of monk seal population parameters (e.g., pup production) in breeding sites in “Group A Countries”, starting in 2014.

**Objective Target 1.2.4.3.** MSTF supports the regular monitoring of region-wide monk seal demographic parameters, such as mortality (levels and causes) and birth rates, starting in 2014.



**Goal 2. Monk seal breeding nuclei in sites located in “Group A” countries are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and seals are able to disperse to and re-colonise the surrounding areas.**

**Goal Target 2.1.** Maintain and secure monk seal presence in important monk seal locations, including: a) Greek Ionian islands (Lefkada, Kefallinia, Ithaca, Zakynthos, and surrounding islets and seas); b) Northern Sporades; c) Gyaros; d) Kimolos and Polyaiagos; e) Karpathos-Saria; f) Turkish Aegean and Mediterranean coasts; g) Cyprus. Breeding nuclei in the locations listed above are effectively protected from deliberate killings and habitat degradation, so that seal numbers in such sites increase and young seals are able to disperse and re-colonise the surrounding areas.

**Objective 2.1.1.** Current legislation prohibiting to carry firearms and explosives aboard fishing vessels in Greece, Turkey, Cyprus is enforced, with a special attention in locations listed in Goal Target 2.1.

**Objective Target 2.1.1.1.** Compliance with existing laws concerning firearms and explosives aboard fishing vessels in Greece, Turkey, Cyprus is routinely enforced everywhere, to come into effect with immediate urgency. Appropriate statistics of infringements are kept and publicized. Infringements are prosecuted with penalties appropriate to address the destruction of a critically endangered, specially protected species. Current illegal fishing practices are eradicated.

**Objective 2.1.2.** Locations listed in Goal Target 2.1, and other equally important locations that may be eventually discovered in the future, are geographically delimited and legally protected/managed.

**Objective Target 2.1.2.1.** A monk seal MPA (or an MPA network) encompassing the most important monk seal habitat in the area is formally established in the Greek Ionian islands by 2014.

**Objective Target 2.1.2.2.** The current Natura 2000 site around the island of Gyaros is formally established as a monk seal protected area by 2014.

**Objective Target 2.1.2.3.** A monk seal MPA is formally established in Kimolos - Polyaigos by 2013.

**Objective Target 2.1.2.4.** A monk seal MPA is formally established in Karpathos - Saria by 2013<sup>10</sup>.

**Objective Target 2.1.2.5.** Monk seal MPAs are designated along the Aegean and Mediterranean coastline of Turkey by 2014, to protect monk seal critical habitat as determined and mapped by the Turkish National Monk Seal Committee.

**Objective Target 2.1.2.6.** A monk seal MPA is designated in Cyprus where suitable critical monk seal critical habitat is identified, and established by 2015.

**Objective 2.1.3.** Areas in locations listed under Goal Target 2.1 are effectively protected through a) appropriate management actions, and b) the keen involvement of the local communities, which will both ensure the good conservation status of monk seals found there. A management framework is in place and implemented, defining the spatial, temporal and specific measures needed in the species' critical habitats (e.g., regulating access to caves), thereby affording effective protection to haul out and pupping sites.

**Objective Target 2.1.3.1.** Until formal protection of the areas listed under Goal Target 2.1 is established and enforced, patrolling of the most important haul out and

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<sup>10</sup> Greece has already established the protected area Management Body in Karpathos in 2007, however the MPA has not been legally declared yet.

pupping locations and caves is organised at least during the summer and breeding season, starting in 2014. Patrolling can be done by volunteers, well-trained and possibly local, who will be performing awareness actions *in situ*, as well as solicit the intervention of law enforcers in case of need.

**Objective Target 2.1.3.2.** All monk seal MPAs established under Objective 2.1.2, as well as the National Marine Park of Alonissos – Northern Sporades, are endowed with an operant Management Body and a management plan which is adaptive, ecosystem-based and fully implemented by 2014.

**Objective Target 2.1.3.3.** Management in monk seal MPAs established under Objective 2.1.2, as well as the National Marine Park of Alonissos – Northern Sporades, is conducted in a participatory fashion, with the full involvement of local artisanal fishermen and local communities at large, and in cooperation with the fisheries sectors (e.g., see GFCM 2011). All proposals and decisions aiming at establishing or modifying conservation and protection measures must be based on sound and indisputable scientific data and evidence. Elements of participatory approach will include awareness campaigns as well as the experimentation/adoption of innovative mechanisms to address opportunity costs, damage mitigation and the generation of alternative sources of income (e.g., ecotourism).

**Goal Target 2.2.** Implementation of Goal Target 2.1. is enabled through appropriate capacity building activities.

**Objective 2.2.1.** Training sessions are organised in areas relevant to locations listed in Goal Target 2.1, with the support of the MSTF (see Objective Target 1.2.2.1). Training will concentrate, at least initially, on mitigating the main threats to monk seals (deliberate killing, habitat degradation, and accidental entanglement), and will target stakeholders identified by the MSTF (e.g., fishermen, tourist operators, enforcement officers, judges). Training will be developed together with the local groups, and will be followed by a constant “advice service” or accompanying process to ensure that full advantage is taken from the effort.

**Goal 3. Monk seal presence in sites where they are occasionally seen today in “Group B” countries is permanently established, and breeding resumes. “Group B” countries are upgraded to “Group A”.**

Monk seal presence in “Group B” countries must be verified with appropriate methods so as to define the actual species’ use of the coastal seas and identify the areas in which priority monitoring, awareness and protection actions need to be carried out (see Objective 1.2.4). This implies that priority areas of usage be identified thorough sighting collection campaigns, habitat surveys in areas of hotspot sightings, and where the coastal habitat is most pristine (which implies analysis of coastal habitat characteristics and their distribution in each nation), followed by in situ monitoring to assess the eventual degree of habitat use by monk seals. Sites with repeated use and with highest numbers of monk seal sightings must be evaluated in terms of pressures and risks. Awareness activities to be carried out in each site will depend on the type of use of the coasts by the species, the degree of the pressures

impinging on each site, and the type of risks involved depending on what will appear to be the type of habitat use by the monk seals.

**Goal Target 3.1.** Monk seal presence in Italy, and in particular in the Egadi Islands, in locations around Sardinia, and in the Tuscan Archipelago, is permanently established, and monk seal breeding resumes.

**Objective 3.1.1.** Monitoring of monk seal distribution, abundance and behaviour (including eventual pup production) is continued in the Egadi islands.

**Objective Target 3.1.1.1.** Non-invasive and scientifically sound monitoring technologies, applied to caves in appropriate locations within the Egadi Islands MPA, is continued and enhanced.

**Objective Target 3.1.1.2.** A programme involving local fishermen in the monitoring programme around the Egadi Islands MPA (also targeted at increasing their awareness), is continued and enhanced.

**Objective 3.1.2.** Regular monitoring of monk seal presence and awareness actions are conducted in areas historically containing monk seal habitat in Sardinia.

**Objective 3.1.3.** Regular monitoring of monk seal presence and awareness actions are conducted in areas historically containing monk seal habitat in the Tuscan Archipelago.

**Goal Target 3.2.** Monk seal presence in Croatia, and in particular in specific localities of the Dalmatian archipelago and southern Istria, is permanently established, and monk seal breeding resumes.

**Objective 3.1.3.** Monk seal ecology and behaviour (including eventual pup production) is monitored in selected locations of the Dalmatian Archipelago and of the Istria Peninsula, and awareness action is conducted in the area.

**Objective Target 3.1.3.1.** Non-invasive and scientifically sound monitoring technologies are applied to caves in Istria and selected Dalmatian islands, starting in 2014.

**Objective Target 3.1.3.2.** Awareness actions are conducted in Croatia, targeting local residents and visitors.

**Goal Target 3.3.** Monk seal presence in Libya and nearby western Egypt is confirmed and permanently established, and monk seal breeding is reported.

**Objective 3.3.1.** Monk seal ecology and behaviour (including eventual pup production) is monitored in Libya (Cyrenaica) and nearby Egyptian coast (from the border, including Sallum MPA, to Marsa Matrouh).

**Objective Target 3.3.1.1.** Full survey of monk seal presence and awareness actions organised in Cyrenaica by 2015.

**Objective Target 3.3.1.2.** Full survey of monk seal presence and awareness actions organised in Egypt (from the border, including Sallum MPA, to Marsa Matrouh) by 2015.

**Goal Target 3.4.** Monk seal presence in the Balearic Islands, Spain, is confirmed and permanently established.

**Objective 3.4.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented; awareness actions are conducted around the Balearic Islands, Spain.

**Goal Target 3.5.** Monk seal presence in Albania is confirmed and permanently established.

**Objective 3.5.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented along the Albanian coastal zone; awareness actions are conducted in the concerned areas.

**Goal Target 3.6.** Monk seal presence in Syria, Lebanon and Israel is confirmed and permanently established.

**Objective 3.6.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented along the Syrian, Lebanese and Israeli coastal zone; awareness actions are conducted in the concerned areas.

**Goal Target 3.7.** Monk seal continued presence in locations of the Maghreb's Mediterranean coasts and annexed islands, in Tunisia, Algeria, Morocco, and the Chafarinas Islands (Spain) is confirmed and permanently established.

**Objective 3.7.1.** A reporting scheme to detect occasional monk seal presence and alert authorities is implemented along Maghreb's Mediterranean coasts and annexed islands, in Tunisia, Algeria, Morocco, and the Chafarinas Islands (Spain); awareness actions are conducted in the concerned areas.

**Goal Target 3.8.** Implementation of Goal Targets 3.1.-3.7. is enabled through appropriate capacity building activities.

**Objective 3.8.1.** Capacity building. Training sessions are organised in areas relevant to locations listed in Goal Target 3.1-3.7, with the support of the MSTF (see Objective Target 1.2.2.1). Training will concentrate, at least initially, on mitigating the main threats to monk seals (deliberate killing, habitat degradation, and accidental entanglements), and will target stakeholders identified by the MSTF (e.g., fishermen, tourist operators, enforcement officers, judges). Training will be developed together with the local groups, and will be followed by a constant “advice service” or accompanying process to ensure that full advantage is taken from the effort.



