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20th Ordinary Meeting of the Contracting Parties to the
Convention for the Protection of the Marine Environment
and the Coastal Region of the Mediterranean and its Protocols

Tirana, Albania, 17-20 December 2017

**REPORT OF THE 20TH ORDINARY MEETING OF THE CONTRACTING PARTIES TO THE
CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT
AND THE COASTAL REGION OF THE MEDITERRANEAN AND ITS PROTOCOLS**



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Report of the 20th ordinary meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols

Introduction

1. The twentieth ordinary meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (the Barcelona Convention) and its Protocols was held at the Tirana International Hotel, Tirana, from 17 to 20 December 2017, and was hosted by the Government of Albania. The meeting included a ministerial session held on 19 December.
2. The following Contracting Parties to the Barcelona Convention were represented at the meeting: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, European Union, France, Greece, Israel, Italy, Lebanon, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Tunisia and Turkey.
3. The following United Nations bodies, specialized agencies, convention secretariats and intergovernmental organizations were represented as observers: the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS); General Fisheries Commission for the Mediterranean (GFCM); Global Environment Facility (GEF); International Atomic Energy Agency (IAEA); International Maritime Organization (IMO); International Union for the Conservation of Nature and Natural Resources (IUCN); the Mediterranean Wetlands Initiative (MedWet); United Nations Department of Economic and Social Affairs; United Nations Development Programme, Albania; and Secretariat of the Union for the Mediterranean (UfMS). The president of the Mediterranean Commission on Sustainable Development and the Chair of the Compliance Committee were also present during relevant sessions of the meeting.
4. The following non-governmental organizations and other institutions were represented as observers: Arab Network for Environment and Development; Arab Office for Youth and Environment; International Centre for Advanced Mediterranean Agronomic Studies; Tirana Environmental Centre for Administration; Sustainable Water Integrated Management and Horizon 2020 Support Mechanism (SWIM-Horizon 2020); Izmir Metropolitan Municipality; Mediterranean Association to Save the Sea Turtles (MEDASSET); the network of Marine Protected Areas managers in the Mediterranean (MedPAN); Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE); Oceana; RAMOGE Agreement for the Prevention and Control of Marine Pollution; World Wide Fund for Nature, Mediterranean Programme Office (WWF MedPO); and Youth Love Egypt Foundation.
5. The United Nations Environment Programme (UNEP), including the Secretariat of the Mediterranean Action Plan and the Barcelona Convention, was also represented, along with the following Mediterranean Action Plan components: the Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL), the Plan Bleu Regional Activity Centre (PB/RAC); the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC); the Regional Activity Centre for Information and Communication (INFO/RAC); the Priority Actions Programme Regional Activity Centre (PAP/RAC); the Regional Activity Centre for Specially Protected Areas (SPA/RAC); and the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC).
6. A complete list of participants is set out in Annex IV to the present report.

I. Opening of the meeting (agenda item 1)

7. The meeting was opened at 11.05 a.m. on Sunday, 17 December 2017 by Ms. Christina Baritaki (Greece), the outgoing President of the Bureau of the Contracting Parties. Opening remarks were made by Ms. Baritaki; Ms. Ornela Cuci, Deputy Minister of Tourism and Environment of Albania; Ms. Mette Wilkie, Director of Ecosystems Division, UNEP, on behalf of the Executive Director of UNEP;

and Mr. Gaetano Leone, Coordinator of the Mediterranean Action Plan/Barcelona Convention. Copies of the statements are set out in Annex I to the present report.

8. Ms. Baritaki welcomed participants and thanked the Government of Albania for hosting the meeting. She said that the Barcelona Convention and its Protocols had contributed significantly to the vital international developments for a sustainable future that had taken place in the previous two years and that they had also played an important role in protecting the environment and promoting sustainable development in the Mediterranean region. All regional stakeholders should, for their part, work collectively for the implementation of the Mediterranean Strategy for Sustainable Development as a pivotal means of promoting the implementation of the Sustainable Development Goals, in particular Goal 14 (conserve and sustainably use the oceans, seas and marine resources for sustainable development). She reaffirmed the determination of the Government of her own country, Greece, to continue working to protect the Mediterranean Sea in concert with others for the benefit of future generations and recalled its ongoing support for the work of the Mediterranean Action Plan system in its capacity as host country for the Mediterranean Action Plan Coordinating Unit for over 30 years.

9. In her remarks, Ms. Cuci said that Albania was committed to fulfilling its responsibilities in presiding over the Bureau and to addressing its own environmental problems as a matter of priority, which called for appropriate planning, monitoring and assessment. In that context, the Barcelona Convention and the Mediterranean Action Plan system provided a gateway for integrated action by all Contracting Parties to reduce the pressure on natural resources, including by mobilizing all stakeholders to join in supporting the implementation of programmes and strategies based on the ecosystem approach. Since acceding to the Convention in 2001, Albania had strived to develop its national framework for the protection of the environment through the enactment of relevant legislation.

10. Ms. Wilkie said that the 2030 Agenda for Sustainable Development recognized the interconnectivity of economic development and environmental protection, as indicated by the fact that over one half of the Sustainable Development Goals had an environmental focus or addressed the sustainability of natural resources. Articulated in Goal 14, the new focus on ocean related issues had been further highlighted by a series of global events and processes aimed at raising awareness of the economic and social importance of oceans and seas. The recent third session of the United Nations Environment Assembly had adopted a ministerial declaration and resolutions designed to promote a pollution-free planet, which was the best guarantee for achieving survival, health, well-being, prosperity and the overarching goal of leaving no one behind in the quest for sustainable development. Implementation of the Barcelona Convention and its Protocols was also the best way to attain Goal 14 in particular, especially given the proven relevance and effectiveness of the Mediterranean Action Plan system in translating global policies into concrete actions on agreed regional and subregional priorities. The present meeting thus presented a decisive opportunity for showcasing the importance placed on the implementation of pollution- and biodiversity-related commitments in the Mediterranean through multi-stakeholder partnerships and through supporting the inclusion of Goal 14 in national agendas for sustainable development. Collective action of that nature would facilitate achievement of the objectives sought for the region.

11. Welcoming participants, Mr. Leone said that the Secretariat and Mediterranean Action Plan components had realized substantial progress during the current biennium in, among others, delivering on many aspects of the Mediterranean Action Plan system mandate, with a focus on implementation, partnership and resource mobilization as the most effective means of implementing the Mid-term Strategy 2016–2021. Tangible accomplishments included the contribution to action on marine litter, the mobilization of resources for action and investments, the development of technical tools and guidance for Contracting Parties, and the provision of capacity-building support. Among the Coordinating Unit's less visible but no less important successes were the enhancement of its desirability as a regional partner, its attention to subregional issues and its mobilization of additional commitments to global initiatives. He expressed confidence that the meeting would address the important work before it with the constructive and cooperative spirit that typified the Mediterranean Action Plan system, stressing in that context the need for more incisive action across the board to ensure protection of the marine environment and coastal areas of the Mediterranean.

II. Organizational matters (agenda item 3)

A. Rules of procedure

12. The Contracting Parties agreed that the rules of procedure adopted for their meetings (UNEP/IG.43/6, Annex XI), as amended (UNEP(OCA)/MED IG.1/5 and UNEP(OCA)/MED IG.3/5), would apply to their twentieth ordinary meeting.

B. Election of officers

13. The Coordinator explained that the Secretariat had received a letter from the Government of Italy in which it had offered to host the twenty-first ordinary meeting of the Contracting Parties. In accordance with the rules of procedure, Italy would therefore serve as a member of the Bureau of the twentieth meeting.

14. In accordance with the rules of procedure and with the principles of geographical distribution (Article 19 of the Convention) and continuity (Article III of the terms of reference of the Bureau of the Contracting Parties), the Contracting Parties elected the members of the Bureau, as follows, from among the representatives of the Contracting Parties:

President:	Ms. Klodiana Marika (Albania)
Vice-President:	Mr. Charalambos Hajipakkos (Cyprus)
Vice-President:	Mr. Mohamed Farouk Osman (Egypt)
Vice-President:	Mr. Oliviero Montanaro (Italy)
Vice-President:	Mr. Mohamed Sghaier Ben Jeddou (Tunisia)
Rapporteur:	Ms. Ivana Stojanovic (Montenegro)

C. Adoption of the agenda

15. The Contracting Parties adopted their agenda on the basis of the provisional agenda circulated in documents UNEP(DEPI)/MED IG.23/1 and UNEP(DEPI)/MED IG.23/2, as follows:

1. Opening of the meeting.
2. Organizational matters:
 - (a) Rules of procedure;
 - (b) Election of officers;
 - (c) Adoption of the agenda;
 - (d) Organization of work;
 - (e) Verification of credentials.
3. Thematic decisions:
 - (a) Revised reporting format for the implementation of the Barcelona Convention and its Protocols;
 - (b) Outcome of the work of the Compliance Committee;
 - (c) Governance;

- (d) Implementation and monitoring of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean;
 - (e) Updated Resource Mobilization Strategy;
 - (f) Implementation of the Ecosystem Approach: Focus on 2017 Quality Status Report and follow-up assessments;
 - (g) Implementation of the Integrated Coastal Zone Management Protocol: Common Regional Framework for Integrated Coastal Zone Management and Conceptual Framework for Marine Spatial Planning in the Mediterranean;
 - (h) Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in Annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean - Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean;
 - (i) Identification and conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance;
 - (j) Amendments to Annex II to the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean;
 - (k) Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents;
 - (l) Guidelines for Regulating the Dumping of Dredged Materials at Sea;
 - (m) Guidelines for Regulating the Placement of Artificial Reefs at Sea;
 - (n) Guidelines to Prevent and Abate Pollution from Desalination Activities.
4. Programme of work and budget 2018–2019.
5. Ministerial session:
- (a) Opening of the session;
 - (b) Report on activities carried out in the framework of the United Nations Environment Programme Mediterranean Action Plan since the nineteenth meeting of the Contracting Parties;
 - (c) Interactive ministerial policy review session: implementation of the 2030 Agenda for Sustainable Development with focus on Sustainable Development Goal 14: pollution and biodiversity;
 - (d) Istanbul Environment Friendly City Award 2016–2017;
 - (e) Tirana Ministerial Declaration.
6. Date and place of the twenty-first ordinary meeting of the Contracting Parties.
7. Any other business.
8. Adoption of the report of the meeting.
9. Closure of the meeting.

D. Organization of work

16. The Contracting Parties agreed to follow the timetable proposed in the Annex to the annotated provisional agenda (UNEP(DEPI)/MED IG.23/2), subject to adjustment as necessary. They agreed to work in plenary sessions and in a budget contact group, chaired by Egypt, to consider the Programme of Work and Budget for 2018–2019.

E. Verification of credentials

17. In accordance with Rule 19 of the rules of procedure for meetings and conferences of the Contracting Parties to the Barcelona Convention and its related Protocols, applicable to the current meeting, the Bureau examined the credentials of the representatives of the Contracting Parties participating in the current meeting.

18. Representatives of 20 Contracting Parties were in attendance. They all submitted their formal credentials to the Secretariat and they all were found to be in order.

III. Thematic decisions (agenda item 3)

19. The Contracting Parties considered the draft decisions set out in document UNEP(DEPI)/MED IG.23/4-16 and UNEP(DEPI)/MED IG.23/21.

A. Revised reporting format for the implementation of the Barcelona Convention and its Protocols

20. The Coordinator introduced a draft decision on the revised reporting format for the implementation of the Barcelona Convention and its Protocols, as set out in document UNEP(DEPI)/MED IG. 23/4 (draft decision IG.23/1), saying that the revised format sought to facilitate reporting, increase the relevance of national reports and homogenize the reporting requirements of the Contracting Parties under the Convention and its Protocols. In the latter regard, he drew attention to a list of reporting obligations prepared by the Secretariat, as requested at the meeting of the Mediterranean Action Plan focal points held in Athens from 12 to 15 September 2017 (UNEP(DEPI)/MED IG. 23/Inf.15).

21. The Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

B. Outcome of the work of the Compliance Committee

22. The Coordinator drew attention to a draft decision on the Compliance Committee in the biennium 2016–2017, as set out in document UNEP(DEPI)/MED IG.23/5 (draft decision IG.23/2), pointing out that particular effort had been made to address the remaining lacunae in the Barcelona Convention compliance mechanism and that the support provided by the Secretariat had been enhanced by the recruitment of a legal officer.

23. Ms. Milena Bataković, Chair of the Compliance Committee, gave a presentation outlining the content of the activity report of the Compliance Committee for the biennium 2016–2017 (draft decision IG.23/2, Annex I); the proposed programme of work for the biennium 2018–2019 (Annex II); and the proposed composition of the Compliance Committee (Annex III). With regard to the activity report, she drew attention in particular to the admissibility criteria of relevant information sources and procedures under paragraph 23.bis of the procedures and mechanisms on compliance under the Barcelona Convention and its Protocols.

24. In the ensuing discussion, one representative, speaking on behalf of a group of countries, suggested that Contracting Parties that had not reported for two consecutive bienniums or the last

biennium would communicate to the Committee their feedback on the challenges met and the need for assistance. The representatives of several of the Contracting Parties pointed out that the complexity of the reporting format had indeed been a challenge to timely reporting and affirmed that steps were being taken to finalize and submit their reports as soon as possible. One representative welcomed the proposed changes that would strengthen the efficiency of the procedure and its equal application to all Contracting Parties.

25. On the question of the admissibility criteria, one representative, supported by another, stressed that they needed more in-depth consideration before they could be accepted, to avoid communications from the public that might lead to the Committee being inundated with complaints and leave the process open to abuse. Responding to the Chair's clarification that the admissibility criteria were for internal use by the Committee in developing a step-by-step approach to determining how to deal with complaints received, and that the procedure and the criteria were open to amendment, the representative expressed her hope that the criteria would undergo a trial period and that the Parties would be regularly informed of their development and implementation.