**Goal 4. Monk seal presence is again reported in the species’ historical habitat in “Group C” countries, and these “Group C” countries are upgraded to “Group B”. Once all “Group C” countries are upgraded, Group C is deleted.**

**Goal Target 4.1.** Monk seal presence is reported again from Corsica and continental France.

**Objective 4.1.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species’ historical habitat in Corsica and continental France.

**Goal Target 4.2.** Monk seal presence is reported from Montenegro, Bosnia Herzegovina and Slovenia.

**Objective 4.2.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species’ historical habitat in Montenegro, Bosnia Herzegovina and Slovenia.

**Goal Target 4.3.** Monk seal presence is reported from Malta.

**Objective 4.3.1.** Regular monitoring of monk seal presence and awareness actions are conducted in the species’ historical habitat in Malta.

**Goal Target 4.4.** Implementation of Goal Targets 4.1-4.3. is enabled through appropriate capacity building activities.

**Objective 4.4.1.** Capacity building: training courses are organised in locations listed in Goal Targets 4.1-4.3, with the support of the Monk Seal Task Force (see Objective Target 1.2.2.1).





#### **3.2.4. Revision of the Strategy**

The suggested time horizon of this Strategy is six years, to be concluded in 2018-2019, when a comprehensive review of the Strategy's accomplishments and failures, with a consideration for potential actions to be taken beyond 2019, should be conducted. Such timing also coincides with the process requiring EU Member States to report concerning the Habitats and Marine Strategy Framework Directives, thereby facilitating the implementation of the Strategy's actions by such States.

A mid-term assessment of the implementation results in 2016 is also recommended, to evaluate up-to-date attainment of Goals and Objectives within the Strategy's timeframe and to identify, if needed, moderate adjustments.



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## 5. List of references

- Anonymous. 1996. Strategy for the protection of the Mediterranean monk seal *Monachus monachus* in Greece. Archipelagos - marine and coastal management, and MOm / Hellenic Society for the Study and Protection of the Monk Seal. Athens. 10 p.
- Anonymous. 2004. Mediterranean News: Morocco. The Monachus Guardian 7(2).
- Anonymous. 2008. Mediterranean News: Spain. Seal returns after 50-year absence. The Monachus Guardian 11(2).
- Anonymous. 2009. Action plan for the mitigation of the negative effects of monk seal - fisheries interactions in Greece. Summary report in English. MOm, WWF Greece, Fisheries Research Institute. Publication prepared as part of the LIFEature Project "MOFI: Monk Seal and Fisheries: Mitigating the conflict in Greek Seas" (LIFE05NAT/GR/000083). 11 p.
- Anonymous. 2010. Mediterranean News: Lebanon. Seal sightings in Lebanon. The Monachus Guardian 13(2).
- Anonymous. 2012. <http://www.monachus-guardian.org/wordpress/2012/08/23/monk-seal-sighting-in-albania/>
- Aguilar A., Lowry L. 2008. *Monachus monachus*. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. <www.iucnredlist.org>
- Alfaghi I.A., Abed A.S., Dendrinis P., Psaradellis M., Karamanlidis A.A. 2013. First confirmed sighting of the Mediterranean monk seal (*Monachus monachus*) in Libya since 1972. Aquatic Mammals 39(1):81-84. DOI 10.1578/AM.39.1.2013.81
- Androukaki E., Adamantopoulou S., Dendrinis P., Tounta E., Kotomatas S. 1999. Causes of mortality in the Mediterranean monk seal (*Monachus monachus*) in Greece. Contributions to the Zoogeography and Ecology of the Eastern Mediterranean Region 1:405-411.
- Antolovic J., Antolovic M., Antolovic N., Furlan B., Adamic-Antolovic Lj., Antolovic R., Cok I. 2007. Monk sea (*Monachus monachus*) sightings in the Croatian part of the Adriatic with a special reference to the population of open-sea islands. The Monachus Guardian 10(1).
- Avella F.J., Gonzalez L.M. 1984. Monk seal (*Monachus monachus*): a survey along the Mediterranean coast of Morocco. Pp: 60-78 in: K. Ronald and R. Duguay (editors). Les phoques moines - Monk seals. Proceedings of the Second International Conference, La Rochelle, France, 5 - 6 October 1984. Annales de la Société des Sciences Naturelles de la Charente-Maritime, Supplément, décembre 1984. 120 p.

- Berkes F., Anat H., Kislalioglu M., Esenel M. 1979. Distribution and ecology of *Monachus monachus* on Turkish coasts. Pp. 113-128 in: K. Ronald, R. Duguay (editors), The Mediterranean monk seal. Proceedings of the First International Conference, Rhodes, Greece, 2-5 May 1978. UNEP Technical Series, Volume 1. Pergamon Press, Oxford. 183 p.
- Bouderbala M., Bouras D., Bekrattou D., Doukara K., Abdelghani M.F., Boutiba Z. 2007. First recorded instance of a hooded seal (*Cystophora cristata*) in Algeria. The Monachus Guardian 10(1).
- Council of Europe. 1991. Seminar on the conservation of the Mediterranean monk seal: technical and scientific aspects. Antalya, Turkey, 1-4 May 1991. T-PVS (91)25:1-94.
- Dendrinos P., Demetropoulos A. 2000. The Mediterranean monk seal in Cyprus. The Monachus Guardian 3 (2). 5 p.
- Font A., Mayol J. 2009. Mallorca's lone seal: the 2009 follow-up. The Monachus Guardian 12(2).
- GFCM. 2011. Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area. Report of the General Fisheries Commission for the Mediterranean's 35<sup>th</sup> Session, Rome. 3 p.
- Gomerčić T., Huber D., Đuras Gomerčić M., Gomerčić H. 2011. Presence of the Mediterranean monk seal (*Monachus monachus*) in the Croatian part of the Adriatic Sea. Aquatic Mammals 37(3):243-247. DOI 10.1578/AM.37.3.2011.243
- Güçlüsoy H., Kýraç C.O., Veryeri N.O., Savas Y. 2004. Status of the Mediterranean monk seal, *Monachus monachus* (Hermann, 1779) in the coastal waters of Turkey. E.U. Journal of Fisheries & Aquatic Sciences 21(3-4):201–210.
- Gucu A.C. 2004. Is the broken link between two isolated colonies in the Northeastern Mediterranean re-establishing? The Monachus Guardian 7(2).
- Gucu A., Mo G. 2009. "Who are our seals? Moving towards a standardised population estimate approach for *Monachus monachus*". Conclusions of the workshop presented within the framework of the conference. Workshop conducted within the framework of the European Cetacean Society Annual Conference, Istanbul, 28 Feb. 2009. 4 p.
- Gucu A.C., Ok M., Sakinan S. 2009a. A survey of the critically endangered Mediterranean monk seal *Monachus monachus* (Hermann, 1779) along the coast of Northern Cyprus. Israel Journal of Ecology & Evolution 55(1):77-82. DOI: 10.1560/IJEE.55.1.77
- Gucu A.C., Sakinan S., Ok M. 2009b. Occurrence of the critically endangered Mediterranean monk seal, *Monachus monachus* (Hermann, 1779), at Olympos-Beydagları National Park, Turkey. Zoology in the Middle East 46:3-8.

- Hamza A., Mo G., Tayeb K. 2003. Results of a preliminary mission carried out in Cyrenaica, Libya, to assess monk seal presence and potential coastal habitat. *The Monachus Guardian* 6(1).
- Hoyt E. (editor). 2012. Proceedings of the Second International Conference on Marine Mammal Protected Areas (ICMMPA 2). Fort-de-France, Martinique, 7-11 Nov. 2011. 103 p.
- Israëls L.D.E. 1992. Thirty years of Mediterranean monk seal conservation, a review. *Nederlandsche Commissie voor Internationale Natuurbescherming. Mededelingen* 28:1-65.
- IUCN. 2009. Resolution 4.023. Conservation and recovery of the Mediterranean monk seal *Monachus monachus*. Pp. 23-24 in: Resolutions and recommendations. IUCN, Gland, Switzerland, 158 p.
- IUCN/SSC. 2008. Strategic planning for species conservation: a handbook. Version 1.0. IUCN Species Survival Commission, Gland, Switzerland. 104 p.
- Jony M., Ibrahim A. 2006. The first confirmed record for Mediterranean monk seals in Syria. Abstract, p. 54 in: UNEP/MAP, RAC/SPA. 2006. Report of the International Conference on Monk Seal Conservation. Antalya, Turkey, 17-19 September 2006. 69 p.
- Karamanlidis A.A., Androukaki E., Adamantopoulou S., Chatzisprou A., Johnson W.M., Kotomatas S., Papadopoulos A., Paravas V., Paximadis G., Pires R., Tounta E., Dendrinou P. 2008. Assessing accidental entanglement as a threat to the Mediterranean monk seal *Monachus monachus*. *Endangered Species Research* 5: 205–213. doi: 10.3354/esr00092
- Kıraç C.O. 2001. Witnessing the monk seal's extinction in the Black Sea. *The Monachus Guardian* 4(2):1-3.
- Kıraç C.O. 2011. Conservation of the Mediterranean monk seal *Monachus monachus* in Turkey and the role of coastal & marine protected areas. Abstract, Second International Conference on Marine Mammal Protected Areas, Martinique, 7-11 November 2011.
- Kıraç C.O., Veryeri N.O., Güçlüsoy H., Savaş Y. 2011. National Action Plan for the conservation of Mediterranean monk seal *Monachus monachus* in Türkiye. UNEP-MAP-RAC/SPA, Tunis. 35 p.
- Langford I.H., Skourtos M.S., Kontogianni A., Day R.J., Georgiou S., Bateman I.J. 2001. Use and nonuse values for conserving endangered species: the case of the Mediterranean monk seal. *Environment and Planning A* 33:2219-2233. DOI:10.1068/a348

- Leader-Williams N., Dublin H. 2000. Charismatic megafauna as "flagship species". Pp. 53-81 in: Entwistle A. and Dunstone N. (eds), Priorities for the conservation of mammalian diversity: has the panda had its day? Cambridge University Press, Cambridge, UK.
- Marchessaux D. 1977. Will the Mediterranean monk seal survive? *Aquatic Mammals* 5(3):87.
- Marchessaux D. 1986. Etude de l'evolution du statut du phoque moine en Tunisie et dans l'archipel de la Galite. Report to RAC/SPA, Tunis, and IUCN. 25 p.
- Marchessaux D. 1989. Distribution et statut des populations du phoque moine *Monachus monachus* (Hermann, 1799). *Mammalia* 53(4):621-642.
- McNeely J.A. 1988. Economics and biological diversity: developing and using economic incentives to conserve biological resources. IUCN, Gland, Switzerland. xiv + 232 p.
- Mo G. 2011. Mediterranean monk seal (*Monachus monachus*) sightings in Italy (1998-2010) and implications for conservation. *Aquatic Mammals* 37(3):236-240. DOI 10.1578/AM.37.3.2011.236
- Mo G., Bazairi H., Bayed A., Agnesi S. 2011. Survey on Mediterranean monk seal (*Monachus monachus*) sightings in Mediterranean Morocco. *Aquatic Mammals* 37(3):248-255. DOI 10.1578/AM.37.3.2011.248
- Mo G., Gazo M., Ibrahim A., Ammar I., Ghanem W. 2003. Monk seal presence and habitat assessment: results of a preliminary mission carried out in Syria. *The Monachus Guardian* 6(1).
- Notarbartolo di Sciara G. 2010. The world's two remaining monk seal species: how many different ways are there of being Critically Endangered? *The Monachus Guardian* 13(1).
- Notarbartolo di Sciara G., Adamantopoulou S., Androukaki E., Dendrinis P., Karamanlidis A.A., Paravas V., Kotomatas S. 2009a. National strategy and action plan for the conservation of the Mediterranean monk seal in Greece, 2009-2015. Hellenic Society for the Study and Protection of the Mediterranean monk seal (MOM), Athens. 19 p.
- Notarbartolo di Sciara G., Adamantopoulou S., Androukaki E., Dendrinis P., Karamanlidis A.A., Paravas V., Kotomatas S. 2009b. National strategy and action plan for the conservation of the Mediterranean monk seal in Greece, 2009-2015. Report on evaluating the past and structuring the future. Publication prepared as part of the LIFE-Nature Project: MOFI: Monk Seal and Fisheries: mitigating the conflict in Greek Seas. Hellenic Society for the Study and Protection of the Mediterranean monk seal (MOM), Athens. 71 p.
- Notarbartolo di Sciara G., Fouad M. 2011. Monk seal sightings in Egypt. *The Monachus Guardian*, online edition. 29 April 2011.

- Panou A. 2009. Monk seal sightings in the central Ionian Sea: a network of fishermen for the protection of the marine resources. Archipelagos – Environment and Development, Greece. Presentation at the "Who are our seals?" Workshop, European Cetacean Society Annual Conference, Istanbul, Turkey, 28 February, 2009. 6 p.
- Pastor T., Garza J.C., Aguilar A., Tounta E., Androukaki E. 2007. Genetic diversity and differentiation between the two remaining populations of the critically endangered Mediterranean monk seal. *Animal Conservation* 2007:1-9. doi:10.1111/j.1469-1795.2007.00137.x
- RAC/SPA 2012. [http://www.rac-spa.org/monk\\_seal\\_death](http://www.rac-spa.org/monk_seal_death)
- Reeves R.R. (editor). 2009. Proceedings of the First International Conference on Marine Mammal Protected Areas, March 30 – April 3, 2009, Maui, Hawai'i, USA. NOAA. 133 p.
- Ronald K. 1984. Action for the conservation of monk seal. Pp: 109-112 in: K. Ronald and R. Duguay (editors). Les phoques moines - Monk seals. Proceedings of the Second International Conference, La Rochelle, France, 5 - 6 October 1984. *Annales de la Société des Sciences Naturelles de la Charente-Maritime, Supplément, décembre 1984.* 120 p.
- Ronald K., Duguay R. (editors). 1979. The Mediterranean monk seal. Proceedings of the First International Conference, Rhodes, Greece, 2-5 May 1978. UNEP Technical Series, Volume 1. Pergamon Press, Oxford. 183 p.
- Ronald K., Duguay R. (editors). 1984. Les phoques moines - Monk seals. Proceedings of the Second International Conference, La Rochelle, France, 5-6 October 1984. *Annales de la Société des Sciences Naturelles de la Charente-Maritime, Supplément, décembre 1984.* 120 p.
- Scheinin A.P., Goffman O., Elasar M., Perelberg A., Kerem D.H. 2011. Mediterranean monk seal (*Monachus monachus*) resighted along the Israeli coastline after more than half a century. *Aquatic Mammals* 37(3):241-242. DOI 10.1578/AM.37.3.2011.241
- Sergeant D., Ronald K., Boulva J., Berkes F. 1979. The recent status of *Monachus monachus* the Mediterranean monk seal. Pp. 31-54 in: K. Ronald, R. Duguay (editors), The Mediterranean monk seal. Proceedings of the First International Conference, Rhodes, Greece, 2-5 May 1978. UNEP Technical Series, Volume 1. Pergamon Press, Oxford. 183 p.
- Sergeant D.E. 1984. Review of new knowledge of *Monachus monachus* since 1978 and recommendations for its protection. Pp: 21-30 in: K. Ronald and R. Duguay (editors). Les phoques moines - Monk seals. Proceedings of the Second International Conference, La Rochelle, France, 5 - 6 October 1984. *Annales de la Société des Sciences Naturelles de la Charente-Maritime, Supplément, décembre 1984.* 120 p.

- UNEP-MAP-RAC/SPA, IUCN. 1988. Report of the joint expert consultation on the conservation of the Mediterranean monk seal. Athens, 11-12 January 1988. IUCN/UNEP/MEDU/MM-IC/5. 8 p.
- UNEP-MAP-RAC/SPA. 1994. Present status and trend of the Mediterranean monk seal (*Monachus monachus*) populations. Meeting of experts on the evaluation of the implementation of the Action Plan for the management of the Mediterranean monk seal, Rabat, Morocco, 7-9 October 1994. UNEP(OCA)/MED WG. 87/3. 44 p.
- UNEP-MAP-RAC/SPA. 1998. Report of the meeting of experts on the implementation of the action plans for marine mammals (monk seal and cetaceans) adopted within MAP. Meeting of experts on the implementation of the Action Plans for marine mammals (monk seal and cetaceans) adopted within MAP. Arta, Greece, 29-31 October 1998. UNEP(OCA)/MED WG. 146/5. 122 p.
- UNEP-MAP-RAC/SPA, ICRAM, ANPE. 2001. Assessment of Mediterranean monk seal (*Monachus monachus*) habitat at La Galite, Tunisia: towards a monk seal conservation strategy in northern Tunisia and nearby waters. By Ouerghi A., Mo G., Di Domenico F., Majhoub H., Tunis. 3 p.
- UNEP-MAP-RAC/SPA. 2003a. Action Plan for the management of the Mediterranean monk seal (*Monachus monachus*). Reprinted, RAC/SPA, Tunis. 12 p.
- UNEP-MAP-RAC/SPA. 2003b. The conservation of the Mediterranean monk seal: proposal of priority activities to be carried out in the Mediterranean Sea. By A. Bayed, A.GUCU, G.Mo, M. Dendrinou, Sixth Meeting of National Focal Points for SPAs, Marseilles, 17-20 June 2003. UNEP(DEC)/MED WG.232/Inf 6. 45 p.
- UNEP-MAP-RAC/SPA. 2005a. Information report on the status of the monk seal in the Mediterranean. Seventh Meeting of the National Focal Points for SPAs, Seville, 31 May–3 June 2005. UNEP(DEC)/MED WG. 268/Inf 3. 45 p.
- UNEP-MAP-RAC/SPA. 2005b. Declaration on the monk seal risk of extinction in the Mediterranean. Mediterranean Action Plan, Meeting of MAP Focal Points, Athens (Greece), 21-24 September 2005. UNEP(DEC)/MED WG.270/17, 30 June 2005. 3 p.
- UNEP-MAP-RAC/SPA. 2005c. Rapid assessment survey of important marine turtle and monk seal habitats in the coastal area of Albania, October – November 2005, By M. White, I., Haxhiu, V. Kouroutos, A., Gace, A., Vaso, S. Beqiraj, A. Plytas and Z. Dedej. 36 p.
- UNEP-MAP-RAC/SPA. 2006a. Report of the International Conference on Monk Seal Conservation. Antalya, Turkey, 17-19 September 2006. 69 p.
- UNEP-MAP-RAC/SPA. 2006b. Propositions d'actions concrètes pour la mise en oeuvre d'un plan de conservation et de gestion pour le phoque moine sur le littoral ouest algérien. Par



Z. Boutiba. 42 p.

UNEP-MAP-RAC/SPA. 2009. Assessment of the implementation of the Action Plan for the management of Mediterranean monk seal. UNEP(DEPI)/MED WG 331/Inf. 9.. Ninth Meeting of Focal Points of SPAs, Floriana, Malta, 3-6 June 2009. 50 p.

UNEP-MAP-RAC/SPA, 2011 a , National Action Plan for the conservation of marine mammals in the Egyptian Mediterranean Sea - 2012-2016 by Notarbartolo di Sciara G., Fouad M. Contract RAC/SPA 2011. 54 p.

UNEP-MAP-RAC/SPA, 2011 b. National action plan for the conservation of the Mediterranean monk seal in Cyprus. by Demetropoulos A. Contract RAC/SPA: N°20/RAC/SPA\_2011. 24 p.

UNEP-MAP-RAC/SPA, 2011c. National Action Plan for the conservation of Mediterranean monk seal *Monachus monachus* in Türkiye. By Kıraç C.O., Veryeri N.O., Güçlüsoy H., Savaş Y. UNEP-MAP-RAC/SPA, Tunis. 35 p.

UNEP-MAP-RAC/SPA, 2012. Action Plan for the conservation/management of the Monk seal in low density areas of the Mediterranean. by Gazo M., Mo G. Contract RAC/SPA, MoU n. 34/RAC/SPA\_2011. 29 p.

Van Bree P.J.H. 1979. Notes on the differences between monk seals from the Atlantic and the Western Mediterranean. P. 99 in: K. Ronald and R. Duguay (editors), The Mediterranean monk seal. Proceedings of the First International Conference, Rhodes, Greece, 2-5 May 1978. UNEP Technical Series, Volume 1. Pergamon Press, Oxford. 183 p.