26. The Coordinator introduced a revised version of the draft decision, pointing out that, in accordance with the rules, the election of the members and alternates for whom there was as yet no nomination would be finalized by the Bureau at its first meeting in 2018. The Coordinator also confirmed that future reports of the Compliance Committee would be distributed to the Contracting Parties after each meeting and would include details of the application of the admissibility criteria.

27. The Contracting Parties approved the draft decision, as amended, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

C. Governance

28. The Coordinator drew attention to a draft decision on governance, as set out in document UNEP(DEPI)/MED IG.23/6 (draft decision IG.23/3), which covered the issues of Mediterranean Action Plan partners, as listed in Annex II to the document, with additional information provided in document UNEP(DEPI)/MED IG.23/Inf.11; the development of host country agreements for regional activity centres; the shift to thematic focal points; the UNEP/Mediterranean Action Plan communication strategy; and the implementation of decision IG.21/16 on the assessment of the Action Plan.

29. The Contracting Parties approved the draft decision, as orally amended, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

D. Implementation and monitoring of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean

30. The Coordinator, introducing the draft decision on the Mediterranean Strategy for Sustainable Development 2016–2025 and the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean (UNEP(DEPI)/MED IG.23/7, draft decision IG.23/4), said that the Secretariat, with the leadership of the Plan Bleu Regional Activity Centre, had enhanced the MED 2050 road map as set out in Annex II to the proposed draft decision. He highlighted the importance of the MED 2050 report as a strategic scenario analysis that would complement the set of assessment reports produced by the Mediterranean Action Plan system and provide valuable basis for the strategic decisions of the Parties, including for the development of the future Mid-term Strategy.

31. One representative, speaking on behalf of a group of countries, welcomed the proposal to undertake a foresight study in accordance with the two-phase timetable proposed by the Secretariat.

32. The Contracting Parties approved the draft decision, as orally amended, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

E. Updated Resource Mobilization Strategy

33. The Coordinator drew attention to a draft decision on the Updated Resource Mobilization Strategy (UNEP(DEPI)/MED IG.23/8, draft decision IG.23/5), as requested in decision IG.22/1 and following the guidance received at the Mediterranean Action Plan focal points meeting held in Athens from 12 to 15 September 2017.

34. One representative, speaking on behalf of a group of countries, welcomed the efforts by the Secretariat to produce, in the short time since the meeting of the Mediterranean Action Plan focal points in September 2017, the new, shorter Annex to the draft decision for consideration by the Contracting Parties at the present meeting. He proposed a number of amendments to the recommendations in section nine of the Annex to the draft decision.

35. In response to the proposals, one representative expressed the hope that the more general reference to meetings with donors would not be interpreted as prohibiting any of the specific types of meeting mentioned in the original text. The Coordinator confirmed that the Secretariat would use the most appropriate means at its disposal to further relations with donors. Another representative, while accepting that the identification of funding opportunities with the European Union could be channelled through the Mediterranean Action Plan focal point of the European Union, stressed the importance of ensuring that the identification of projects should be carried out with the countries concerned.

36. After agreeing on the wording of the Annex and its Appendix, the Contracting Parties considered the draft decision itself, and a proposal by one representative, speaking on behalf of a group of countries, to request the Secretariat to further refine, for consideration at the twenty-first ordinary meeting of the Contracting Parties, the appendix to the Annex containing the Updated Resource Mobilization Strategy in order to include the resource requirements of each strategic outcome of the Mid-term Strategy, and the relevant potential donors for each of those outcomes. It was pointed out that such mapping would help to focus and guide resource mobilization efforts if necessary.

37. The Contracting Parties approved the draft decision, with its Annex and the Appendix, as orally amended, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

38. Following the approval, in response to a question about implementation of the list of recommendations in section nine of the Annex to the decision, the Coordinator said that the Secretariat planned to analyse the recommendations to see which could be implemented immediately, their financial implications, and which would require greater planning and integration into the programme of work.

39. One representative requested that the Contracting Parties be informed of the outcome of the exercise.

F. Implementation of the Ecosystem Approach: Focus on 2017 Quality Status Report and follow-up assessments

40. The Coordinator drew attention to a draft decision on the Mediterranean Quality Status Report (UNEP(DEPI)/MED IG.23/9/Rev.2, draft decision IG.23/6), which had been based on the common indicators of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP). While implementation of IMAP was still at an early stage, and had been hampered by the limited availability of data, the Mediterranean Quality Status Report would assist Contracting Parties in continuing their work towards finalizing their updated national monitoring and assessment programmes. The second Mediterranean Quality Status Report, planned for 2023, would demonstrate the progress made towards Good Environmental Status and its related targets.

41. A number of representatives provided additional information on the work being undertaken on, among other things, cetacean populations in the Mediterranean region; mapping and monitoring of

anthropogenic underwater noise; and the development of indicators and assessment methodologies for commercially exploited stocks in the Mediterranean Sea and the Black Sea.

42. One representative, speaking on behalf of a group of countries, stressed the importance of the 2017 Mediterranean Quality Status Report, though clear, time-bound procedures needed to be put in place to address the knowledge and capacity gaps noted in the report, including through development of a road map for preparation of the 2023 Mediterranean Quality Status Report; carrying out a needs assessment; and utilizing the Ecosystem Approach governance structure to prioritize the activities needed to ensure successful delivery of the 2023 report. A number of representatives said that such an approach was over-prescriptive and could place a heavy intersessional work burden on the Secretariat.

43. In endorsing the key findings, it was recognized that there are knowledge gaps that may not be limited to those explicitly identified in the Annex to draft decision IG.23/6.

44. The Contracting Parties approved the draft decision, as amended, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

G. Implementation of the Integrated Coastal Zone Management Protocol: Common Regional Framework for Integrated Coastal Zone Management and Conceptual Framework for Marine Spatial Planning in the Mediterranean

45. The Coordinator introduced a draft decision on implementation of the Integrated Coastal Zone Management Protocol: Common Regional Framework for Integrated Coastal Zone Management and Conceptual Framework for Marine Spatial Planning in the Mediterranean (UNEP(DEPI)/MED IG.23/10, draft decision IG.23/7), saying that the crucial importance of those two elements was fully recognized.

46. The Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

H. Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in Annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean - Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean

47. The Coordinator introduced a draft decision on the Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in Annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean - Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean (UNEP(DEPI)/MED IG.23/11, draft decision IG.23/8).

48. The Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

I. Identification and conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance

49. The Coordinator introduced a draft decision on the identification and conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance (UNEP(DEPI)/MED IG.23/12, draft decision IG.23/9), recalling that specific parts of the draft decision remained in brackets, pending the finalization of the national process in Spain of giving the status of marine protected area to the proposed Cetaceans Migration Corridor Specially Protected Area of Mediterranean Importance (SPAMI).

50. The representative of Spain informed the meeting that the technical aspects of that process had been completed as required by the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and that the national process was expected to conclude in the near

future. She therefore proposed amendments to the draft decision in order to reflect the progress achieved in the process to date and to convey the hope that the proposed cetaceans migration corridor would ultimately be approved for inclusion in the SPAMI list at the twenty-first ordinary meeting of the Contracting Parties.

51. In the ensuing discussion, numerous representatives, including one speaking on behalf of a group of countries, commended the Government of Spain on its progress towards finalizing the national process. Several emphasized the immense value of the proposed SPAMI, including in the light of threats posed by such activities, as oil and gas exploration, and as an incentive for other countries in the region to pursue the ecosystem approach. One representative underlined the overall importance of SPAMIs and marine protected areas for the effective implementation of that approach and for the sustainable economic use of Mediterranean coastal and marine resources on that basis, which he said should also be taken into account in the Common Fisheries Policy.

52. Two representatives also congratulated the Government of France on the inclusion of the Calanques National Park in the list of SPAMIs, with one offering the support of her organization to those seeking to pursue cetacean conservation measures, and the other stressing the need to increase marine protected areas in the south-eastern Mediterranean in order to protect turtle nesting and feeding grounds, notably from the growth in sand extraction and aquaculture activities. Another representative similarly offered the support and cooperation of his country in matters relating to cetacean conservation.

53. Following the discussion, the Contracting Parties approved the draft decision, as orally amended, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

J. Amendments to Annex II to the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean

54. The Coordinator introduced a draft decision on amendments to Annex II to the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (UNEP(DEPI)/MED IG.23/13, draft decision IG.23/10), recalling that the text of the draft decision, together with the Annex thereto, remained in square brackets, pending completion of the internal procedures of the European Union.

55. The representative of the European Union and its member States said he was pleased to report that those internal procedures had been completed and that his delegation was therefore in a position to remove its reservation to the text of the draft decision and the Annex thereto.

56. The Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

57. Two representatives of Mediterranean Action Plan Partners welcomed the approval of the draft decision and called on Contracting Parties to consider further expanding the list of endangered or threatened species, as well as the number and extent of marine protected areas. In that context, one of them urged a special emphasis on deep sea areas and recalled the need for progress towards the achievement of Aichi Biodiversity Target 11 by 2020.

K. Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents

58. The Coordinator introduced a draft decision on the Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents (UNEP(DEPI)/MED IG.23/14, draft decision IG.23/11), saying that the lists of Contracting Parties' focal points and the directory of companies offering services in the Mediterranean in case of emergency, set out, respectively, in Annexes I.2 and I.3 to the draft decision, would each be updated on the basis of requests received from those concerned. Footnotes had been included in the two Annexes indicating that the contacts listed

therein were extracted from the Country Profiles of REMPEC, which were updated upon official notification.

59. On the understanding that the contacts listed in the two Annexes would be updated as necessary, the Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

L. Guidelines for Regulating the Dumping of Dredged Materials at Sea

60. The Coordinator introduced a draft decision on the Guidelines for Regulating the Dumping of Dredged Materials at Sea (UNEP(DEPI)/MED IG.23/15, draft decision IG.23/12).

61. The Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

M. Guidelines for Regulating the Placement of Artificial Reefs at Sea

62. The Coordinator drew attention to a draft decision on the updated Guidelines for Regulating the Placement of Artificial Reefs at Sea (UNEP(DEPI)/MED IG.23/21, draft decision IG.23/15). The document addressed the request of the Mediterranean Action Plan focal points at their meeting in Athens from 12 to 15 September 2017 that the Secretariat provide further legal and technical analysis of the guidelines.

63. One representative, speaking on behalf of a group of countries, said that there had been insufficient time to resolve all the complex questions related to the placement of artificial reefs, and more scientific work and examination by all relevant components was needed to clarify those issues before finalizing the proposed update of the guidelines. Another representative said that a great deal of time and resources had gone into the process of updating the guidelines, including through expert consultations, and efforts had been made to ensure that they gave due consideration to biodiversity and integrated coastal zone management and were in line with the provisions of the Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (the Dumping Protocol). The revised guidelines would help countries to achieve environmentally sound management of the placement of artificial reefs in the Mediterranean Sea area, and merited adoption. The representative who first spoke reiterated that the problems presented by the proposed text were beyond resolution at the present meeting and should be considered in greater detail at the technical level, with the full engagement of the Contracting Parties, before a final decision could be made on the matter. In the meantime, he encouraged parties to ratify the 1995 amendments to the Dumping Protocol.

64. The Contracting Parties agreed to engage in further discussions with a view to submitting a report to the twenty-first meeting of the Contracting Parties.

65. One Contracting Party pointed out that the current version of the guidelines, adopted at the fourteenth meeting of the Contracting Parties, remained operational.

N. Guidelines to Prevent and Abate Pollution from Desalination Activities

66. The Coordinator introduced a draft decision on the Guidelines to Prevent and Abate Pollution from Desalination Activities (UNEP(DEPI)/MED IG.23/16, draft decision IG.23/13).

67. The Contracting Parties approved the draft decision for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

IV. Programme of work and budget 2018–2019 (agenda item 4)

68. The Coordinator drew attention to the draft decision on the programme of work and budget for 2018–2019 (UNEP(DEPI)/MED IG.23/17) and supporting documentation (documents

UNEP(DEPI)/MED IG.23/20, UNEP(DEPI)/MED IG.23/Inf.3, UNEP(DEPI)/MED IG.23/Inf.5, UNEP(DEPI)/MED IG.23/Inf.6 and UNEP(DEPI)/MED IG.23/Inf.16).

69. He highlighted the adjustments that had been made since the meeting of the Mediterranean Action Plan focal points in September 2017 on the basis of the discussions held at that meeting and the intense consultations subsequently held with the Contracting Parties.

70. One representative, speaking on behalf of a group of countries, applauded the extent to which funding for the activities in the following biennium had already been secured, and welcomed the more strategic presentation of the information. She also welcomed the generous pledge made by the Government of Italy to finance the Communications Officer post for the biennium 2018–2019. She also recommended that the Secretariat, in future, should present two alternative budget proposals. Experience had shown that consideration of a budget that included zero nominal growth and another with a defined maximum growth rate enabled greater focus on priorities.

71. The same representative, speaking on behalf of a group of countries, recalled the request expressed at the September meeting of the Mediterranean Action Plan focal points to receive further information on the availability of savings. Drawing attention to the statement of income and expenditure on page 43 of document UNEP(DEPI)/MED IG.23/3 (Progress report on activities carried out during the biennium 2016–2017), she proposed that an additional line showing the surplus and deficit in relation to the fund balance, as well as a short column on estimates for 2017, be added to give the hitherto-missing total. Noting that such information was available for other multilateral environmental agreements administered by UNEP, she requested the Secretariat to provide the Contracting Parties with the information on an official basis in the future. The statement of the balance of the Mediterranean Trust Fund, including an estimate of the 2017 figures, is presented in *Section 5* to the present report.

72. Subsequently, the Chair of the budget contact group reported back, thanking participants, who had done their best to reach an agreement on the proposed programme of work and budget with minor amendments. The group had worked on the programme of work, the budget and the text of the related draft decision. The Chair confirmed to the meeting that more than 90 per cent of the budget for the biennium had already been secured and that the Government of Italy had pledged 2,015,000 million euros towards the implementation of the programme of work and 300,000 euros to fund the Communications Officer post for the biennium 2018–2019.

73. In relation to INFO/RAC, one representative said that, owing to the change of president and director-general of the Italian Institute for Environmental Protection and Research, which hosted the centre, it had not yet been possible to complete the formal procedure of notifying the Mediterranean Action Plan of the host country's related in-kind contribution for the biennium, but a formal letter would be sent at the beginning of 2018 to enable the Secretariat to update the financial framework and show the full amount of the host-country contribution.

74. In relation to the host-country contribution for REMPEC for 2018–2019, the representative of Malta confirmed that in addition to the annual 5,000 euros of in-cash contribution, an in-kind contribution of 250,000 euros annually would be provided for the REMPEC premises. She also said that Malta had provided, in addition to the amount originally pledged, an additional 25,000 euros in 2016 for the REMPEC fortieth anniversary celebrations.

75. One representative said that, six years since the adoption of the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol), there was still no staff member in the Mediterranean Action Plan system with specific responsibility for overseeing its implementation. He proposed that a staff member be recruited at REMPEC, or within another appropriate body.

76. Another representative, speaking on behalf of a group of countries, said, however, that it would not be possible for the group of parties to agree to additional changes to the budget beyond those agreed in the budget contact group and that it would be impossible for them to pre-judge future decisions on the budget for the biennium 2020–2021 by stating in the decision on the biennium 2018–

2019 that the Offshore Protocol would become a priority during that later period. She also deemed it inappropriate to include acknowledgement of the general need to strengthen implementation of any instrument in the decision on the Programme of Work and Budget for 2018–2019, stating that it would be better placed in a policy-related decision.

77. In the ongoing discussion, the representative of IMO said that, although offshore issues did not fall directly within the mandate of the organization, there was a clear link to many of the conventions with which it worked. She explained that the IMO programme for the biennium 2018–2019 was already decided, but that there would be some flexibility to rearrange activities or to redirect funds unspent at year-end to such activities. It might also be possible to make more deliberate plans for the subsequent biennium. It would not, however, be possible to fund a post.

78. Given that it remained impossible to reach agreement on the inclusion of any mention of strengthening the capacity of REMPEC to facilitate implementation of the Offshore Protocol in the budget decision, the representative of Israel submitted the following statement for inclusion in the present report:

79. “Israel pointed out that there are substantial ongoing offshore activities taking place in the Mediterranean. The Offshore Protocol has been in force since 2011 and a series of decisions (IG.20/12, IG.21/8 and IG.22/3) gave effect to the Protocol including one in which REMPEC was given the responsibility for the preparation of the “Mediterranean Offshore Action Plan in the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil” (decision IG.22/3). Paragraph 4 of that decision states: “Requests the Secretariat to provide technical support to the Contracting Parties [...] in carrying out the obligations arising from the Offshore Protocol”. Israel expressed its concern that for a number of years inadequate personnel and other resources have been allocated so that implementation of the above decisions has not been effective. Israel therefore asks that during the next biennium, the Secretariat undertakes an analysis of how to strengthen the ability of REMPEC to facilitate the implementation of the Offshore Protocol and Roadmap and the necessary resources required and provide this information so that the topic may be considered at COP 21.”

80. Two representatives were against singling out one regional activity centre, as there were other centres that did not have adequate staffing or resources to undertake the activities expected of them. The Contracting Parties approved the revised draft decision, for consideration and possible adoption at the final session of the meeting (see section VIII of the present report).

81. At the conclusion of consideration of budgetary matters, the representative of the European Union paid tribute to Ms. Jill Hanna from the European Union delegation, as she would soon be leaving her post. They highlighted her substantial contribution to the Mediterranean Action Plan over the years, particularly in relation to budgetary matters.

82. Subsequently, the representative of GEF gave a presentation on the work of his organization on transboundary water management towards achieving the objectives of, among other things, strengthening blue economy opportunities, maintaining healthy ecosystems and ensuring fresh water security.

83. In the ensuing discussion, general appreciation was expressed for the partnership between GEF and the Mediterranean Action Plan.

V. Ministerial segment (agenda item 5)

84. The ministerial segment of the twentieth meeting of the Contracting Parties was opened at 10.05 a.m. on Tuesday, 19 December 2017. During the segment, the Contracting Parties heard welcoming remarks and keynote speeches, a progress report by the Secretariat on activities carried out during the biennium 2016–2017 and statements by ministers and other ministerial representatives, followed by the representatives of partner organizations and other entities, on the theme of “Implementation of the 2030 Agenda for Sustainable Development, with a focus on Sustainable Development Goal 14: pollution and biodiversity”. That was followed by the presentation of the Istanbul Environment

Friendly City Award to the mayor of the winning Mediterranean city and consideration for adoption of a draft Tirana Ministerial Declaration.

A. Opening of the session

85. Opening remarks were made by Mr. Blendi Klosi, Minister of Tourism and Environment, Albania; Ms. Wilkie, on behalf of the Executive Director of UNEP; and the Coordinator of the Mediterranean Action Plan/Barcelona Convention Secretariat. Keynote speeches on the theme of the ministerial session were delivered by Ms. Irena Zubcevic, Division for Sustainable Development, United Nations Department of Economic and Social Affairs; Ms. Amy Fraenkel, Director of Mainstreaming, Cooperation and Outreach Division, Convention on Biological Diversity; Ms. Mette Wilkie; and Mr. Branimir Gvozdenović, Vice-President of the Parliament of Montenegro and 2017 Ambassador of the Coast. Statements delivered at the opening of the ministerial session are set out in Annex II.

86. Mr. Klosi, in his opening remarks, welcomed the participants to his country and expressed his firm belief that the Meeting of the Contracting Parties, under the presidency of Albania over the coming biennium, would continue to strive to improve the quality of life for all, in every country in the region and beyond, through the elaboration of sound strategies and concrete actions to protect the common, shared resources and biodiversity of the marine environment of the Mediterranean. Albania, for its part, was committed to tackling the pollution caused by dense marine traffic, to promoting sustainable tourism and to imposing a ban on single-use plastic bags, among other things, and it looked to fellow Contracting Parties to share their best practices with regard to, inter alia, cleaning up the rivers that flowed across national borders. He concluded his remarks by wishing the participants an enjoyable and fruitful meeting.

87. Ms. Wilkie, in her remarks, stressed that the 17 Sustainable Development Goals were interconnected and that a transition towards a blue and green economy was crucial to ensuring the implementation of the 2030 Agenda for Sustainable Development, adding that many of the Goals had an environmental focus because the environment was key to tackling poverty and hunger, building just and inclusive societies and promoting the health of people and the planet. With regard to Goal 14, she said that the commitments made and achievements highlighted at recent global conferences and meetings had shown the protection of marine ecosystems and coastal zones to be regarded as crucial to implementing the 2030 Agenda. The issue of tackling the pollution of the oceans, for instance, had been addressed by the United Nations Environment Assembly in the ministerial declaration and one of the resolutions adopted at its third session. Meanwhile, implementing the Barcelona Convention and its Protocols was, she said, the best way to attain Goal 14 in view of the effectiveness of the Mediterranean Action Plan system in translating global policies into concrete actions on agreed regional and subregional priorities, and the present meeting was an opportunity to showcase the importance of implementing pollution and biodiversity-related commitments in the region through collective action within the framework of multi-stakeholder partnerships and support for the inclusion of Goal 14 in national agendas for sustainable development.

88. The Coordinator, in his remarks, said that during the current biennium, the Coordinating Unit had achieved considerable progress in delivering on its commitments and in, inter alia, improving its financial stability and institutional set-up, enhancing its visibility and credibility, and contributing to the global agenda. As to its support for the prevention of marine and coastal pollution, key outcomes included the establishment of an appropriate regulatory framework, the development of national action plans, and the provision of capacity-building and technical assistance. Other significant achievements comprised the adoption of 10 regional plans for the reduction of pollution from land-based sources and activities, the delivery of various technical guidelines, the introduction of marine litter management initiatives, and expansion of the SPAMI list. He welcomed the efforts towards the achievement of Aichi Biodiversity Target 11 by 2020 and paid tribute to partners and all others working to protect the Mediterranean environment, calling for even keener action to that end.

B. Report on activities carried out within the framework of the United Nations Environment Programme Mediterranean Action Plan since the nineteenth meeting of the Contracting Parties

89. The Coordinator reported on the main activities and outputs of the Coordinating Unit and Mediterranean Action Plan components in implementing the programme of work for the period 2016–2017, outlining by theme the information presented in document UNEP(DEPI)/MED IG.23/3. He also identified a number of challenges faced, such as the limited availability of resources and the complexity of the new United Nations enterprise resource planning system (Umoja), and emphasized the crucial importance of ownership by the Contracting Parties to efficient and successful delivery of the programme of work.

C. Interactive ministerial policy review session: implementation of the 2030 Agenda for Sustainable Development with focus on Sustainable Development Goal 14: pollution and biodiversity

90. During the ministerial session, ministers and other ministerial representatives of Contracting Parties, along with representatives of partner agreements and organizations, made statements on the theme “Implementation of the 2030 Agenda for Sustainable Development, with a focus on Sustainable Development Goal 14: pollution and biodiversity” (UNEP(DEPI)/MED IG.23/18).

91. Ms. Zubcevic, in the first keynote speech, highlighted the interlinkage between Goal 14 and the other Sustainable Development Goals, drawing attention in particular to target 14.1, on reducing marine pollution, which was linked to food security and human health, well-being and prosperity, and outlining the main outcomes of the historic United Nations Conference to Support the Implementation of Sustainable Development Goal 14, which included increased awareness of the challenges facing the oceans; a strong action-oriented political declaration; a road map and ambitious work plan; and 1,406 specific, measurable, achievable, resource-based and time-bound voluntary commitments made primarily in regard to target 14.1 by Governments, civil society, United Nations entities, academia and philanthropic organizations. The follow-up to those and future commitments would be assured by nine thematic Communities of Ocean Action, in close collaboration with the United Nations Secretary-General’s Special Envoy for the Ocean. The conference outcomes had provided input for the 2017 meeting of the High-level Political Forum on Sustainable Development and a number of member States had referred to the ocean in their voluntary national reviews, highlighting, inter alia, their importance for sustainable development; the major threats that they faced; and the measures for – and challenges to – the sustainable management and use of marine and coastal ecosystems. On the question of fostering the synergies needed to translate global processes and tools under the 2030 Agenda to the national and regional levels, she said that the Mediterranean Strategy for Sustainable Development 2016–2025 and the Mediterranean Commission on Sustainable Development each had an important role to play: the former was a tool for developing national implementation action plans and a platform for exchanging good practices and enhancing stakeholder engagement, with its six objectives being closely linked to several Sustainable Development Goals and its implementation indicators being consistent with the global indicators associated with the Goals; and the latter was a key mechanism for strengthening intersectoral policymaking, enhancing multilevel, multi-stakeholder frameworks for action and developing an integrated approach to tackling multifaceted problems such as marine pollution. In conclusion, she suggested that the Mediterranean Action Plan would have an opportunity to showcase regional experience at the global level by organizing a side event at the July 2018 meeting of the High-level Political Forum in New York.

92. Ms. Fraenkel, in her keynote speech, noting that regional organizations were key players in achieving global environmental and biodiversity goals, said that the Coordinating Unit had clearly demonstrated leadership in pursuing the strategic approach required for ensuring the conservation and sustainable use of marine biodiversity in support of sustainable development. Its proactive identification of ecologically or biologically significant marine areas had contributed to activities undertaken in that sphere by the Secretariat of the Convention on Biological Diversity, while its timely

focus on pollution and biodiversity complemented the latter's recent work on marine debris, an issue that called for universal efforts to halt its universal impact. The Unit's leadership was further exemplified by its cross-sectoral collaboration aimed at mainstreaming biodiversity into the region's fisheries and by its efforts to coordinate the conservation and sustainable use of biodiversity in the Mediterranean.

93. Building on that work, a regional capacity-building workshop planned for 2018 would aim to identify pathways towards achievement of the Aichi Biodiversity Targets and the Sustainable Development Goals, an objective that called for the direct engagement of a broader audience. To that end, she urged the Coordinating Unit and the Contracting Parties to the Barcelona Convention to emulate the Parties to the Convention on Biological Diversity by incorporating a biodiversity mainstreaming focus into their work and identifying opportunities to better engage sectors in strategic planning and management of marine biodiversity. In addition to scaling up their efforts towards achievement of the Aichi Biodiversity Targets, they should aim to set a solid foundation for the ambitious but achievable post-2020 biodiversity agenda to be crafted at the next Conference of the Parties to the Convention on Biodiversity in 2018. She encouraged their active involvement in that endeavour, which would undoubtedly benefit from their insight and experience.

94. Ms. Wilkie, in her keynote speech, focused on sources of marine pollution, including nutrients, marine plastic litter, raw sewage and on increases in global temperature. She noted that while wastewater was a valuable resource, globally nearly 80 per cent of it was discharged untreated. Increasing global temperatures severely affected the world's oceans: in 2016 alone, bleaching had affected 90 per cent of the Great Barrier Reef in Australia and had killed an estimated 29–50 per cent of the reef's corals. In 2017, bleaching had increased even further. Some 75 per cent of all marine litter was accounted for by plastic, of which more than 8 million tons had reached the oceans. It was widely estimated that by 2050 there could be more plastic than fish in the oceans. Drawing attention to the impact of such sources of marine pollution, she noted that marine litter had harmed more than 600 marine species, of which 15 per cent were endangered. There were documented records of 89 species of fish and 16 species of whales having been entangled in marine debris; 52 per cent of all sea turtles had consumed plastic; and it was estimated that by 2050, 99 per cent of seabirds would have ingested plastic. The financial cost of marine pollution had already reached more than \$8 billion annually and such pollution was also potentially damaging to human health.