Veryeri O., Güçlüsoy H., Savas Y. 2001. Snared and drowned: are fishing nets killing off a new generation of monk seals in Turkey's protected areas? The Monachus Guardian 4(1).

Wilhere G.F., Maguire L.A., Scott M., Rachlow J.L., Goble D.D., Svancara L.K. 2012. Conflation of values and science: response to Noss et al. Conservation Biology 26(5):943-944. DOI: 10.1111/j.1523-1739.2012.01900.x



## **Annex VIII**

### **Draft Updated Timetable of the Action Plan for the conservation of Marines Turtles**



## Draft Updated Timetable of the Action Plan for the conservation of Mediterranean Marine Turtles

### Implementation Timetable (2014-2019)

Actions		Deadline/periodicity	By whom
<b>A.PROTECTION AND MANAGEMENT</b>			
<b>A.1 Legislation</b>	a. Protection of turtles—general species protection	As soon as possible	Contracting Parties
	b. Enforce legislation to eliminate deliberate killing	As soon as possible	Contracting Parties
	c. Habitat protection and management (nesting, mating, feeding, wintering and key migration passages)	As soon as possible	Contracting Parties
<b>A.2 Protection and Management of habitats</b>	a. Setting up and implementing management plans	From 2014 to 2019	Contracting Parties
	b. Restoration of damaged nesting habitats	From 2014 to 2019	Contracting Parties
<b>A.3 Minimisation of incidental Catches</b>	a. Fishing regulations(depth, season, gear) in key areas	From 2014 to 2019	Contracting Parties
	b. Modification of gear, methods and strategies Partners & Parties	From 2014 to 2019	RAC/SPA, partners and Contracting Parties
<b>A.4 Other Measure to Minimise individual Mortality</b>	a. Setting up and/or improving operation of Rescue Centres	As soon as possible	Contracting Parties
<b>B. SCIENTIFIC RESEARCH AND MONITORING</b>			
<b>B.1 Scientific Research</b>	a. Identification of new mating, feeding and wintering areas and key migration passages	From 2014 to 2019	Contracting Parties and partners
	b. Elaboration and execution of cooperative research projects of regional importance aimed at assessing the interaction between turtles and fisheries	From 2014 to 2019	RAC/SPA, partners and Contracting Parties
	c. Tagging and genetic analysis(as appropriate)	From 2014 to 2019	RAC/SPA, partners and Contracting Parties

	d. Facilitate the networking between managed and monitored nesting sites, aiming at the exchange of information and experience	From 2014 to 2019	RAC/SPA
<b>B.2 Monitoring</b>	a. Guidelines for long-term monitoring programmes for nesting beaches and standardisation of monitoring methods for nesting beaches, feeding and wintering areas	2 years after adoption	RAC/SPA
	b. Setting up and/or improving long-term monitoring programmes	From 2014 to 2019	RAC/SPA and Contracting Parties
	c. Setting up stranding networks	As soon as possible	Contracting Parties
	d. Standardization of methodologies to estimate demographic parameters for population dynamics analysis, such as population modelling.	3 years after adoption	RAC/SPA
	e. Tagging standardization	As soon as possible	RAC/SPA
<b>C. PUBLIC AWARENESS AND EDUCATION</b>			
	Public awareness and Information campaigns in particular for fishermen and local populations	From 2014 to 2019	RAC/SPA, partners and Contracting Parties
<b>D. CAPACITY BUILDING</b>			
	Training courses	From 2014 to 2019	RAC/SPA, Contracting Parties and partners
<b>E. NATIONAL ACTION PLANS</b>			
	Elaboration of National Action Plans	From 2014 to 2019	Contracting Parties
<b>F. COORDINATION</b>			
	a. Assessment of progress in the implementation of the Action Plan	Every two years	RAC/SPA and Contracting parties
	b. Cooperation in organizing the Mediterranean Conference on marine turtles	Every three years	RAC/SPA
	c. Updating the action plan on Marine Turtles	Five years	RAC/SPA

## **Annex VIII**

### **Draft Updated Timetable of the Action Plan for the conservation of Marines Turtles**





## Draft Updated Timetable of the Action Plan for the conservation of Mediterranean Marine Turtles

### Implementation Timetable (2014-2019)

Actions		Deadline/periodicity	By whom
<b>A.PROTECTION AND MANAGEMENT</b>			
<b>A.1 Legislation</b>	a. Protection of turtles—general species protection	As soon as possible	Contracting Parties
	b. Enforce legislation to eliminate deliberate killing	As soon as possible	Contracting Parties
	c. Habitat protection and management (nesting, mating, feeding, wintering and key migration passages)	As soon as possible	Contracting Parties
<b>A.2 Protection and Management of habitats</b>	a. Setting up and implementing management plans	From 2014 to 2019	Contracting Parties
	b. Restoration of damaged nesting habitats	From 2014 to 2019	Contracting Parties
<b>A.3 Minimisation of incidental Catches</b>	a. Fishing regulations(depth, season, gear) in key areas	From 2014 to 2019	Contracting Parties
	b. Modification of gear, methods and strategies Partners & Parties	From 2014 to 2019	RAC/SPA, partners and Contracting Parties
<b>A.4 Other Measure to Minimise individual Mortality</b>	a. Setting up and/or improving operation of Rescue Centres	As soon as possible	Contracting Parties
<b>B. SCIENTIFIC RESEARCH AND MONITORING</b>			
<b>B.1 Scientific Research</b>	a. Identification of new mating, feeding and wintering areas and key migration passages	From 2014 to 2019	Contracting Parties and partners
	b. Elaboration and execution of cooperative research projects of regional importance aimed at assessing the interaction between turtles and fisheries	From 2014 to 2019	RAC/SPA, partners and Contracting Parties
	c. Tagging and genetic analysis(as appropriate)	From 2014 to 2019	RAC/SPA, partners and Contracting Parties

	d. Facilitate the networking between managed and monitored nesting sites, aiming at the exchange of information and experience	From 2014 to 2019	RAC/SPA
<b>B.2 Monitoring</b>	a. Guidelines for long-term monitoring programmes for nesting beaches and standardisation of monitoring methods for nesting beaches, feeding and wintering areas	2 years after adoption	RAC/SPA
	b. Setting up and/or improving long-term monitoring programmes	From 2014 to 2019	RAC/SPA and Contracting Parties
	c. Setting up stranding networks	As soon as possible	Contracting Parties
	d. Standardization of methodologies to estimate demographic parameters for population dynamics analysis, such as population modelling.	3 years after adoption	RAC/SPA
	e. Tagging standardization	As soon as possible	RAC/SPA
<b>C. PUBLIC AWARENESS AND EDUCATION</b>			
	Public awareness and Information campaigns in particular for fishermen and local populations	From 2014 to 2019	RAC/SPA, partners and Contracting Parties
<b>D. CAPACITY BUILDING</b>			
	Training courses	From 2014 to 2019	RAC/SPA, Contracting Parties and partners
<b>E. NATIONAL ACTION PLANS</b>			
	Elaboration of National Action Plans	From 2014 to 2019	Contracting Parties
<b>F. COORDINATION</b>			
	a. Assessment of progress in the implementation of the Action Plan	Every two years	RAC/SPA and Contracting parties
	b. Cooperation in organizing the Mediterranean Conference on marine turtles	Every three years	RAC/SPA
	c. Updating the action plan on Marine Turtles	Five years	RAC/SPA

## **Annex IX**

**Draft Updated Timetable of the Action Plan for the  
conservation of Bird species listed in Annex II to the  
SPA/BD Protocol**



## Draft Updated Timetable of the Action Plan for the conservation of Bird species listed in Annex II to the SPA/BD Protocol

<b>Implementation Timetable (2014-2019)</b>		
<b>Action</b>	<b>Deadline/Periodicity</b>	<b>By whom</b>
1. Produce and publish an updated version of the Action Plan including all 25 target species.	By 2015	RAC/SPA
2. Protect legally all bird species in Annex II	By 2019	Contracting Parties
3. Optimize synergies with international agreements and organizations dedicated to bird conservation	From 2014 to 2019	Contracting Parties
4. Target and lobby decision-making organisations and government bodies to stimulate the implementation of the Action Plan	From 2014 to 2019	Contracting Parties, Partners and RAC/SPA, ICCAT, GFCM
5. Organize specific training courses and workshops in coordination/synergy with international and/or national NGOs	From 2014 to 2019	RAC/SPA Contracting Parties, AP partners, AEWA, Birdlife International, ICCAT, GFCM
6. Organization of the 3 <sup>rd</sup> Mediterranean Symposium on ecology and conservation of the bird species listed in Annex II	By 2017	RAC/SPA and Contracting Parties
7. Participation in / promotion of a regional network for monitoring populations and distribution of Mediterranean threatened bird species, in co-ordination with other organisations	From 2014 to 2019	RAC/SPA, AP partners, AEWA, Birdlife International,

8. Establishment / support of research and monitoring programs to fill gaps in the knowledge of threatened species in partnership with other organisations	From 2014 to 2019	RAC/SPA, Contracting Parties, AP partners, AEWA, Birdlife International
9. Establishment and implementation of National Action Plans for the conservation of endangered and threatened bird species in the Mediterranean	From 2014 to 2019	RAC/SPA, Contracting Parties
10. Support contracting parties and partners to produce and publish relevant scientific documentation contributing to update knowledge and enhance conservation action taken on the Annex II species	From 2014 to 2019	RAC/SPA, AP partners, AEWA, Birdlife International, ICCAT, GFCM
11. Identification of areas important for birds on land and at sea (mapping of breeding, feeding, molting and wintering areas).	From 2014 to 2019	Contracting Parties, AP partners, AEWA, Birdlife International,
12. Legal establishment of Protected Areas (PAs) with adequate management plans at breeding sites	By 2019	Contracting Parties
13. Produce the 3 <sup>rd</sup> Report on progress in the implementation of the Action Plan according to the proposed achieved indicators	By 2019	RAC/SPA