95. In response to this global problem, in February 2017 the United Nations Environment Programme had launched the #CleanSeas initiative, a global campaign to address the root causes of marine litter, with an initial focus on plastic. In partnership with Governments, the private sector and the general public, its goals were fourfold: improved plastics management; the phasing-out of non-recoverable plastics, such as microplastics in cosmetics; a significant reduction in single-use plastics; and the avoidance of waste, including the recycling of all plastics. The initiative included a pledge for individuals, companies, Governments and groups/non-governmental organizations to commit to undertake a variety of actions related to working towards cleaner seas. To date, almost 40 Governments had joined the initiative, including a number of Contracting Parties, and had made specific commitments, a number of key partnerships had been established and thousands of citizens had pledged individual actions. She noted that the theme of the United Nations Environment Assembly of the United Nations Environment Programme, which had met for its third session in Nairobi from 4 to 6 December 2017, was "Towards a pollution-free planet" and that that was also the title of the ministerial declaration that had emanated from the Assembly. The Assembly had adopted eight resolutions whose aim was to combat pollution and more than 2.4 million pollution-related pledges and commitments had been made.

96. Mr. Gvozdenović, in his keynote speech, stressed the need for awareness of responsibility towards future generations and said that integrated coastal zone management tools provided the only holistic approach to the planning and development of marine and coastal areas. Such tools were vital for the sustainable development of those areas, the elimination of pollution and the achievement of Good Environmental Status of marine waters in accordance with the ecosystem approach. Integrated coastal zone management promoted resilience to development pressures further exacerbated by

climate change effects; enhanced productivity and economic development; encouraged marine and coastal ecosystem diversity; increased the attractiveness of coastal areas; and ensured the health of those areas by reducing or eliminating land- and sea-based pollution.

97. Integrated coastal zone management furthermore promoted a responsible attitude towards natural resources and contributed to ecosystem restoration and conservation. By supporting the development of green infrastructure and green and blue economy patterns, it also increased the diversity of habitats and species, reduced the pollution load of the marine environment and strengthened marine litter management. Through such activities, the Mediterranean region was contributing significantly to implementation of the Sustainable Development Goals, in particular Goal 14. The commitment of countries in the region to integrated coast zone management goals was furthermore affirmed by their development of a new generation of related national policies and their application of relevant tools through the Coastal Area Management Programme, marine spatial planning and the Integrated Monitoring Assessment Programme.

1. Statements by ministers and other ministerial representatives

98. Statements were made by the ministers and other high-level representatives of the following Contracting Parties (listed in the order in which they spoke): the European Union, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Spain, France, Greece, Israel, Italy, Lebanon, Malta, Monaco, Montenegro, Morocco, Slovenia and Turkey.

99. Ms. Joanna Drake, Deputy Director General, Directorate-General for Environment of the European Union, said that the intensive ongoing work to ensure the cleanliness, health and productivity of the Mediterranean was intrinsic to sustainable development in the region. Holistic, ecosystem-based and precautionary approaches were key to addressing ocean-related challenges, as were close cooperation and decisive action to implement relevant global agreements, targets and goals and regional legislation and directives. She described the aims of a new European Union plastics strategy being prepared for adoption and urged meaningful contributions to ocean-related and other relevant national, regional and global monitoring and reporting exercises, expressing in conclusion the European Union commitment to strong regional collaboration to protect the Mediterranean for the benefit of current and future generations.

100. Ms. Samira Hamidi, Inspector General for the Environment, Ministry of the Environment and Renewable Energy, Algeria, delivered a statement highlighting the efforts made by her country to tackle pollution and attain the Sustainable Development Goals under an extensive national action plan, backed by significant public spending, that focused on wastewater treatment and household waste management, and through a number of projects to clean up the seabed that had been launched in close collaboration with local authorities, civil society organizations and the media to implement the resolution on marine litter and microplastics adopted at the third session of the United Nations Environment Assembly. Regarding biodiversity, she drew attention to, among other things, a national strategy and plan of action elaborated for the conservation and sustainable use of biodiversity that would be mainstreamed into all sectoral plans and programmes aimed at economic and social development and climate change adaptation.

101. Mr. Tarik Kupusović, Director of the Hydro-Engineering Institute Sarajevo, Bosnia and Herzegovina, said that, despite the fact that administrative issues were delaying his country's ratification of certain major legal documents of the Mediterranean Action Plan, Bosnia and Herzegovina remained active within the system. Two months previously, the Council of Ministers had adopted an updated national action plan for the country's Mediterranean region to prevent, reduce, control or eliminate degradation of the coastal environment and to engage in rehabilitation to counter the environmentally negative consequences of certain land-based activities. The feasibility study for the country's coastal area management plan was shortly to be completed and implementation of the plan could be expected in the biennium 2018–2019. A project to improve the management of marine litter on the beaches of Bosnia and Herzegovina was ongoing and the country was actively engaged in the preparation of GEF and other Mediterranean projects.

102. Mr. Igor Čižmek, Assistant Minister, Ministry of the Environment and Energy of Croatia, reaffirmed the support of his Government to the Mediterranean Action Plan, commending components for the accomplishments of the biennium 2016–2017. He was pleased to announce that, in September 2017, Croatia had ratified the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol). He also informed the Contracting Parties that Croatia was developing a Marine and Coastal Management Strategy. A related programme of measures had been adopted and communicated to the European Commission. Once the translation into English of that programme of measures had been officially endorsed it would be shared with the Secretariat. He stressed the importance of intensifying regional and subregional efforts to combat the priority challenge of transboundary marine litter, a problem that particularly affected Croatia.

103. Mr. Charalambos Hajipakkos, Chief Water Officer, Water Development, of the Ministry of Agriculture, Rural Development and Environment of Cyprus, highlighted the extreme pressures on and risks for the Mediterranean ecosystem caused by ever-increasing shipping and off-shore exploration for oil and gas. Cyprus, which had begun test-drilling operations, had worked with neighbouring Greece and Israel on a subregional contingency plan for preparedness and response in relation to a major marine pollution incident; that plan was due to be adopted by the heads of the three countries at a meeting in January 2018. Similarly, ministers from Cyprus, Egypt and Greece had agreed in 2017 on five priority areas for cooperation that would contribute to achieving Sustainable Development Goal 14. Highlighting the serious problem of eutrophication, Mr. Hajipakkos outlined his country's approach to addressing the issue, whereby coastal towns used the latest technology to treat sewage so that 97 per cent could be reused for agriculture. While the remaining three per cent was discharged into the sea, Cyprus was working to reduce that to zero by 2020.

104. Ms. Raquel Orts Nebot, Director General, Directorate-General for the Sustainability of the Coast and the Sea, Ministry of Agriculture, Food and Environment of Spain, outlined three of the targets of Sustainable Development Goal 14: scientific knowledge as the basis for decision-making; the need to substantially reduce pollution and marine waste, as demonstrated at the third session of the United Nations Environment Assembly; and the need to establish a comprehensive and coherent network of protected marine areas and to identify and conserve vulnerable species, for which the Barcelona Convention provided a key platform. She expressed satisfaction at the proposal of her country to the Contracting Parties to include the Mediterranean Cetacean Migration Corridor as a new protected area on the SPAMI list, which would provide a legal protection framework for 13 per cent of Spain's marine waters. Lastly, she expressed the firm support of her country for the inclusion of four new species of Anthozoa in Annex II to the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean.

105. Mr. Xavier Sticker, Ambassador for the Environment of France, endorsed the statement made by the representative of the European Union. He looked forward to seeing how the Barcelona Convention system could support implementation of the Mediterranean-related commitments of the European Union "Our Ocean" Conference, held in Malta in October 2017. He also expressed the need to strengthen cooperation between the United Nations Environment Programme/Mediterranean Action Plan and GFCM. He emphasized the importance of multinational initiatives in general and highlighted his country's founding role in the Plastic Bag Coalition, its forthcoming co-presidency of the WestMed Initiative of the European Commission, and its interest in the Clean Seas global campaign on marine litter. He highlighted the importance of sustaining funding for marine protected areas and also mentioned a number of his country's national initiatives, such as plans to establish an area within the Mediterranean that had low carbon dioxide and sulphur dioxide emissions, and the president's commitment to addressing climate change and protecting biological diversity.

106. Ms. Eleni Sourani, Ambassador of the Hellenic Republic to the Republic of Albania, also endorsed the statement made by the representative of the European Union and welcomed the significant progress that had been accomplished over the biennium 2016–2017. She said that the Barcelona Convention and the Mediterranean Action Plan system played a crucial role in translating global strategies and agendas, such as the global 2030 Agenda for Sustainable Development and its

Sustainable Development Goals, into concrete implementation applicable to the challenges faced by the Mediterranean. Greece attached great importance to the achievement of Sustainable Development Goal 14, given that preventing pollution – marine plastic litter in particular – and conserving biological diversity were key to healthy and productive seas, and was committed to achieving Sustainable Development Target 14.5 by 2020. Ms. Sourani also noted that there were other important activities taking place in the Mediterranean outside the Mediterranean Action Plan system, such as the Mediterranean Strategy for Education for Sustainable Development.

107. Ms. Ayelet Rosen, Director, Multilateral Environmental Agreements Division, Ministry of Environmental Protection of Israel, said that a number of new issues were arising for the marine environment as new discoveries and technologies aimed to solve pressing challenges. Water scarcity had led to increased desalination, which required careful monitoring of the impact on the marine environment, and while the move to natural gas had helped to reduce greenhouse gas emissions, exploration and extraction required close environmental oversight. She considered the Mediterranean Action Plan system to be the forum to raise such challenges and explore solutions. Ms. Rosen enumerated some of the successful actions taken by Israel, such as the drastic reduction of land-based sources of pollution to the marine environment; the reduction by more than 80 per cent of the number of plastic bags purchased by the major retailers following the passing of a law to introduce a levy on plastic bags; and the Clean Coast Action Program, which had reduced litter on Israeli beaches despite a marked increase in the country's population. Like other speakers, she looked forward to the signature of the trilateral agreement between Cyprus, Greece and Israel for mutual assistance during oil spill emergencies.

108. Ms. Maria Carmela Giarratano, Director General for the Protection of Nature and the Sea, Ministry for the Environment, Land and Sea of Italy, stressed the severity of the increasing threat to marine and coastal biological diversity posed by marine pollution, particularly microplastics. Prevention and reduction policies were key to combating the threat and it was crucial to link waste-management approaches based on the models of resource efficiency and the circular economy. In that regard, Italy had adopted specific legislative measures to reduce production and consumption of single-use plastic bags. She noted the memorandum of understanding concluded with the Mediterranean Action Plan as an example of the commitment of the Government of Italy to the implementation of regional instruments and confirmed that Italy would contribute 2 million euros in the biennium 2018–2019 for key activities aimed at achieving Good Environmental Status through the ecosystem approach, climate change adaptation and meeting Aichi Biodiversity Target 11. After speaking of the support that Italy had provided for other initiatives, including as president of the Group of 7, she formally announced the offer of her Government to host the twenty-first ordinary meeting of the Contracting Parties.

109. Mr. Adel Yacoub, Head of the Protection of Natural Resources Department, Ministry of the Environment, Lebanon, described the measures being undertaken by Lebanon to implement the Barcelona Convention and its Protocols. In the face of depletion of its natural resources due to various challenges, including the refugee crisis, poverty and water scarcity, Lebanon was putting in place various programmes to protect the marine environment. However, national action needed to be supported by the allocation of increased funding to regional activity centres to enable them to continue to implement relevant projects and plans in their respective focus areas.

110. Ms. Michelle Piccinino, Director Environment and Resources, Environment and Resources Authority, Malta, highlighted a number of national measures that had been implemented to ensure compliance with the Barcelona Convention and related European Union obligations. Additional commitments made by Malta included a plastic bottle recycling and refund scheme, the designation of 30 per cent of its waters as Marine Protected Areas and preparatory steps to ensure protection of caves and reefs. A joint initiative between her Government and the Commonwealth Secretariat would be launched to support small States in the implementation of Agenda 2030.

111. Mr. Tidiani Couma, Secretary of External Relations, Ministry of Foreign Affairs and Cooperation, Monaco, noted the role of the document "Our ocean, our future: call for action" in countering harmful human activity and eliminating plastic waste marine pollution. All partners were

called to action to combat the degradation of the seas and their ecosystems. A collaborative effort was required to face those challenges and to that end Monaco had signed the RAMOGE agreement with France and Italy. His country had participated in several conferences on the protection of the Mediterranean Sea, which had highlighted the importance of knowledge exchange and the threats to coral reefs. As science had to be at the heart of all decision-making on marine protection, Monaco had launched a scientific research campaign and an ecological research vessel, which had set sail from Monaco in July 2017.

112. Mr. Sasa Radulovic, State Secretary in the Ministry of Sustainable Development and Tourism, Montenegro, outlined national measures to ensure compliance with the Mediterranean Action Plan, which included pollution control, and sound waste and marine litter management. The GEF-funded MedProgramme would present further opportunities to reduce pollution. Other national priorities addressed, inter alia, plans and strategies for the protection and sustainable management of marine and coastal ecosystems; implementation of the GEF-supported project for the protection of Montenegrin coastal areas; alignment of national policy and legal framework with the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast; and measures to ensure sustainable marine spatial planning, a green coastal economy and the application of integrated coastal zone management governing tools.

113. Mr. Mohamed Benyahia, Secretary General, National Secretariat for Sustainable Development, Morocco, expressed concern that various factors, including population growth and inappropriate consumption models, posed a threat to biodiversity, and actions should be intensified to identify innovative solutions. The Mediterranean Action Plan, together with Agenda 2030 and the Paris Agreement, provided opportunities for common action adapted to national contexts and capacities. Various national measures had been adopted, such as the enshrinement in the 2011 Constitution of the right to a healthy environment and to sustainable development, and the enactment of legislation to protect and manage marine and coastal ecosystems, regional environmental monitoring and tax incentives to combat pollution. Significant challenges remained, which the Mediterranean Action Plan system, by strengthening cooperation among partners, would help to overcome.

114. Mr. Mitja Bricelj, Secretary, Directorate for Water and Investments, Ministry of the Environment and Spatial Planning, Slovenia, outlined the actions his country had taken to support implementation of the Barcelona Convention and attainment of Sustainable Development Goal 14. Slovenia had signed, along with Italy and Croatia, a contingency plan for the prevention of and preparedness for pollution incidents in the north Adriatic. Slovenia had hosted a Mediterranean Coast Week as part of its efforts to improve governance and transboundary cooperation, taking into account EcAp in realizing environmental aims in the Mediterranean. He noted that Slovenia was actively engaged in implementation of the European Union Strategy for the Adriatic and Ionian Region, which brought together blue growth, transport, energy and sustainable tourism using integrated coastal zone management and marine spatial planning tools. Slovenia had also worked together with Bosnia and Herzegovina, Croatia and Serbia to develop a flood forecasting warning system, which they hoped to extend to the Adriatic River Basin, and thanks to the efficient implementation of the European Union Strategy for the Danube Region, the pressure and impact from the Danube River Basin had been significantly reduced.

115. Mr. Mehmet Emin Birpinar, Deputy Undersecretary of the Ministry of Environment and Urbanization of Turkey, said that his country had incorporated the objectives of the 2030 Agenda for Sustainable Development into its national and international actions and that its tenth National Development Plan, which covered the period 2014–2018, had sustainable development at its core. Concerning Goal 14, Turkey was committed to preparing marine litter strategic action plans for all coastal cities by the end of 2018. Positive steps had been taken towards the achievement of Goals 11 and 13 through the establishment of the Istanbul Environment Friendly City Award and the adoption of the Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas respectively. Great efforts were being made to address climate change in Turkey, which stood ready to share experience and best practice and to provide technical and financial support in that regard.

2. Statements by the representatives of partner organizations and other entities

116. Statements were also delivered by representatives of the following partner organizations and other entities (listed in the order in which they spoke): GEF, IUCN, GFCM, World Wildlife Fund for Nature, ACCOBAMS, IAEA, Oceana, MedPAN, MEDASSET, MIO-ESCDE, SWIM-Horizon 2020, Youth Love Egypt and IMO.

117. Mr. Christian Severin, Lead, International Waters focal area, GEF, said that strong partnerships were the reason for the success experienced by the Facility, its partner organizations and the countries of the Mediterranean. GEF had recently provided more than \$40 million to the Mediterranean region through a number of partners. It would continue to support the implementation of the Strategic Action Programme to Address Pollution from Land-Based Activities in the Mediterranean Region, thereby helping to sustain and develop the shared marine resources that held the key to local, national and regional human and economic prosperity.

118. Ms. Marie-Aude Sevin, Marine Programme Manager, International Union for Conservation of Nature, encouraged close cooperation between Mediterranean Action Plan partners for the implementation of global strategies on the Mediterranean, particularly those on pelagic species and deep-sea habitats. While it was regrettable that the Tirana Ministerial Declaration did not encompass measures for the implementation of the Aichi Biodiversity Targets or the commitment to designate 30 per cent of marine habitats as marine protected areas, the establishment of the SPAMI was a step towards the achievement those aims. Given the continuing degradation of marine biodiversity, her Union would continue to support the Mediterranean Action Plan to achieve implementation of the Convention through partnerships, knowledge exchange and policymaking.

119. Mr. Miguel Bernal, Fishery Resources Officer, GFCM, welcomed the adoption of the Tirana Ministerial Declaration, which renewed the commitment of the Mediterranean Action Plan to improving the health of the Mediterranean Sea. He thanked the Secretariat for assisting in the development of the Memorandum of Understanding between his Commission and the Regional Seas Convention. His Commission was open to discussion on a joint strategy concerning a holistic approach to the spatial conservation of the marine environment. His Commission had, to date, designated nine Fishery Restricted Areas in the Mediterranean and welcomed continuing coordination to protect those areas from harmful human activity.

120. Mr. Paolo Lombardi, WWF MedPO, said that a WWF study of the Mediterranean marine economy had valued the economic sectors directly dependent on healthy marine ecosystems and biodiversity at over US\$450 billion per year. There was still great potential for increasing the economic output and value of the Mediterranean Sea by better accounting for the value of its natural capital and through more sustainable use of its productivity, though capturing that potential would entail reversing the current decline of marine and coastal ecosystems. The WWF had developed a set of recommendations that would support and enable such a transformational change towards a sustainable economy in the Mediterranean region.

121. Ms. Florence Descroix-Comanducci, Executive Secretary, ACCOBAMS, said that ACCOBAMS had been contributing to the protection of cetaceans for 21 years by mitigating the main threats that they faced, which required a coordinated regional response based on intergovernmental collaboration. In that context, it had been working closely with the Mediterranean Action Plan to develop noise-related indicators within the ecosystem approach process and was looking to strengthen cooperation with MED POL through the quietMED project. She recalled the ACCOBAMS Survey Initiative, a macroregional project aimed at establishing an integrated cetacean monitoring system for the entire ACCOBAMS area, which would provide a better understanding of the abundance and distribution of cetaceans and other marine fauna and help to bolster national capacities for data collection and analysis.

122. Ms. Sylvia Sander, Section Head, Marine Environmental Studies Laboratory, IAEA, said that the agency, through its environmental laboratories, specifically the Marine Environmental Studies Laboratory based in Monaco, had assisted the implementation of the Mediterranean Action Plan since its inception. A large number of training courses and proficiency tests had been organized to

strengthen pollution monitoring in the region and build the capacity of national laboratories by sharing techniques and knowledge. The agency also produced and distributed high-quality certified reference materials of marine origin.

123. Ms. Pilar Marin, Oceana, gave information on the contribution that Oceana makes to the protection of the oceans, including through its consistent involvement in ocean conferences. While progress had been made in conservation of the marine environment, steadfast, high-level commitment was needed to achieve the objectives set out in Aichi Biodiversity Target 11 and Sustainable Development Goal 14.5. However, she regretted the lack of ambition in relation to concrete actions and timeframe within the Tirana Ministerial Declaration. She noted that deep-sea habitats were in particularly urgent need of protection. Lastly, she welcomed the inclusion of four new coral species in Annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and reiterated Oceana's willingness to continue collaboration.

124. Ms. Purificacio Canals, MedPAN, outlined a number of activities through which MedPAN had been contributing to the objectives of the Barcelona Convention, especially with regard to the Specially Protected Areas and Biodiversity Protocol. Examples of activities included participation in the production of the 2016 report on the Status of Marine Protected Areas in the Mediterranean; development of a number of tools to support management of marine protected areas; organization of regional training courses and workshops; and presenting the Mediterranean perspective at global events and conferences. MedPAN was currently developing its 2018–2022 strategy to strengthen and sustain the network of marine protected area managers and other conservation actors in the Mediterranean area.

125. Ms. Angela Klauschen, MEDASSET, said that marine turtles were the flagship species of the Mediterranean Sea and had been included in the list of endangered and threatened species under the Specially Protected Areas and Biodiversity Protocol since 1996. They were also helpful indicators of marine pollution, particularly plastic macro-litter, sound fisheries practices and sustainable management of the coastal zones and the land-sea interface. By appropriately protecting and monitoring marine turtles and their habitats, the Mediterranean community could significantly contribute to a sustainable blue economy as well as to the achievement of Sustainable Development Goal 14, in particular targets 14.1, 14.2, 14.4 and 14.5.

126. Ms. Thomais Vlachogianni, Programme Officer, MIO-ECSDE, highlighted the active contribution made by MIO-ECSDE on the science-policy interface to protect the coastal and marine environment of the Mediterranean. She called for stronger linkage of the Contracting Parties with the non-governmental organization (NGO) and civil society sector, in terms of funding and support, enhanced involvement of NGOs in the decision-making process, but also in terms of creating pathways for NGOs to report on the progress made to date in the achievement of Sustainable Development Goal 14 in the Mediterranean. She reaffirmed the commitment and readiness of MIO-ECSDE to work with all parties.

127. Mr. Michael Scoullou, Team Leader, SWIM-Horizon 2020, said that the programme aimed to build the capacity of stakeholders to achieve Sustainable Development Goal 14 through activities to reduce pollution from land-based sources and to address critical related water issues. Measures included expert-facilitated interventions, capacity-building workshops, study visits and peer-to-peer exercises. Assistance was being sought from the commercial banking sector to fund projects. The programme supported implementation of the Barcelona Convention through its synergies with the Mediterranean Action Plan.

128. Mr. Ahmed Fathy, Youth Love Egypt, described the efforts of the organization to mobilize young people in protecting the marine environment in Egypt, including by cleaning up areas affected by plastic pollution, undertaking advocacy to reduce the impact of fisheries on turtles and raising awareness through educational videos. The organization had been honoured by the Ministry of Environment of Egypt in 2015, 2016 and 2017 for its activities in the environmental field.

129. Ms. Patricia Charlebois, IMO, said that the organization had in place an array of conventions to protect the marine environment from the adverse effects of shipping, including the International

Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, whose aims included controlling the introduction of alien species. Other conventions and protocols covered such issues as control of oil pollution, preparedness for and response to pollution incidents, and dumping of wastes. The IMO had a long history of cooperation with the Mediterranean Action Plan, and offered financial support to the work of REMPEC.

130. Ms. Michelle Piccinino, said that the Government of Malta had recently commemorated the fiftieth anniversary of Ambassador Arvid Pardo's 1967 speech presenting Malta's initiative on the Law of the Sea at the United Nations General Assembly. A number of events had been held to mark the occasion. Other celebrations had marked the fortieth anniversary of REMPEC, which continued to play a proactive role in facilitating regional cooperation and coordination for dealing with the aftermath of, and preventing, marine pollution from ships. Malta reiterated its support for REMPEC, not only by hosting the centre but also by supporting its activities and promoting further regional cooperation.

D. Istanbul Environment Friendly City Award 2016–2017

131. The Coordinator announced that, following a long and rigorous selection process, the city of Izmir, Turkey, had been chosen from a field of 17 applicants as the winner of the inaugural Istanbul Environment Friendly City Award.

132. Mr. Aziz Kocaoğlu, Mayor of Izmir, was presented with the award by Ms. Ornela Çuçi, Deputy Minister of Tourism and Environment of Albania. In his acceptance speech, Mr. Kocaoğlu said that Izmir was a vibrant, multicultural city steeped in history, where living in a clean and healthy environment was viewed as a fundamental right.

133. At the national level, Izmir was a leader in terms of investing in the environment, including through the construction of wastewater treatment plants and through efforts to make the Gulf of Izmir suitable for swimming, promote sustainable environmental practices and increase the number of green spaces. To fulfil a pledge to reduce carbon dioxide emissions by 20 per cent by 2020, the rail transport network was being expanded, low emission buses and vessels had been purchased and a public bicycle system had been set up. In short, the city was investing in its future.

134. Noting that Izmir and Albania had long-standing cordial ties, he said that a debt of gratitude was owed to the Mediterranean Action Plan for uniting the two places through the conferral of the award in Tirana.

135. In the ensuing discussion, all the representatives who took the floor congratulated Izmir on its achievement. One representative emphasized the importance of guaranteeing the effective implementation of the 2030 Agenda for Sustainable Development, while another stressed the need to encourage sustainable urban development and production and consumption practices. A third representative thanked the Secretariat for the efficiency and transparency of the selection process for the award.

E. Tirana Ministerial Declaration

136. The Contracting Parties also agreed to establish an informal working group, chaired by Albania, to work on a draft "Tirana Ministerial Declaration" as set out in document UNEP(DEPI)/MED IG.23/19.

137. Subsequently, following a presentation in plenary by the Chair of the informal working group, several amendments were proposed, including for the inclusion of a reference to the SWIM-Horizon 2020 Support Mechanism Project, global citizenship education and education for sustainable development, and strengthening cooperation with regard to implementation.

138. The representative of an NGO said that the protection of biodiversity was given little attention in the text, which denoted a lack of ambition, and should be strengthened. The position was supported by other Mediterranean Action Plan partners.

139. Following further discussions, the Contracting Parties adopted the Tirana Ministerial Declaration. The Declaration as adopted is set out in *Section 2* to the present report.

VI. Date and venue of the twenty-first meeting of the Contracting Parties (agenda item 6)

140. The Contracting Parties accepted with gratitude an offer by the Government of Italy to host the twenty-first ordinary meeting of the Contracting Parties from 10 to 13 December 2019.

VII. Any other business (agenda item 7)

141. The representative of Turkey confirmed that his country would continue to fund the Istanbul Environment Friendly City Award for the biennium 2018–2019 and requested that that funding be included in the appropriate budget line.

VIII. Adoption of the report (agenda item 8)

Adoption of the report, thematic decisions, decision on the programme of work and budget for the biennium 2018–2019 and the Tirana Ministerial Declaration

142. At the final plenary session, the Contracting Parties adopted the present report on the basis of the draft report set out in document UNEP(DEPI)/MED IG.23/L.1, including the thematic decisions set out in *Section 3* to the present report and the decision on the programme of work and budget for the biennium 2018–2019 set out in *Section 4* to the present report. As noted in section V above, during the ministerial session of the current meeting the Contracting Parties also adopted the Tirana Ministerial Declaration, which is set out in *Section 2* to the present report.