## **Annex X**

### **Draft Updated Timetable of the Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea**





## Draft Updated Timetable of the Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea

<b>Implementation Timetable (2014-2019)</b>		
<b>Action</b>	<b>Deadline/Periodicity</b>	<b>By whom</b>
<b>Tools</b>		
1. Update directory of national, regional and international experts on chondrichthyan fishes.	By 2015	RAC/SPA, CMS Shark MOU Secretariat, IUCN SSG, RFMO Shark Working Groups
2. Develop, print and distribute multilingual regional and national field identification guides and sheets for remaining priority areas: Adriatic, Aegean, Ionian (in Croatian, Albanian, Italian, Greek, Turkish); and Northwestern Mediterranean (French, Spanish).	2014 – 2015	GFCM/FAO, MEDITS, National scientific and management bodies, Regional cooperation agencies
3. Promote use of existing standard monitoring protocols and forms (RAC/SPA, FAO) for species-specific data on landings, discards and observations of threatened species;	From 2014 to 2019	National scientific and management bodies, Regional cooperation agencies, MedLEM, CMS, GFCM and FAO
4. Update and promote protocols and programmes for improved compilation and analysis of data, for contribution to regional stock assessment initiatives.	From 2014 to 2019	National and regional agencies and advisory bodies, CMS, GFCM and FAO
5. Formalise/reinforce synchronous submission of catch, bycatch and discard data to both scientific and management bodies, and annually to the GFCM.	Every year From 2014 to 2019	Contracting Parties
6. Improve data on elasmobranch bycatch in national reports to GFCM, for incorporation in GFCM database	Every year From 2014 to 2019	Contracting Parties, GFCM, MEDLEM
7. Undertake information campaigns, improve the provision of materials for publication, and disseminate more widely existing RAC/SPA, FAO, CMS and other relevant products to fisheries managers, researchers and the public.	2014, 2016, 2018	AP Partners, Associates and donor agencies

8. Widely disseminate RAC/SPA guidelines and code of conduct for shark and ray recreational fishing.	2014	RAC/SPA, Contracting Parties, AP Partners, CMS
9. Promote catch and release, research activity and improved reporting of catches to shark and ray recreational fishers.	From 2014 to 2019	Contracting Parties and AP Partners
<b>Legal processes</b>		
10. Establish strict legal protection for species listed in Annex II and GFCM Recommendation through national laws and regulations.	As soon as possible	Contracting Parties
11. Establish and promote national, sub-regional and regional plans or strategies for species listed in Annexes II and III.	2014	Contracting Parties, RAC/SPA, GFCM, CMS
12. Support GFCM finning prohibition by enacting national regulations and monitoring their implementation & enforcement.	As soon as possible	Contracting Parties
13. Monitor and protect critical habitats for chondrichthyan fishes, as soon as they are identified.	From 2014 to 2019	Contracting Parties, MEAs,
<b>Monitoring and data collection</b>		
14. Promote existing research proposals developed under the RAC/SPA Action Plan to funding agencies; develop similar proposals for the Levantine basin.	2014	RAC/SPA, CPs, AP Partners
15. Develop and support improved data collection efforts, particularly in southern and eastern Mediterranean	2014 – 2015	National and regional scientific bodies and cooperation agencies, GFCM, FAO
16. Promote input and shared access to the MEDLEM database under the appropriate protocol.	From 2014 to 2019	Contracting Parties, research institutes, GFCM
17. Complete and disseminate inventories of critical habitats (mating, spawning and nursery grounds)	2015	Contracting Parties
18. Increase compliance with obligations to collect and submit species-specific commercial catch and bycatch data to FAO and GFCM, including through increased use of observers.	From 2014 to 2015	Contracting Parties

19. Comply with obligations under GFCM Recommendations to collect and submit data on pelagic shark catches.	As soon as possible	Contracting Parties
20. Improve programmes for the collection and reporting of data from coastal fisheries.	As soon as possible	Contracting Parties
21. Support expert participation in RFMO and other relevant meetings and workshops, to share expertise and build capacity for data collection, stock assessment and bycatch mitigation.	As soon as possible	Contracting Parties, RFMO, RAC/SPA
<b>Management and assessment procedures</b>		
22. Continuously review data and undertake new studies to clarify the status of Mediterranean endemics and large bodied species assessed as Data Deficient or Near Threatened	2014, 2017	Contracting Parties, Partners
23. Monitor Critically Endangered, Endangered and endemic species	From 2014 to 2019	Contracting Parties
24. Submit to the GFCM annual Shark Assessment Reports describing all national target and/or bycatch fisheries	Every year	Contracting Parties
25. Develop and adopt (where these do not exist) national Shark Plans and specific regulations for fisheries exploiting chondrichthyans, whether target or bycatch.	As soon as possible	Contracting Parties individually and through GFCM
26. Develop a Regional Shark Plan and associated fisheries management regulations outside territorial waters.	2015	Contracting Parties, GFCM
27. Review national and regional Shark Plans every four years	2014, 2018	Contracting Parties, GFCM
29. Continue to implement programme for the development of stock assessments, by area and by species.	2014, 2016, 2019	Contracting Parties, GFCM
30. Assessment of progress in the implementation of the Action Plan and update its timetable	2019	RAC/SPA, Contracting Parties



## **Annex XI**

**Draft Action Plan for the conservation of Habitats and Species associated with Seamounts, Underwater Caves and Canyons, Aphotic Engineering Benthic Invertebrates and Chemo-synthetic Phenomena, in the Mediterranean Sea.  
(Dark Habitats Action Plan)**

Note:

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of RAC/SPA and UNEP concerning the legal status of any State, Territory, city or area, or of its authorities, or concerning the delimitation of their frontiers or boundaries.

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**Draft Action Plan for the conservation of Habitats and Species  
associated with Seamounts, Underwater Caves and Canyons, Aphotic  
Engineering Benthic Invertebrates and Chemo-synthetic Phenomena, in  
the Mediterranean Sea.  
(Dark Habitats Action Plan)**

## **1. PRESENTATION**

### **A. State of knowledge**

Dark habitats are environments where the luminosity is extremely weak, or even absent (aphotic area) leading to an absence of macroscopic autochthonous photosynthesis.

The bathymetric extension of this lightless area depends to a great extent on the turbidity of the water and corresponds to benthic and pelagic habitats starting from the deep circalittoral. Caves which show environmental conditions that favour the installation of organisms characteristic of dark habitats, are also taken into account.

Dark habitats are dependent on very diverse geo-morphological structures (e.g. underwater caves, canyons, slopes, isolated rocks, seamounts, abyssal plains).

#### ***A.1 – Assemblages of underwater caves***

Underwater caves are 'natural cavities big enough to permit direct exploration by man' [1]. Dark underwater caves are lightless enclaves of the marine environment, with lighting less than 0.01% [2] and a fairly confined space. Dark underwater caves are often reservoirs of unknown biodiversity and refuges for generally very non-resilient communities [2].

Semi-dark underwater caves are not included in this Action Plan as they are already integrated into the "Action plan for the conservation of the coralligenous and other calcareous bio-concretions in the Mediterranean Sea"

Underwater caves are particularly well represented in all the rocky karst or fractured coastlines and are probably very widespread at Mediterranean level. Although we do not have an exhaustive view of the situation, several actions, specific to these habitats, have recently been started:

- Since the 1950s, researchers from the Endoume Marine Station (Marseilles) have been more particularly studying the underwater caves of France's Mediterranean coast. A great number of caves have been identified, and sometimes described, and the main species have been paid particular and systematic attention and also studied from a functional and progressive angle. Most of these results have fed into the assessments made at national (ZNIEFF sea) and European (Natura 2000) level. Since 2011, the French Marine Protected Areas Agency has undertaken systematic research on these

habitats in the sectors mapped within the CARTHAM programme (CARTography of heritage Marine Habitats) and the Corsican DREAL has sponsored an inventory of the island's whole coastline (97 dark caves)

- From 2003 on, Italian researchers with the support of the Ministry of the Environment have brought out an atlas with a CD on the distribution of underwater caves by geographic sector (1). Additionally, a national system of geo-location of the caves has been set up, accessible online (catastogrotte.speleo.it)
- Inventorying is now being done as part of the Greek-European NETMED programme and has recorded over 2,700 marine caves in the 13 Mediterranean countries inventoried.

In terms of conservation, as far as the Mediterranean European states are concerned, caves are natural habitats that come under Habitat Directive on the conservation of natural habitats and of wild fauna and flora and appear as such as priority habitats requiring protection (Directive 92/43). Lastly, a certain number of underwater caves enjoy protection status because they fall within the geographical boundaries of Marine Protected Areas (MPAs): (e.g. the Karaburun-Sazan National Marine Park (Albania<sup>1</sup>), the Telašćica Nature Park (Croatia), the Lastovo Archipelago National Park (Croatia), the Mèdes Islands Marine Reserve (Spain), the Port-Cros National Park (France), the Calanques National Park (France), the Alonissos and Northern Sporades National Marine Park (Greece), the Zakynthos Marine National Park (Greece), the Capo Caccia/Isola Piana Marine Protected Area (Italy), the Punta Campanella Marine Protected Area (Italy), the Tremiti Islands Marine Nature Reserve (Italy), the Ustica Islands Marine Nature Reserve (Italy), the Palm Islands Reserve (Lebanon), the Dwejra Marine Area (Malta), the Mgarr ix-Xini Marine Area (Malta), the Ghar Lapsi and Filfla Marine Area (Malta), the Marine Area between Rđum Majjiesa and Ras ir-Raheb (Malta), the North-east Malta Marine Area, the Al-Hoceima National Park (Morocco) and the Galite Archipelago (Tunisia)).

## **A.2 – Assemblages of underwater canyons**

Canyons are valleys with sometimes steep walls and V-shaped sections that are like land canyons but bigger; they often present tributaries and rocky outcrops that can be sizeable [3].

These are elements that play an important part in the way the Mediterranean ecosystem functions, insofar as they constitute the main route for transferring matter between the coast and the deep sea [4]. Thus they can represent biodiversity hotspots and recruiting areas (Sardà *et al.*, 2004 in [4]). Lastly, in the light of the Convention on Biological Diversity (2008), underwater canyons present characteristics that class them as priority conservation areas (Chalabi, 2012 in [3]).

These structures are extremely frequent and concern all the Mediterranean countries. Thus, even though over 518 important canyons have been identified [3], less than 270 are sited in

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detailed fashion (Figure 1), and they are probably more numerous in the light of the geomorphological maps of the Mediterranean seabed.