IX. Closure of the meeting (agenda item 9)

143. Following the customary exchange of courtesies, the President declared the meeting closed at 6.10 p.m. on Wednesday, 20 December 2017.

Annex I

**Statements Delivered at the Opening of COP 20
17 December 2017**

Statement delivered at the opening of COP 20 by Ms. Christina Baritaki, outgoing President of the Bureau of the Contracting Parties:

Your Excellency, Coordinator of the Mediterranean Action Plan,
Distinguished Delegates,
Ladies and Gentlemen,

First of all I would like to express on behalf of Greece, our deep appreciation to the Secretariat for organizing the 20th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols and the government of Albania for hosting it.

I would also like to express our appreciation and congratulate the Secretariat for the important work done, in implementing the adopted work programme and in preparing the reports and the 15 draft decisions of various matters which are going to negotiate during next days. Decisions are both of strategic and thematic nature. Either thematic or strategic, the decisions have the potential to coordinate our attempts in order to address effectively and efficiently our common challenges.

Only two years have passed since Greece took over the presidency of the Bureau and several developments took place both at UNEP/MAP level and at international level.

The Paris Agreement on Climate Change, the 3rd Session of the United Nations Environment Assembly with the overarching theme "Towards a Pollution-Free Planet", the continuous implementation of the Agenda 2030 and its Sustainable Development Goals, the high-level United Nations Conference to Support the Implementation of Sustainable Development Goal 14 for Oceans and the ongoing negotiations for an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, **are among the international developments of utmost importance for our sustainable future.**

Barcelona Convention and its Protocols have contributed significantly to the aforementioned international developments and simultaneously have played an important role for environmental protection at Mediterranean level, as well as for the promotion of sustainable development. In particular, with regard to sustainable development, and since Greece is holding the Presidency of the Steering Committee of the Mediterranean Commission on Sustainable Development, the MCSDD, for this biennium, with your support and guidance, and since this COP will be focusing on the implementation of the Sustainable Development Goal 14, I would like to take this opportunity to stress that the MSSD is a well elaborated contribution to the global 2030 Agenda, adapted to the regional Mediterranean context and priorities and it demonstrates that the Mediterranean is indeed a front runner with regard to the implementation of the SDGs. Its implementation should be a collective endeavor for all the Mediterranean stakeholders beyond just governments.

Before closing my short intervention, I would like to thank all members of the Bureau for our fruitful and warm cooperation and all the delegates for their ongoing commitment in implementing our shared goals and wish my colleagues from Albania all the best for their new tenure as President of the Bureau. I personally, as well as the Greek government wish to reaffirm our country's determination to protect Mediterranean Sea by all means available and together with other Mediterranean countries and the international community to make sure that the future generation will be able to enjoy the results of our common efforts. Greece as host country of the Coordinating Unit of MAP, since 1985, has been providing its continuous support to the work of the MAP system including our efforts, during our Presidency of the Bureau, for the new premises of the coordinating unit.

Thank you for giving me the opportunity to work closely with "Barcelona" family and become a part of it.

I wish fruitful and inspired COP.

Statement delivered at the opening of COP 20 by Ms. Ornela Cuci, Deputy Minister of Tourism and Environment of Albania:

*Distinguished Heads of Delegations,
Dear Representatives of the Contracting Parties and Partner Organisations,
Ladies and Gentlemen*

I am very honoured and pleased at the same time to welcome you today in Albania on the occasion of the 20th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols.

First of all, I would like to convey my sincere thanks on behalf of the Government of Albania and myself, to all the Contracting Parties that unanimously accepted the offer of Albania and decided to convene this important event in our country, in the beautiful city of Tirana, which I suggest to all of you to visit and enjoy.

Albania is fully committed to take over the high responsibility of the Presidency for the next 2 years, demonstrating the spirit of the MAP system and its solidarity that all Contracting Parties can and should equally contribute to the further development of the MAP system with a focus on implementation and action. Also, availing of this opportunity I would like to thank the current Presidency of Greece led by **Ms. Christina Baritachi**, whose leadership was instrumental, as well as the current Bureau of the Contracting Parties composed of Egypt, Morocco, Israel, Spain and Albania.

Albania is a small country with rich and diverse nature, but although environment counts a lot and is among top 5 priorities of the Albanian Government, there are still many problems to be addressed. We, as well as the other Contracting Parties, are well aware of our problems which are mainly related to development, pressures on the environment, marine and coastal pollution and issues related to them. In this regard, **I would like to point out today that only an appropriate planning, monitoring and assessment, as well as implementation of our commitments, can and should make the difference.** In this context the Barcelona Convention and the MAP system must be considered from all of us as a gate and bridge to ensure integrated actions.

Concrete responses must now be taken to reduce the pressure on natural resources, especially in the most fragile areas. Also, all of us must support the implementation of programmes and strategies that place ecosystems at the heart of development, which requires the mobilization of all stakeholders. Albania, since its adherence to the Barcelona Convention in 2001, has followed and collaborated towards its implementation both at regional and national level.

We have been working hard for completion and approximation of our legal framework in compliance with EU directives taking into consideration also our obligations towards the Barcelona Convention. Law for protection of marine environment from pollution and damage, law on protected areas, law for protection of environment, law on integrated management of waters and law on Environmental Impact Assessment are strong pillars to reach our objectives.

Our aim is to clean up Albania, to plant 20 million trees up to 2020, to bring tourism as an economic activity that will improve the quality of life and to protect environment including the sea and the coastal areas. Also, we are committed to increase the surface of protected areas including the marine and coastal ones. In this regard, to honour COP 20, in the morning of 20 December we have planned a tree planting in collaboration with the Municipality of Tirana, where I am pleased to invite all of you distinguished delegates to participate.

Concluding,

I am confident that COP 20 will be a COP of delivery and of further implementation towards achieving of our common goal, protection of the Mediterranean Sea against pollution. The agenda of the 20th meeting of the Contracting Parties clearly promotes implementation and concrete actions to meet the commitments that we have taken all together in the framework of the Barcelona Convention during the last years.

I am sure that this meeting, as it has been always the case, will also witness the high spirit of consensus and solidarity that is one of the most important values of the MAP Barcelona Convention system.

Thank You!

Statement delivered at the opening of COP 20 by Ms. Mette Wilkie, Director of Ecosystems Division, United Nations Environment Programme, on behalf of the Executive Director of United Nations Environment Programme:

Excellencies, Ladies and Gentlemen, Dear Colleagues,

On behalf of the Executive Director of UN Environment, Mr. Eric Solheim, I would like to welcome you to the 20th Conference of the Parties of the Barcelona Convention.

We are almost two years after the adoption of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), a recognition of the interconnectivity of economic development and environmental protection. We can, we must protect the planet while building stable societies and vibrant economies. The transition towards a green and blue economy, to innovate and become more competitive while preserving natural capital, is of paramount importance for The Future We Want.

The environment plays a pivotal role in lifting people out of poverty, in ending hunger, in growing our economies, in building peaceful, just and inclusive societies, and in promoting the health of our people and our planet, therefore more than half of the SDGs have an environmental focus or address the sustainability of natural resources. In its “Vision 2030”, the UN Environment aims to reduce environmental risks and increase the resilience of societies and the environment as a whole, with the overarching goal of promoting the environmental dimension of sustainable development, and bringing socio-economic benefits.

It is also the first time we have a global development goal specifically dedicated to the oceans – SDG 14: *Conserve and sustainably use the oceans, seas and marine resources for sustainable development*. And two years after the adoption of the 2030 Agenda, a number of commitments and achievements are already demonstrating that the protection of marine ecosystems and coastal zones are at the core of the global agenda on the environment and sustainable development. Indeed, in 2017, a number of global events and processes have raised attention to SDG implementation some with a specific focus on ocean-related issues:

- The Conference to Support the Implementation of the SDG 14 (New York, 5-9 June 2017) created high-level momentum and raised awareness at the highest political level about the vital importance of the oceans and seas for our economies and societies.
- The meeting of the high-level political forum (HLPF) (New York, 10-19 July, 2017) benefited from the momentum generated by the Ocean Conference. Its thematic review of selected SDGs firmly “centered” SDG 14 at the heart of the implementation of the 2030 Agenda and further explore the linkages with the other SDGs.
- The Conference “Our Ocean, an ocean for life” (Malta, 5-6 October 2017) delivered an extraordinary level of commitments and results relevant to achieve SDG 14.

This series of events culminated with the successful third session of the UN Environment Assembly that just ended, with a Ministerial Declaration and a set of resolutions aiming at acting towards a pollution-free planet to achieve the SDGs. A pollution-free planet is the best insurance for the survival and well-being of current and future generations. Pollution prevention, control and reduction will also create multiple opportunities for achieving the SDGs in a mutually beneficial manner.

Pollution constitutes a significant impediment to achieving health, well-being, prosperity and the sustainable development goal to “leave no one behind”. Tackling pollution will contribute to sustainable development by fighting poverty, improving health, creating decent jobs, improving life below water and on land, and reducing global warming. Unless we take action, our oceans will contain

more plastic than fish by 2050. The longer we wait, the greater is the extent of our exposure and the cost of the clean-up. Now is the time for action!

In this regard, it is worth to remind that the Regional Seas programme, launched in 1974, is one of the UN Environment's most significant achievements in the past four decades. And, as you are all aware, it is my pleasure to remind that the Mediterranean Action Plan (MAP) is the first Regional Sea programme under UN Environment auspices.

The implementation of the Barcelona Convention and its Protocols is the way to achieve SDG 14 and to deliver the 2030 Agenda in the Mediterranean. Almost two years ago, echoing new and unprecedented global agreements such as the 2030 Agenda and the Paris Agreement, the Contracting Parties of the Barcelona Convention confirmed that the MAP system continues to be a very relevant and effective instrument to translate global policies into concrete action on priorities agreed at regional and subregional levels.

Two years later, following concrete actions and pragmatic achievements, we are going to adopt decisions that will put the Mid-Term Strategy 2016-2021 in motion towards its full delivery in the two coming biennia. This 20th Meeting of the Contracting Parties to the Barcelona Convention comes at a decisive stage, with the focus on implementing the transformative global goals and targets of the 2030 Agenda and the policies of the MAP system. It is a timely opportunity to showcase the importance that the Mediterranean region places on the implementation of pollution and biodiversity related commitments.

Despite current actions and existing environmental governance frameworks, the problem of pollution persists and remains pervasive. Multi-stakeholder partnerships must be created and expanded because responsibility for combatting pollution does not rest with national governments alone: governments need support from the private sector, international organizations, academia, civil society and individuals. We need engagement from all, and it is imperative to engage political, industrial, scientific and civil society leaders to work towards a pollution-free planet.

We rely on you, representatives of the Ministries of the Environment, to support the inclusion of the SDG 14 in the center of national agendas for sustainable development, together with innovative ways and institutional arrangements to foster synergies between various departments and by effectively engaging local authorities, the private sector, the civil society, the scientific community, and all other stakeholders.

Collective actions from national governments and all partners can enable the achievement of the UN Environment/MAP-Barcelona Convention objectives in the Mediterranean countries and region.

I wish to us all a very successful meeting!

Thank you.

Statement delivered at the opening of COP 20 by Mr. Gaetano Leone, Coordinator of the United Nations Environment Programme/Mediterranean Action Plan-Barcelona Convention Secretariat:

Honourable Deputy Minister Cuci,
President of the Bureau Baritaki,
Director Wilkie of the UN Environment Ecosystems Division,
Excellencies, distinguished delegates, guests, colleagues,

It gives me great pleasure, on behalf of the Coordinating Unit and the entire Secretariat, to welcome you warmly to the 20th Conference of the Parties to the Barcelona Convention, beautifully hosted by the Government of Albania.

The short biennium that is now ending has brought us good progress and achievements – in terms of stabilizing our financial resources, strengthening our institutional set-up, establishing new partnerships, raising our visibility and credibility, contributing to the global agenda, and most importantly delivering on many aspects of the mandate of the MAP system. Our efforts have focused not on developing new commitments and instruments, but on three aspects of the same concept of action: implementation, partnership, and resource mobilization. This was the necessary choice to start effectively the execution of the 6-year Mid-Term Strategy approved at COP 19. I reported at length to the Meeting of Focal Points held in Athens last September; and I will provide details when presenting the Progress Report to the high-level segment on Tuesday.

This morning, I just wish to highlight that some of the accomplishments are tangible (the removal of 930 tons of PCBs from 3 countries, the contribution that we are making to action on Marine Litter, the mobilization of considerable multi- and bi-lateral resources for concrete action and investments, the technical tools and guidance developed and shared to facilitate the implementation of the MAP instruments by Contracting Parties, the capacity building that we have delivered), some are less visible but no less important (the leading role that we are taking in cooperating with the fishery body of the Mediterranean and with Multilateral Environment Agreements, the attention to sub-regional issues, the desirability that we have regained as a partner in the region, the capacity to mobilize additional interest and commitments of Contracting Parties and Partners for global initiatives).

Monsieur le Ministre, Chers Délégués,

Notre réunion des Points Focaux du PAM à Athènes, en septembre dernier, a été très productive, couvrant de nombreux sujets relatifs aux décisions à prendre par cette COP. Je suis confiant et convaincu que dans les quatre prochains jours nous allons bâtir sur ce travail, avec le même esprit constructif et collaboratif qui caractérise le système PAM depuis plus de quarante ans. Des documents importants sont en face de vous : un Programme de travail et un Budget ambitieux qui vont nous permettre de mettre en œuvre la Stratégie à moyen terme au cours du prochain biennium ; la Stratégie de mobilisation des ressources qui va nous montrer la voie à suivre vers des opportunités croissantes et la stabilité financière ; le tout premier Rapport méditerranéen sur la qualité, qui représente un produit crucial pour la série d'études d'évaluation à venir ; et d'autres décisions tout aussi pertinentes sur la gouvernance, les indicateurs, la biodiversité et les aires marines protégées, la gestion intégrée des zones côtières et la planification de l'espace marin, la pollution et les situations d'urgence.

Besides the decisions, what is needed now is more incisive action. This is the one commitment we are after; action by the Secretariat and the Components, action by our partners; most importantly, action by the Parties. As the cheers of the end-of-year holidays grow in intensity around us, I wish this COP great success in meeting the busy agenda of the next four days. An agenda that reflects the focus on implementation and partnerships of this biennium and showcases again the relevance of the MAP-Barcelona Convention system for the protection of the marine environment and coastal areas of our Sea.

Before I conclude, Minister, I would like to express the sincere gratitude of the Secretariat to the Government of Albania for hosting us in such an enjoyable venue. It is the first COP in Albania, and I

am proud of being part of it. Also, I wish to express my personal deep, genuine gratitude to Christina Baritaki for her leadership and support during the past biennium as our President, and to all the members of the Bureau. Christina has been an inspiring passionate leader and is a good friend – I am honoured for having worked with her.
Thank you.

Annex II

**Statements Delivered at the Opening of the Ministerial Session
19 December 2017**

Statement delivered at the opening of the Ministerial Session by the Minister of Tourism and Environment of Albania, H.E. Mr. Blendi Klosi:

Tirana, Albania, 19 December 2017

Honourable head of delegations,
Director of the UN Environment,
Coordinator of Barcelona Convention Mr. Leone,
Excellencies, distinguished delegates and representatives of the Contracting Parties to the Barcelona Convention, Partners,

As the Minister of Tourism and Environment of Albania, I feel grateful to the opportunity and trust given by the contracting parties to host the 20th Ordinary Meeting of the Contracting Parties to the Barcelona Convention in Tirana.

The Barcelona Convention and its protocols with all the developments that have taken place have gone beyond the regional dimension, by serving as a strong linkage between national dimension with the global one.

Barcelona Convention and its protocols is a complex system both legally and institutionally, which has played and play a very important role towards implementing global policies, strategies and programs by securing at the same time that regional governance is in place.

Albania is among the countries that has ratified the Barcelona Convention and among the first ones that ratified the Integrated Coastal Zone Management Protocol, by helping to give in this manner an impetus for ratification by other contracting parties.

The Mediterranean Action Plan-Barcelona Convention has supported us in the region through provision of the guidelines and guidance to undertake coordinated measures to prevent and abate pollution of the marine and coastal areas and also to protect our nature from degradation.

Marine litter is receiving increasing attention in the international agenda: UN Environment launched the Clean Seas Campaign, and I take the opportunity here, to add and speak up the Albanian Campaign – Clean up Albania.

I congratulate the UNEP/MAP initiative for new major interventions in support of countries to complete their inventories of existing Persistent Organic Pollutants and mercury stockpiles and to remove 2,000 tons of PCPs/POPs and 30 tons of mercury by 2022.

The new government of Albania has put environment high on its agenda. Our aim is to clean up Albania, to plant 20 million trees up to 2020, and to bring tourism as an economic activity that could and should improve the quality of life and protect the environment including the sea and the coastal zone.

Our work among us, with partners and donors has started to give concrete results. Greening Albania and cleaning of hotspots which represents important initiatives of this government aims to give an end to the mismanagement of urban waste. School and kids are encouraged to plant trees in their surroundings. We are also committed to increase the surface of protected areas including the marine and coastal ones.

In recent years, the process of drafting national environmental legislation and policies has been based on requirements defined by the approximation to the EU legislation and to EU environmental policies as well as fulfilling the obligations Albania has toward ratified Conventions such as the Barcelona Convention, the Convention on Biodiversity, the United Nation Framework Convention on Climate Change, the United Nation Convention to Combat Desertification.

Albania has considered this to be an important task, although the existing conditions and capacity within the country needs to be further strengthened. The present challenge is thus for the approximation to be feasible and rapid enough, taking into account the capacity of the country. A number of initiatives have been taken in the area of strategic environmental policymaking.

We are in the process of the finalization of The National Waste Management Strategy that aims at the full implementation of the EU Framework Directive on Waste Management.

Since the theme of the conference of the parties has two topics: pollution and biodiversity, my word express the progress Albania has done towards biodiversity conservation through institutional and legislative framework, and their implementation and enforcement in practice, and the preparation in 2016 the **Strategic Plan for Marine and Coastal Protected Areas**.

Marine pollution threatens the health of our coasts and ocean and it comes in many different forms. Marine pollution can mean plastic litter, other litter such as glass bottles and cans, oil and chemical spills or polluted storm water drains and rivers flowing into the sea.

Biodiversity and ecosystem services are crucial for sustainable development.

If we don't take biodiversity seriously we cannot reach sustainable development goals to eradicate poverty, food security, human health and adaptation to climate change – elements that all are vital for the well-being of all of us.

To conserve biodiversity and to use it sustainably there is a need to have a strategic approach, which needs first of all to understand biodiversity values and to not only recognise issues, but also address the urgent pressures on biodiversity.

In this regard Integrating Biodiversity Priorities in National Development Plans, Sector Strategies and Sub-National Plans is considered as a must:

Initially the National Environment Strategy (NES) 2007- 2013 considered the biodiversity as one of the priority areas of environment. The strategy clearly identifies the main areas of work, like the increase of the Protected Areas surface, the elaboration of Management Plans and their implementation; the completion of the legal framework in line with the EU acquis for nature and environment; the elimination of illegal logging and hunting by the means of better enforcement of the legal framework as well as capacity building activities; implementation of action plans for threatened species and habitats and the update of the National Biodiversity Strategy and Action Plan as the main policy document for nature and biodiversity protection area.

The document of strategic policies on biodiversity protection identifies major goals and objectives for nature protection in accordance with the EU biodiversity strategy and in line with Aichi Biodiversity Targets to 2020 of the CBD.

In the environment sector, we need a stronger focus on building institutional capacity, data and knowledge to integrate environment and climate considerations more fully into the national regulatory framework, and to develop new capacities and systems for implementation and compliance monitoring across major sectors.

What we can do – concrete actions

Preventing marine pollution is vital for the well-being of the sea, the marine life it supports and us! Cleaner oceans mean we can continue to enjoy our beaches for swimming, fishing and recreation.

1. Organise a beach clean-up

Wouldn't it be great if we never saw any rubbish on our beaches? Unfortunately, this isn't always the case. Picking up other people's rubbish, if it is safe, is an easy way to help reduce pollution on our beaches and in the ocean.

2. Reduce our rubbish

Studies have shown that about 80 percent of marine pollution comes from the land. So, one of the main ways to reduce marine pollution is to get rid of rubbish carefully, wherever we are. If we reduce the amount of rubbish we make on the land it is likely there will be less rubbish in the seas.

3. Take care of a local river/streams

As most streams and rivers flow into the sea, taking care of them can help reduce marine pollution. If rubbish ends up in a stream or river it will very likely end up in the sea. Another type of marine pollution that comes from streams and rivers is soil or sediment pollution. Sediment pollution can happen when soil enters waterways that flow to the sea. It is natural for some sediment to enter the ocean, but when there is a lot of it entering the ocean it becomes a problem. Sediment pollution can be increased by human activities such as earthworks near streams or when trees and plants near streams have been removed.

**Statement delivered at the opening of the Ministerial Session by Mr. Gaetano Leone,
Coordinator of the United Nations Environment Programme/Mediterranean Action Plan-
Barcelona Convention Secretariat:**

Honourable Ministers,
Director Wilkie of the UN Environment's Ecosystems Division,
Excellencies, distinguished delegates and representatives of the Contracting Parties to the Barcelona Convention,
Partners, media representatives, guests, colleagues,

Republic of Albania honored us with organization of the 20th Ordinary Meeting of the Contracting Parties to the Barcelona Convention. We are pleased to be in this beautiful country that has been contributing to UN Environment/Mediterranean Action Plan (MAP) achievements in many, invaluable ways and we are looking forward to our closer collaboration during the next biennium.

The regional dimension has taken an increasingly crucial role for the implementation of global policies, strategies and action plans. Regional Seas programmes and Conventions, such as the Mediterranean Action Plan - Barcelona Convention system, complement global conventions and provide a legal and institutional framework for regional governance of shared seas, including for the prevention of pollution from ships and of dumping at sea, the protection of marine biodiversity and the creation of marine protected areas. As Regional Environmental Agreements, the Barcelona Convention and its Protocols echo the global Multilateral Environmental Agreements, especially those related to pollution prevention and control and biodiversity conservation.

The Regional Seas Programme, launched in 1974, is one of UN Environment's most significant achievements to address the accelerating degradation of the oceans, with more than 143 countries having joined 18 Regional Sea Conventions and Action Plans. The Mediterranean Action Plan remains a frontrunner within the Regional Seas, representing a relevant bridge between global agreements, such as the Agenda 2030 for Sustainable development, and national regulations and actions to promote structural changes with positive impacts on local economies, environment and society.

Dear Participants,

In relation to pollution, the Mediterranean Action Plan-Barcelona Convention system has evolved into an extensive system that supports and guides the Contracting Parties to undertake coordinated measures to prevent and abate pollution of the marine and coastal areas. Concrete results on marine pollution reduction and prevention include the establishment of a regulatory framework of Protocols and other instruments; the development of National Action Plans that define the needs of countries in the region; the delivery of pollution reduction action deriving from those plans; the assessment and the identification of trends and hot spots; and the provision of capacity building and technical assistance.

The activities of the Mediterranean Action Plan have spurred much progress for forty-two years in protecting the marine environment and coastal zones, advancing the sustainable management of natural resources, strengthening solidarity among Mediterranean Coastal States, and ultimately contributing to the sustainable development of the region.

The adoption of ten Regional Plans under the Land Based Source Protocol are of particular relevance. The Regional Plans represent a firm basis for the implementation of MED POL actions focusing on the industrial pollution (persistent organic pollutants - POP, heavy metals and nutrient loads from food industry), urban development (urban wastewater and marine litter). Data are crucial and the reporting system is continuously improved to enable tracking trends in pollution reduction and hotspots elimination.

Only in the past biennium, we have delivered technical guidelines on Best Available Technologies and Best Environmental Practices for Industry, Solid Waste and Waste Water, and achieved the disposal of more than 930 tons of polychlorinated biphenyl (PCB) from the electricity and industrial sectors in Bosnia and Herzegovina, Egypt, and Turkey. The ongoing development of the *Mediterranean Sea*

Programme: Enhancing Environmental Security (MedProgramme) provides a unique opportunity to assist the countries to reduce pollution in hot spot areas through Global Environment Facility (GEF) supported projects and to contribute to the fulfilment of commitments under the Barcelona as well as Basel, Rotterdam, and Stockholm Conventions. Work continues to operationalize new major interventions in support of countries to complete their inventories of existing POPs and mercury stockpiles and to remove 2,000 tons of PCPs/POPs and 30 tons of mercury by 2022.

Marine litter is receiving increasing attention in the international agenda: UN Environment launched the Clean Seas Campaign (#CleanSeas) in February 2017, with the aim of engaging governments, the general public, civil society and the private sector in the fight against marine plastic litter, and to address the root-cause of marine litter by targeting the production and consumption of non-recoverable and single-use plastic. Contracting Parties and other Mediterranean actors have joined the campaign, showing commitment to action for a marine litter-free Mediterranean Sea. I would like to urge those Contracting Parties – as well as Partners – who have not done so, to join UN Environment's CleanSeas campaign against marine litter and ocean pollution!

The Mediterranean Action Plan is currently implementing the first ever legally binding Regional Plan on Marine Litter Management in the Mediterranean. This Regional Action Plan is timely and comprehensive, demonstrating a strong political commitment, with legally-binding measures and related timetable. A Regional Cooperation Platform on Marine Litter was also established, aiming to ensure contribution of all regional stakeholders to the effective implementation of the regional plan. On a voluntary basis, this platform is an open-ended group of regional and international partners with mandates and activities contributing to the management of marine litter in the Mediterranean, and to the achievement of SDG 14, and especially Target 14.1 “*by 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution*”.

Dear Participants,

In relation to the second focus theme of this Ministerial Session, allow me to remind that biodiversity faces multiple anthropogenic pressures that affect its ecological status and peril its conservation, which is crucial for the marine ecosystems, socioeconomic activities and human health.

In addition to Articles 4 and 10 of the Barcelona Convention, the “Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean” (SPA/BD Protocol) and its “Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region” (SAP BIO), the Contracting Parties have also established the List of Specially Protected Areas of Mediterranean Importance (SPAMIs) to promote cooperation in the management and conservation of natural areas, including in the areas beyond national jurisdiction, as well as in the protection of threatened species and their habitats.

The Contracting Parties have also agreed on a Roadmap for a comprehensive coherent network of well-managed Marine Protected Areas (MPAs) to achieve Aichi Target 11 in the Mediterranean, which supports the initial Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean Sea including the High Sea. The work of the Preparatory Committee, established by UN General Assembly Resolution 69/292, for the Development of an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, is very relevant for our region and closely linked with the efforts to achieve Aichi Target 11.

The recent evaluation (May 2016) of the status of implementation of the Mediterranean programme for coastal and marine protected areas had very positive results: a significant progress has been made by the Mediterranean countries during the period 2010-2016. In December 2016, there were 915 sites under national and international declarations. The marine area covered by conservation measures is of about 180,000 km², representing 7.14 % of the Mediterranean Sea surface. However, to reach global and regional conservation and sustainable use objectives, it is imperative to accelerate the efforts to

effectively and equitably conserve at least 10% of the Mediterranean coastal and marine areas by 2020.