At present, underwater canyons are not much taken into account in terms of conservation insofar as only a few of them are protected by inclusion in existing MPAs (the Golfe du Lion Marine Nature Park and Calanques National Park canyons, France; the Pelagos Specially Protected Area of Mediterranean Importance (SPAMI) canyons, France, Monaco and Italy; the Mar Menor SPAMI canyon and coasts of the Murcia region, Spain).

Also, since 2009 the Montpellier, petit-Rhône and grand-Rhône canyons have been integrated within the Golfe du Lion restricted fishing area adopted by the General Fisheries Commission for the Mediterranean (GFCM) [5].



Figure 1: Distribution of main canyons identified in the Mediterranean (after authors of Document & [3], [6]). Map: Google earth©

### ***A.3 – Deep Water Engineering benthic invertebrate assemblages***

Assemblages of engineering benthic invertebrates are found on several kinds of substratum and, in the Mediterranean, give rise to unique formations of conservation interest such as:

- black coral forests (Antipatharians) and Gorgonia on hard substrata
- beds with *Isidella elongata* and beds with Pennatula on crumbly substrata
- associations of big sponges and 'deep water corals' present on both kinds of substratum.

These various formations can be more or less overlapping and they shelter ecosystem-building species that provide a hard biogenic habitat as well as a network of interstices for many other organisms. Among these, the 'deep sea corals' shelter a very high specific richness with over 220 species [7], constitute the base of complex food chains and represent, the FAO says (2008), one of the best known examples of vulnerable marine ecosystems (Marin & Aguilar in [3]).

Although there is still not much information on where they are to be found, living 'deep water corals' do not seem to be frequent in the Mediterranean (Figure 2; [8]). They are particularly found on rocky escarpments, walls of canyons, seamounts, and also on rocky surfaces that stand permanently clear of bathyal silts.



**Figure 2:** Location of some populations of structuring invertebrates in the Mediterranean. These are mostly 'deep water corals' (after authors of Document & [8], [9], [10]). Map: Google earth©

Their presence can thus be a necessary precondition for setting up specific measures. Although at present they are still not much taken into account in terms of conservation, since only the Santa Maria de Leuca reef with *Lophelia* and *Madrepora* has since 2006 been included as a restricted fishing area by GFCM [11], they are at the origin of the creation of MPAs (e.g. the Cassidaigne and Lacaze-Duthiers canyons, France). Similarly, two sites have been chosen to this effect by Italy (Continental slopes of the Tuscan Archipelago and Santa Maria de Leuca sector) for setting up the Natura 2000 at-sea network, and many are included in the proposal to set up a representative MPA in the Sea of Alboran [6].

#### **A.4 – Deep-sea chemo-synthetic assemblages (mud volcanoes, cold seeps, 'pockmarks', brine anoxic lakes, hydrothermal springs)**

It was in the 1990s that the first descriptions on deep-sea populations based on chemo-synthesis started (Corselli & Basso, 1996 in [12]). They are often associated with underwater mud volcanoes, but more generally any emission ('cold seeps') on the surface of the sediment of reduced gas or fluids (methane, sulphurs, etc.) permits the developing of chemo-autotrophic microbial communities, themselves at the base of a particular food chain, quasi-disconnected to surface photosynthesis.

In the Mediterranean we are therefore familiar with mud volcanoes and also 'pockmark' areas, shallow craters that form after gas has been released. Hyper-saline anoxic lakes have also been discovered between 3,200 and 3,600 metres down in the eastern basin

(Lampadariou *et al.*, 2003 in [12]). They also give rise to chemo-autotrophic primary production. Lastly, areas with hot hydrothermal springs are found at the level of underwater volcanoes in the Tyrrhenian Sea (Marsili Seamount). These Mediterranean chemo-synthetic communities are deemed to be relatively isolated vis-a-vis the Atlantic Ocean (Fiala-Médioni, 2003 in [12]). Hyper-saline anoxic lakes, because of the combination of almost saturated salt concentrations, high hydrostatic pressures, absence of light, anoxia and the high stratification of the water layers certainly constitute habitats that are among the planet's most extreme. They mainly contain bacterial communities and metabolically active Archaeans, specific to these environments [4].

'Cold seeps' seem to be well represented along the Mediterranean fold (eastern basin; Figure 3). 'Mud volcanoes' are frequent in the eastern basin especially at the level of the Mediterranean fold and in the south-east of the basin, but the discovery of 'pockmarks' around the Balearic Islands allows us to envisage their existence in the western basin (Acosta *et al.*, 2001, in [12]; Figure 3). Lastly, six hyper-saline anoxic lakes have been localised at the level of the Mediterranean fold [4] (Figure 3).



**Figure 3:** Locating chemo-synthetic populations that have been studied in the Mediterranean (after authors of Document & [6], [12], [13], [14], [15]). Map: Google earth©

Among these deep-sea chemo-synthetic populations only the 'cold seeps' of the Nile Delta are currently taken into account in terms of conservation, since it has since 2006 been included as a restricted fishing area by GFCM [4].

#### **A.5 – Assemblages associated with seamounts**

In the Mediterranean, seamounts are raised parts of the seabed, ending in a peak, and of limited extent, which never reach the surface [16].

Although seamounts have so far been little studied from the biological angle in the Mediterranean, they seem to contain a unique biodiversity characterised by high rates of

endemic species and could act as refuges for relic populations or constitute speciation areas (Galil & Zibrowius, 1998 in [12]).

The Mediterranean in its wider sense (including the Black Sea) probably contains about 200-300 seamounts, most of them in the western basin (Figure 4), with over 127 of them at the level of the Tyrrhenian Sea and the Sicily-Tunisian Strait<sup>2</sup>.



**Figure 4:** Distribution of the main Mediterranean seamounts (Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo & the GIS User Community; map: Google earth©)

At present, these seamounts are little taken into account in terms of conservation since only that of Eratosthenes (eastern basin) has since 2006 been included as a restricted fishing area by GFCM [3].

## **B. Main threats**

Apart from a limited number of sectors, the small size of the Mediterranean continental shelf leads to a strong interaction between the land and sea domains; thus the impact of earth-origin pressures is felt down to sizeable depths. Such impacts may be of natural origin (mouths of coastal rivers, underwater cascades) or of human origin (discharge from urban and industrial pipes, coastal development, exploiting of living and subsoil resources, prospecting). Similarly, this proximity leads to strong interaction between the euphotic and aphotic domains, particularly via the supply of nutritive elements at the base of many trophic chains, and the transfer and fixing of larvae both for the pelagic and benthic fields.

The main threats hanging over dark habitats therefore depend greatly on their location (distance from coast, presence of rivers, proximity of big population centres and industrial

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complexes), their depth, their morphology (slope, substratum, structure) and the uses to which they are put (exploiting of resources).

In this respect underwater caves are specific entities, being, because of their often shallow depth and their nearness to the coast, easy of access. Also, the caves, at least in their 'semi-dark' parts, constitute landscapes of high aesthetic or archaeological value and are therefore often visited, leading to mechanical harm particularly from divers. Using destructive methods (e.g. dynamite) in coastal development work is likely to significantly affect these habitats.

Changes in the quality of the environment (accumulation of nutriments, contamination by run-off water, rise in water temperature) can impact these environments. Although the dark caves are less frequented, they are especially fragile and constitute veritable reservoirs of knowledge and biodiversity that must at all costs be protected [17]. Indeed, the slightest disturbance can cause considerable damage and impacted communities will take a long time to recover their state of equilibrium (extremely lengthy adjustment of stability).

Other dark populations undergo different pressures, at least in part, to those hanging over the underwater caves. There, too, although changes in the quality of the environment can play a non-negligible part (acidification of the water) specific threats are identified.

These mainly concern impacts linked to the exploiting of living resources (gathering red coral, trawling, fishing with *palangres*, or mesh nets, lost or abandoned fishing gear), the accumulation of waste (land-origin arrivals, direct discharge at sea, submersion of rubble from dredging), research activities (seismic, sampling), and undersea prospecting (drilling, exploiting hydrocarbons; military activities [12]).

Thus, recent studies have shown that as well as displacing sediments, trawling affects the morphology of the seabed, as is shown by high-resolution relief maps of the seabed, and can cause damage equal to that caused by ploughing farmland [18].

Similarly, the fragility of cold-water corals makes them very vulnerable to fishing activities, especially trawling, and also to mesh nets and *palangres*, whether directly or because of the changes in the environment caused by some of the fishing gear. Moreover, recolonisation can prove very difficult or even impossible in the light of the reduced growth of the main builders [19].

Similarly the burying at great depths of waste from the exploiting of mines is often seen as one of the options available for eliminating that waste [20].

## **2. OBJECTIVES OF THE ACTION PLAN**

The objectives of the Action Plan are to:

- conserve the habitats' integrity, functionality (favourable state of conservation) by maintaining the main ecosystem services (e.g. carbon sink, halieutic recruitment and production, biogeochemical cycles) and their interest in terms of biodiversity (e.g. specific diversity, genetics)

- encourage the natural restoration of degraded habitats (reduction of human origin impacts)
- improve knowledge about dark populations (e.g. location, specific richness, functioning, typology).

### **3. ACTIONS REQUIRED TO ATTAIN THE OBJECTIVES OF THE ACTION PLAN**

Actions needed to achieve the aims can be put into four categories:

#### **A. Improvement and acquisition of knowledge**

Scientific data on the biology, ecology and functioning of the various dark populations is still rare and hard of access. Thus, we should improve this knowledge in order to possess the information that is vital for implementing an optimal management strategy for each of these populations, in particular by:

- assessing available knowledge, taking into account not only national and regional data (e.g. RAC/SPA, GFCM, IUCN, OCEANA, WCMC) but also scientific works. The information will be integrated within a geographical information system (GIS) and could be shared via online consultation
- setting up a database of people-resources in identified fields (i.e. caves, deep-sea populations), of institutes and bodies working in this field and of the available means of investigation
- quantifying the proven or potential pressures (e.g. commercial and recreational fishing, leisure activities and diving, undersea prospecting).

New knowledge must be acquired in areas of regional interest to promote a multidisciplinary approach and enhance international cooperation over these sites. Such joint action will permit the exchange of experience and the setting up of shared management strategies (crafting guidelines).

Regularly holding theme-based workshops that bring together experts on these dark populations will enable an assessment to be made of how far knowledge has progressed.

#### **B. Management measures**

Management procedures involve enacting laws aimed at regulating human activities likely to affect dark populations and permit their long-term conservation.

##### ***B.1 – Legislation***

Thus, we must identify endangered or threatened dark populations and grant them the status of protected species as defined in Article 11 of the Protocol on Specially Protected Areas and Biological Diversity (SPA/BD Protocol, [21]).

The regulations on impact studies must be strengthened to make assessing the impacts on dark populations compulsory. The regulations should pay particular attention in the event of



coastal development, the prospecting and exploiting of natural resources and the discharge at sea of materials.

Insofar as regulatory procedures already exist at international level to restrict or ban certain human activities, we should work to have them applied and developed. This is particularly so for the ban on trawling at depths of over 1,000 metres down in the Mediterranean or the setting up of Restricted Fishing Areas (RFA) as adopted in the context of the mandate of the General Commission on Mediterranean Fisheries [11]. The Mediterranean states are invited to use, and enhance, all the means already available to ensure better conservation of dark populations.

### ***B.2 – Setting up MPAs***

Designation of Marine Protected Areas intended to permit more efficacious conservation of these dark assemblages must be based on the identification of emblem sites on the basis of the criteria (uniqueness or rarity, particular importance for species biological stages, importance for threatened, endangered or declining habitats or species, vulnerability and reduced recuperative capacity after disturbance, biological productivity, biological diversity and naturality) that were adopted in 2009 by the Contracting Parties [22].

As part of the work done by RAC/SPA in 2010, many sites that met, these criteria have already been identified for the creation of MPAs beyond national jurisdiction [23]. It is necessary to pursue and build upon this approach via the procedures in Article 9 of the SPA/BD Protocol [21].

Similarly, it would be helpful to identify from among the already existing MPAs those that exist near sites of interest for the conservation of dark assemblages and to study the feasibility of extending them so that these sites are included within the boundaries of the MPA.

### ***B.3 – Other management measures***

Measures should be identified to reduce the pressures that hang over these dark assemblages and to implement them (e.g. guidelines).

In the light of the precautionary principle, particular attention will be paid to the impacts that could arise as a result of the acidification and/or fertilization of the oceans and the setting up of new emergent fisheries (border areas).

MPAs which host dark assemblages (e.g. dark caves) should update their management plans to include measures adapted to the conservation of these caves.

Procedures aimed at assessing the efficacy of these measures as a whole will be defined in consultation with the organisations concerned by the management of these dark

assemblages (e.g. international conventions, GFCM, IUCN, NGOs) to promote sustainable, adaptable and concerted management.

Similarly, possession of a state of reference is a necessary precondition for setting up a system to monitor over time the maintenance in good condition of these dark assemblages. It is also helpful in the sites for which data already exists to start monitoring procedures (return to the site) and in sites which have not yet been studied to establish a 'zero' state. Defining ecological indicators and biodiversity and vulnerability indices should permit the crafting of predictive scenarios for managing these habitats and their dependent populations. Making this approach general should in time permit the building up of a network of sites for monitoring.

### **C. Public awareness and information**

Information and awareness programmes to make dark populations, their vulnerability and the interest for conservation better known should be crafted for decision-makers, users (e.g. divers, fishermen, mine operators) and the wider public (environment education). The participation of NGOs in these programmes will be encouraged.

### **D. Enhancing national capacities**

In the light of the geographical distribution of many of these dark populations (outside waters that lie within national jurisdiction) and the difficulties of reaching them (bathymetric bracket, scientific means required, lack of knowledge, cost of study), it is important to:

- encourage the introduction of international cooperation to create synergies between the various actors (decision-makers, scientists, socio-professionals) and set up shared management
- organise training courses and encourage the exchange of cross-border experience so as to enhance national capacities in the field

### **E. National plans**

To give greater efficacy to the measures envisaged for setting up the present Action Plan, the Mediterranean countries are invited to craft national plans for the protection of dark assemblages. Each national plan must bear in mind the specific features of the country and even the areas concerned. It must suggest appropriate legislative measures, particularly as regards impact studies for coastal development and to check the activities that can affect these assemblages. The national plan will be drawn up on the basis of the scientific data available and will include programmes for: (i) gathering and continuous updating of data, (ii) training and retraining for specialists, (iii) education and awareness for the public, actors and decision-makers, and (iv) the conservation of dark populations that are significant for the marine environment in the Mediterranean. These national plans must be brought to the attention of all the concerned actors and as far as is possible coordinated with other pertinent national plans (e.g. emergency plan against accidental pollution).

#### 4. REGIONAL COORDINATION AND IMPLEMENTATION

Regional coordination of the implementation of the present Action Plan will be handled by the Secretariat of the Mediterranean Action Plan (MAP) via the Regional Activity Centre for Specially Protected Areas. The coordinating structure's main functions are:

- gathering, summarizing and circulating knowledge at Mediterranean level and permitting this to be integrated within the available instruments (e.g. FSD)
- setting up and updating databases on people/resources, laboratories involved and investigation means available
- helping states identify and assess the pressures on the various dark populations at national and regional level
- promoting studies on dark populations and making inventories of species in order to better grasp the way they function and better assess the ecosystem services they provide
- promote cross-border cooperation
- back the setting up of dark population monitoring networks
- organise meetings of experts and training courses on dark populations
- prepare reports on how implementation of the Action Plan is progressing, for submission to the Meeting of National Focal Points for SPAs and meetings of the Contracting Parties
- establish a work programme for implementing the Action Plan over a five-year period, which will be submitted to the Contracting Parties for adoption. At the end of this period, if necessary, after assessment and updating, it can be repeated.

Implementing the present Action Plan is the responsibility of the national authorities of the Contracting Parties. At each of their meetings, the National Focal Points for SPAs shall assess how far the Action Plan is being implemented on the basis of national reports on the subject and a report made by RAC/SPA on implementation at regional level. In the light of this assessment, the Meeting of National Focal Points for SPAs will suggest recommendations to be submitted to the Contracting Parties. If necessary, the Meeting of Focal Points will also suggest adjustments to the schedule that appears in the Appendix to the Action Plan.

Supplementary work done by other international and/or non-governmental organisations, aiming at the same objectives, should be encouraged, encouraging their coordination and avoiding duplication of effort.

At their ordinary meetings, the Contracting Parties could, at the suggestion of the Meeting of National Focal Points for SPAs, in order to encourage and reward implementation of the Action Plan, grant the title of 'Action Plan Partner' to any structure that may so request. This label will be granted on the evidence of proven involvement in the implementing of the present Action Plan attested by concrete actions (e.g. conservation, management, research, awareness etc.). The label can be extended at the same time as the multi-annual work programme on the grounds of an assessment of actions carried out during that period.

## 5. IMPLEMENTATION SCHEDULE

Actions	Time	Who
Making a summary of knowledge of dark populations and their distribution around the Mediterranean in the form of a geo-referenced information system	As soon as possible, and continuously	RAC/SPA and Contracting Parties
Setting up a database of people/resources and means of investigation available	As soon as possible, and continuously	RAC/SPA
Identify and assess proven pressures on each of the various types of habitat	Year 1	RAC/SPA and Contracting Parties
Revise the reference list of types of marine habitat for the selection of sites for inclusion in the national inventories of natural sites of conservation interest, in order to take account of dark assemblages	Years 1 and 2	RAC/SPA and Contracting Parties
Promote the identifying of areas of interest for the conservation of dark assemblages in the Mediterranean and Carry out concerted actions in national and/or cross-border sites	Years 1 and 2	Contracting Parties RAC/ SPA and Contracting Parties
Finalise the implementing of MPAs in already identified sites at national level and outside waters that lie within national jurisdiction Propose the creation of new MPAs	Starting from Year 2	RAC/SPA and Contracting Parties
Encourage the extension of existing MPAs to integrate nearby sites that host dark assemblages	Starting from Year 2	Contracting Parties
Introduce national legislation to reduce negative impacts Integrate taking dark assemblages into account within impact studies procedures	On adoption	Contracting Parties
Regularly hold theme-based workshops (in coordination with those of the 'Coralligenous' AP	Every three years	RAC/.SPA
Propose guidelines suited to the inventorying and monitoring of dark assemblages	Starting from Year 2	RAC/SPA and Partners
Implement monitoring systems	Starting from Year 3	RAC/SPA and Contracting Parties
Enhance cooperation actions with concerned organisations and in particular with GFCM	On adoption	RAC/SPA
Step up awareness and information about dark assemblages with the various actors	Continuously	RAC/SPA, partners and Contracting Parties
Enhance national capacities and improve skills in taxonomy and monitoring methods	As needed	RAC/SPA

## 6. BIBLIOGRAPHY

- 1 Cicogna, F., *et al.* (2003) *Grotte marine: cinquant'anni di ricerca in Italia*. Ministero dell'ambiente e della tutela del territorio
- 2 Harmelin, J.G., *et al.* (1985) Dark submarine caves - An extreme environment and a refuge-biotope. *Téthys* 11, 214-229
- 3 Wurtz, M. (2012) *Mediterranean submarine canyons: Ecology and governance*. UICN
- 4 Danovaro, R., *et al.* (2010) Deep-Sea Biodiversity in the Mediterranean Sea: The Known, the Unknown, and the Unknowable. *PLoS ONE* 5, 1-25
- 5 CGPM (2009) *Rapport de la trente-troisième session. Tunis, 23-27 mars 2009*. Fishery and Agriculture Organization
- 6 UICN (2012) *Propuesta de una red representativa de áreas marinas protegidas en el mar de Alborán / Vers un réseau représentatif d'aires marines protégées dans la mer d'Alboran*. UICN
- 7 Mastrototaro, F., *et al.* (2010) Biodiversity of the white coral bank off Cape Santa Maria di Leuca (Mediterranean Sea): An update. *Deep Sea Research Part II: Topical Studies in Oceanography* 57, 412-430
- 8 Freiwald, A., *et al.* (2009) The WHITE CORAL COMMUNITY in the Central Mediterranean sea revealed by ROV surveys. *Oceanography* 22, 59-74
- 9 Pardo, E., *et al.* (2011) Documentacion de arrecifes de corales de agua fria en el Mediterraneo occidental (Mar de Alboan). *Chronica naturae*, 20-34
- 10 Taviani, M., *et al.* (2010) Pleistocene to Recent scleractinian deep-water corals and coral facies in the Eastern Mediterranean. *Facies* 57, 579-603
- 11 GFCM (2006) Report of the Thirtieth Session. Istanbul, Turkey, 24-27 January 2006. In *GFCM Report* (Mediterranean, G.F.C.f.t., ed), pp. 56, Food and Agriculture Organization
- 12 WWF and IUCN (2004) *Mediterranean deep-sea ecosystems an overview of their diversity, structure, functioning and anthropogenic impacts, with a proposal for their conservation*. IUCN Centre for Mediterranean Cooperation & WWF Mediterranean Programme
- 13 Dupré, S., *et al.* (2010) Widespread active seepage activity on the Nile Deep Sea Fan (offshore Egypt) revealed by high-definition geophysical imagery. *Marine Geology* 275, 1-19
- 14 Lastras, G., *et al.* (2004) Shallow slides and pockmark swarms in the Eivissa Channel, western Mediterranean Sea. *Sedimentology* 51, 837-850
- 15 Taviani, M., *et al.* (2013) The Gela Basin pockmark field in the strait of Sicily (Mediterranean Sea): chemosymbiotic faunal and carbonate signatures of postglacial to modern cold seepage. *Biogeosciences Discussions* 10, 967-1009

- 16 Ballesteros, E., *et al.* (2013) Els monts submarins. In *Atles dels ecosistemes* (Bueno, D., ed), pp. 320, Enciclopèdia Catalana
- 17 Gerovasileiou, V. and Voultsiadou, E. (2012) Marine caves of the Mediterranean sea: A sponge biodiversity reservoir within a biodiversity hotspot. *PLoS ONE* 7
- 18 Puig, P., *et al.* (2012) Ploughing the deep sea floor. *Nature* 489, 286-289
- 19 Clark, M.R., *et al.* (2006) *Seamounts, Deep-sea corals and Fisheries: vulnerability of deep-sea corals to fishing on seamounts beyond areas of national jurisdiction*. UNEP-WCMC
- 20 CIESM (2003) *Mare Incognitum ? Exploring Mediterranean deep-sea biology*. CIESM
- 21 PNUE-PAM-CAR/ASP (1995) *Protocole relatif aux Aires Spécialement Protégées et à la Diversité Biologique en Méditerranée (Barcelone, 1995)*. CAR/ASP,
- 22 PNUE-PAM-CAR/ASP (2009) Proposition concernant un programme de travail régional pour les Aires Protégées Marines et Côtières de la Méditerranée. In *Document de travail pour la neuvième réunion des Points Focaux nationaux pour les ASP, 3-6 Juin 2009, Floriana - Malte* (Notarbartolo di Sciara, G. and Rais, C., eds), pp. 1-37
- 23 UNEP-MAP-RAC/SPA (2010) *Overview of scientific findings and criteria relevant to identifying SPAMIs in the Mediterranean open seas, including the deep sea*. RAC/SPA

## **Annex XII**

### **Draft General Guidance for the Programme of Work of the Regional Activity Centre for Specially Protected Areas (RAC/SPA) for 2014-2015**





## **Draft General Guidance for the Programme of Work of the Regional Activity Centre for Specially Protected Areas (RAC/SPA) for 2014-2015**

### **I. General context**

The aim of this document is to present the main general directions to be followed when crafting the RAC/SPA Work Programme for the two-year period 2014-2015.

The 17<sup>th</sup> Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Paris, France, 8-10 February 2012) discussed the possibility of bringing the five-year strategic Work Programme into line with the two-year decision-making cycle of the Parties' Ordinary Meetings by reducing the Work Programme to four years, which would restrict the implementation time of the Work Programme, designed to take five years.

The 17<sup>th</sup> CoP also decided on a Functional review of UNEP/MAP System whose implications were unknown at the time of its adoption. It has become obvious that a period of transition will be necessary to decide on, and implement, the Functional review, and this is now making it difficult to carry out a planning exercise.

The recent decisions of the CoP (Marrakech Declaration, 2009) called on the MAP to increase synergy and consistency with other multilateral environmental processes. As part of the setting up of synergy and bringing the MAP's Work Programme into line with that of the pertinent international processes and the substantive processes of MAP such as the post-2015 Sustainable Development Objectives (SSO), the last years of the Convention on Biological Diversity's Strategic Action Plan (2016-2020) and the six-year cycle of the ecosystem approach and the process of the European Union's 'Strategy for the Marine Environment' Framework Directive, it is suggested that the five-year Work Programme be re-named and that its cycle be changed to a medium-term strategy with a six-year cycle starting in 2016.

The 76<sup>th</sup> Meeting of the Office of the Contracting Parties to the Barcelona Convention (Algiers, Algeria, 26-28 February 2013) asked the Secretariat to prepare a new Work Programme for the two-year period 2014-2015 on the basis of the five-year Work Programme 2010-2015 adopted at the 16<sup>th</sup> Meeting of the Contracting Parties (Marrakech, November 2009), keeping the same planning code number as that of the current two-year period (2012-2013).

Also, as part of improving consistency, effectiveness, responsibility and transparency in the way UNEP/MAP and its components operate; the contribution of the appropriate international and regional partners is becoming vital due to the context of diminishing resources.

Future guidance for the suggested activities will be organised around the subjects and performance of the (2010-2014) five-year Work Programme adopted by the 16<sup>th</sup> Ordinary Meeting of the Parties (Marrakech, 2009), and will take into account results obtained or, if these are still ongoing, certain actions that have been accomplished and the remaining

lacunae for implementing the five-year Work Programme. They also take into consideration the constantly-changing international context, an assessment of progress made during this two-year period, and emerging issues.

## **II. Priorities emerging from international processes**

New issues that concern RAC/SPA, identified as being particularly pertinent for MAP and its components in preparing the 2014-2015 Work Programme, are the three following recent international events:

- The inclusion, for the first time ever, in the 'The Future We Want' Declaration made by heads of state and of government, adopted at the Rio+20 United Nations Conference on Sustainable Development (Rio de Janeiro, Brazil, 20-22 June 2012), of a section on Oceans (paragraphs 158-177) that includes references *inter alia* to ecosystem approaches, invasive species, the Aichi objectives (10% MAPs) and areas that do not come under any national jurisdiction
- The pertinent marine and coastal decisions adopted at the 11<sup>th</sup> CoP of the Convention on Biological Diversity (CBD) (Hyderabad, India, 8-17 October 2012) that include *inter alia* decisions linked to areas of ecological or biological importance (AEBI), assessments of undersea noise, acidification of the oceans, planning of maritime space, impact of fishing in Marine Protected Areas, and assessment and monitoring
- Strategic directions (2013-2016) suggested by the 27<sup>th</sup> Session of the UNEP Administrative Council (Nairobi, Kenya, 18-22 February 2013) such as applying the ecosystem approach when managing the marine and coastal environment, strengthening capacities to improve knowledge and world trends on the state of the marine environment, and enhancing collaboration and partnerships with the Multilateral Environment Agreements (MEAs) and world and regional initiatives.

It transpires that there is consistency between development at international level and the priorities covered by the Barcelona Convention and its protocols, particularly the Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol).

### III. Mediterranean priorities for RAC/SPA's 2014-2015 Work Programme

The activities suggested by RAC/SPA concern four out of the six subjects presented in the MAP five-year Work Programme, i.e. Governance, Integrated management of coastal areas, Biodiversity and Climate change.

Below appears an account of the activities suggested by RAC/SPA for 2014-2015.

In the context of Subject (I), Governance, the priorities are RAC/SPA's contribution to the following activities, coordinated by MAP:

- Developing an Integrated programme of Barcelona Convention measures based on a review of pertinent strategies such as SAP BIO
- Developing an Integrated programme of monitoring and assessment of the EcAp as required to round off the implementing of the Ecosystem Approach as agreed by the Contracting Parties.

In accordance with the procedure for reviewing the areas on the SPAMI List, adopted by the Contracting Parties, RAC/SPA will undertake an ordinary review of the **SPAMIs** that appeared on the List in 2001, 2003, 2008 and 2009.

Moreover, RAC/SPA will work further on improving and maintaining the tools of quality data collection and circulation (in preparation for the EcAp integrated monitoring and assessment programme) and on improving national capacities and the availability of data at national level.

In the context of Subject (II), Integrated Coastal zone Management (ICZM)

RAC/SPA's activities will be restricted to helping implement the biodiversity element of the **Coastal Development Programmes** piloted by RAC/PAP.

In the context of Subject (III), Biodiversity, RAC/SPA intends to develop its activities along the following main lines:

- Promoting **management, connectedness and representativeness** among the Marine and Coastal Protected Areas according to the priorities and directions of the 'Road map – Towards a Mediterranean network of **Marine Protected Areas** (MPAs) that are connected, ecologically representative and effectively and sustainably managed by 2020' (*MedMPAnet Project*)
- Implementing the third phase of the **MedOpenSeas** Project to propose SPAMIs in the areas already identified with the concerned countries and in collaboration with the pertinent partners

- Improving the status of **threatened species** and **key habitats** through helping the countries implement work programmes for the Action Plans adopted for the conservation of species and habitats (nine Action Plans, including an Action Plan being adopted in 2013 and a new strategy for the conservation of the monk seal in the Mediterranean)
- Completing the **inventorying** and **mapping** of key habitats in the Mediterranean, aimed at extending the SPAMI network
- Supporting actions in the context of assessing **services rendered by ecosystems** in the Marine Protected Areas
- Putting into effect the collaboration agreement with the GFCM especially as regards mitigating the impact of fishing activities on threatened species and vulnerable habitats as well as improving consistency between SPAMIs and Fisheries Restricted Areas. Promote synergy with other Regional fisheries management organizations, in particularly the ICCAT
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- Establish an implementation timetable for the Action Plan for the conservation of cetacean in the Mediterranean in collaboration with ACCOBAMS.
- Regional monitoring of, as well as awareness actions on, **introduced species**
- Strengthening the developing of **capacity-building** programmes in the context of implementing regional Action Plans.

In the context of Subject (VI), Climate change, priority will be given to:

- Assessing **climate change** impact indicators in the SPAs in the Mediterranean
- Implementing the project to restore and rehabilitate **wetlands** and degraded lagoons as a measure to mitigate climate change.