I would like to highlight other key achievements of the 2016-2017 biennium linked to the theme of this COP and showcasing the contribution of the MAP Components:

- The delivery of the 2017 MED Quality Status Report, led by MED POL, is a MAP achievement based on joint and integrated efforts of the Contracting Parties, Partners and the Secretariat. Taking into consideration the key findings of the 2017 MED Quality Status Report, we will continue towards filling the data gaps and preparing the fully data-based 2023 MED Quality Status Report.
- SPA/RAC supported nine countries in the elaboration of 16 national strategies and action plans for the conservation of biodiversity features and the management of special areas.
- The competent national authorities of the Governments of Cyprus, Greece and Israel requested REMPEC to assist them in formulating and implementing a joint Sub-regional Marine Oil Pollution Contingency Plan, within the framework of the Prevention and Emergency Protocol, for responding promptly and effectively to major marine oil pollution incidents, affecting or likely to affect the territorial sea, coasts and related interests of any of the three countries concerned.
- PAP/RAC prepared the Common Regional Framework for Integrated Coastal Zone Management (ICZM), using among others the results of two Coastal Area Management Plan (CAMP) projects successfully closed in this biennium (France and Italy), and of the Conceptual Framework for Marine Spatial Planning (MSP) that is being tested in practice within several pilot projects. The integrated approach promoted by the ICZM Protocol has been strengthened at all levels, starting from better integration of the Barcelona Convention driven policies themselves to the implementation of country-level initiatives. This is particularly evident through the work on land-sea interactions and the effort to integrate land and seas use planning.
- Supported by Plan Bleu, the Mediterranean Commission on Sustainable Development, with a new impetus after its reform adopted at COP 19, launched the implementation and monitoring process of the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD) on solid ground: The Simplified Peer Review Mechanism was successfully implemented with three volunteer countries (France, Montenegro, Morocco); the Sustainable Development Dashboard was designed to monitor the implementation of the MSSD in line with SDGs, in particular SDG 14; and, the development of the Mediterranean Expert Network on Climate and Environmental Change (MedECC), progressively connecting scientists across the Mediterranean in a robust Science Policy Interface. During upcoming years, the preparation of the State of the Environment and Development Report and the foresight exercise MED2050 will involve in a participatory approach Contracting Parties, MCSD members, MAP partners, as well as a wide range of stakeholders, including economic sectors.
- Through its SCP/RAC, the Mediterranean Action Plan trained 1,600 green/blue entrepreneurs, has contributed to the creation of 100 new businesses, and has mobilized direct financial support to new entrepreneurs. Furthermore, the Barcelona Convention auspices a pioneering regional initiative to support the development of eco-innovative businesses for blue and circular economy in the Mediterranean.

Dear Participants,

Let me conclude by stating that, without sustainable management of the oceans, they, in turn, will be unable to sustain the life and livelihoods that depend on them. Yet, never before have we had more resources, better science and technology, and more opportunities of partnership to deliver the mandate you gave us for the Mediterranean region. With its re-established solid financial basis and having mobilized significant investments for the region, the Barcelona Convention system is plowing ahead in mainstreaming the ecosystem approach in all its work.

We will continue to respond to urgent demands for action in the field of chemicals and waste, as well as Marine Litter, establishing successful models of cooperation and action, and we are moving forward in the area of biodiversity conservation and the establishment of marine protected areas.

In this quest, we are not working alone. We are maximizing coordination and cooperation with the work of the global Conventions, such as the UN Convention on Biological Diversity - with its next, 14th, COP taking place next November in Egypt - the Minamata Convention, the Basel Convention, the Stockholm Convention, the Rotterdam Convention, the London Convention and London Protocol, and other relevant Multilateral Environmental Agreements, as well as with regional partners, such as the General Fisheries Commission for the Mediterranean and ACCOBAMS.

Our vision is to provide the solutions and the partnerships to cope with the challenges of the Mediterranean Sea, towards a systemic transformation that will be able to change the tide... We have a tall task ahead of us, but can count on a solid basis for action.

Thank you.

Annex III

Other Statements (attached to the Report upon request)

Other statement (attached to the Report upon request) by Mr. Adel Yacoub, Head of Protection of Natural Resources, Ministry of Environment-Lebanon:

Dear Madame Chair

Ladies and Gentlemen;

First, I would like to stress on Lebanon's commitment and engagement towards Barcelona Convention and its respective protocols. In fact, Lebanon had launched the adhesion process to the ICZM protocol in 2014 as per the decree number 639 date 18th of September 2014. Currently Lebanon is working on the draft law on Integrated Coastal Zone Management which is under study by relevant ministries prior the Council of Ministers approval.

However, Lebanon's natural resources are still depleting due to different challenges among which the refugees' crisis, poverty and water scarcity figure to be one of the most relevant topics that we should work hand and hand to reduce their impacts on the different environmental components in Lebanon.

In this context, Lebanon endorses programs and action plans undertaken under Barcelona convention and its protocols and highly appreciates the work done by the working groups and all Regional Activity Centers and supports the allocation of more funds in the budget plan to the functioning of the Regional Activity Centers enabling them to continue the implementation of more relevant projects and plans each in their respective focus area.

In light of what is said during this COP, it is obvious that there are too many topics to be implemented; therefore, Lebanon wishes from all concerned parties to support some suggestions made by the Ministry of Environment such as:

1. Need for a Grant Funded Unit for the creation of a unit at the Ministry of Environment to support Lebanon's compliance with Barcelona Convention and its respective Protocols– similar to the grant funded units for the Ozone (Multi-Lateral Fund) and Climate Change (GEF and others) conventions;
2. Re-expression of interest for a phase II of H2020/SwitchMed & other programs;
3. Support in implementing the provisions of the ICZM protocol – including future implementation of the ICZM draft law and national strategy once endorsed;
4. Support needed in (1) implementing the SCP Action Plan for the Industrial Sector prepared in 2015/2016; and (2) preparing SCP Action Plans for other sectors, (3) further support to green entrepreneurship;
5. Overall support in implementing the NAP;
6. Assess the impact of refugees on the coastal zone areas abiding to the Barcelona Convention and its respective Protocols;
7. Marine Biodiversity: support needed in (1) completing the marine biodiversity database through extensive marine field work at selected sites; and (2) supporting the establishment of MPAs;
8. POPs: support needed in implementing the updated NIP, including more detailed inventory where needed and disposal of PCBs;
9. Spills Contingency Plans: support in implementing the updated NOSCP as well as preparing a gasoline related CP;
10. Environmental Law Enforcement: technical assistance to the newly established Environmental Prosecutors and Investigation Judges (based on law 251/2014);
11. Environmental Awareness: financial support to conduct annual school competitions on a given MAP related theme with a related study tour offered to the top 3 winning teams.

Finally, I would like to seize this moment to thank Albania, UNEP/MAP, the coordinating unit, the Bureau (head and members), the secretariat, all Regional Activity Centers and wish them the best of luck in their effort aiming to protect the natural resources and the coastal zones on Planet Earth.

Congratulation to Albania, for this big event, and looking forward for more achievements in the next COP.

Thank you for your kind attention!

Annex IV
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The Tirana Ministerial Declaration

TIRANA MINISTERIAL DECLARATION

We, Ministers and Heads of Delegation of the Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (the Barcelona Convention) and its Protocols, meeting in Tirana, Albania, on 19 December 2017,

Recalling the importance of the regional dimension for the implementation of global strategies and agendas,

Recalling also the unique nature and mandate of the United Nations Environment Programme/Mediterranean Action Plan - Barcelona Convention system and its primary role in contributing to the implementation of the 2030 Agenda for Sustainable Development in the Mediterranean,

Welcoming the progress made in the delivery of the mandate described set out in the Mediterranean Action Plan, the Barcelona Convention and its Protocols, and in other instruments and decisions,

Welcoming also the outcome document of the high-level United Nations Conference to Support the Implementation of Sustainable Development Goal 14, held in New York from 5 to 9 June 2017, entitled “Our ocean, our future: call for action”, and the commitments to action announced by the Contracting Parties to the Barcelona Convention, as well as the regional commitments submitted by the United Nations Environment Programme/Mediterranean Action Plan within the framework of the Conference and of the fourth “Our Ocean” Conference, held in Malta on 5 and 6 October 2017,

Recalling the Ministerial Declaration adopted by the Ministers of the Environment at the third session of the United Nations Environment Assembly, held in Nairobi from 4 to 6 December 2017 under the overarching theme “Towards a pollution-free planet”, and especially the commitments to strengthen actions that prevent, mitigate and manage marine pollution and promote science-based decision-making,

Noting the key findings of the 2017 Mediterranean Quality Status Report, and *highlighting* the fact that despite the measures taken to date, marine pollution, including new and emerging pollutants, remains one of the main pressures on the marine and coastal environment of the Mediterranean, causing significant adverse impacts on natural ecosystems, and *also highlighting* the degradation of marine and coastal biodiversity caused by cumulative pressures, including ecosystem fragmentation; overexploitation of natural resources; introduction of invasive alien species; marine, soil and atmospheric pollution; and climate change,

Recalling the importance of oceans and biodiversity conservation for swift and effective implementation of the Paris Agreement under the United Nations Framework Convention on Climate Change,

Being aware that the development of sustainable blue economy and key socioeconomic activities depends on clean, biologically diverse and healthy seas, and reaffirming the vital importance of the conservation of marine and coastal biodiversity and of the sustainable management of natural resources for the provision of goods and services for the population of the Mediterranean region,

Welcoming the outcome of the Ocean Conference and reiterating its call to strengthen cooperation, policy coherence and coordination among institutions at all levels, including between and among international, regional and subregional organizations and institutions, arrangements and programmes,

Recognizing the contribution of non-governmental organizations, the private sector and other key stakeholders as a means to maximize effectiveness and results on the ground,

Reaffirm our commitment to making progress towards achieving and/or maintaining Good Environmental Status in the Mediterranean, in line with the Barcelona Convention and its Protocols, and *decide* to start discussions on the next steps of the ecosystem approach implementation beyond 2021 to contribute to the implementation of the 2030 Agenda for Sustainable Development;

Resolve to enhance our efforts to play a key role in working towards a pollution-free planet and to integrate pollution prevention into local and national planning for the long-term well-being of our people and our planet;

Decide to continue taking appropriate measures to prevent and reduce marine pollution from land-based and marine sources as set out in strategic Mediterranean Action Plan documents, including the Mid-term Strategy 2016–2021, the Strategic Action Programme to Address Pollution from Land-based Activities in the Mediterranean Region (SAP-MED), the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016–2021), the Mediterranean Offshore Action Plan and national and regional action plans, with particular regard to municipal and industrial wastewater treatment, solid waste management, the reduction or phasing out of toxic and obsolete chemicals and hazardous waste, marine litter, plastics and microplastics and especially single-use plastics;

Commit to promoting sustainable consumption and production patterns, including making the best use of investment and innovation opportunities, supporting market-based and other solutions to reduce waste generation, improving mechanisms for environmentally sound waste management, and developing and promoting sustainable chemicals management and safe alternatives to plastics and toxic chemicals;

Welcome the commitments to eliminate 2,000 tons of polychlorinated biphenyls and persistent organic pollutants and 30 tons of mercury in pollution “hot spots” in the Mediterranean under the MedProgramme;

Commit to strengthening the implementation of the Regional Plan on Marine Litter Management in the Mediterranean and achieving its targets, in synergy with similar work undertaken within other global frameworks, such as the Group of 7 and the Group of 20, and welcome commitments of the Contracting Parties under the “Clean Seas” and “Beat Pollution” campaigns led by the United Nations Environment Programme;

Encourage Contracting Parties to promote transformative investment for our economies and societies, bringing in the private sector to finance clean, resource-efficient, low-carbon opportunities;

Resolve to enhance action to fully implement the priority and specific actions and achieve the biodiversity-related targets as set out in the Strategic Action Programme for the Conservation of Biological Diversity (SAP-BIO); the regional action plans for endangered species and habitats; and the integrated monitoring and assessment programme (IMAP), on biodiversity and non-indigenous species within the framework of the Ecosystem Approach Roadmap in order to enhance the Good Environmental Status of the ecosystems, habitats and endangered species of the Mediterranean sea to reduce the impact of invasive and non-indigenous species and achieve Aichi Biodiversity Target 9;

Commit to accelerating efforts to ensure the implementation in the Mediterranean of the Aichi Biodiversity Targets, in particular target 11, and the ocean-related Sustainable Development Goal targets, in particular target 14.5, and cooperating so as to achieve ambitious targets by 2030;

Encourage Contracting Parties to work on advancing the process of establishing marine protected areas in line with global developments, including the ongoing process for the development of a global, legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, and the provisions of the Barcelona Convention and its Protocols, where appropriate;

Welcome voluntary sources of financing for Mediterranean marine protected areas, for example the work of the Trust Fund established for Mediterranean marine protected areas and the financial contributions already provided therein;

Reaffirm our commitment to promoting adaptation to climate change and increasing the resilience of the Mediterranean marine and coastal natural and socioeconomic systems to the impacts of climate change by advancing the implementation of the Protocol on Integrated Coastal Zone Management in the Mediterranean and the Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas;

Resolve to act in support of the prevention and phase-out of marine pollution and in support of biodiversity conservation within the framework of the United Nations Environment Programme/Mediterranean Action Plan - Barcelona Convention and its Protocols by maximizing coordination and synergy with the work of other multilateral environmental agreements at all levels, as well as with the General Fisheries Commission for the Mediterranean and other partners, and *invite* all secretariats to strengthen their collaboration;

Invite international organizations, bilateral and multilateral donors, foundations and the private sector, with the interest and capacity to do so, to support the work of the United Nations Environment Programme/Mediterranean Action Plan and its related initiatives;

Welcome the work done on the development of the Common Regional Framework for Integrated Coastal Zone Management and the Conceptual Framework for Marine Spatial Planning and agree to further develop those two key instruments with a view to ensuring and promoting the sustainable use of coastal and marine resources, achieving Good Environmental Status in the Mediterranean and contributing to its sustainable development through enhanced planning and management approaches;

Commit to implementing effective national monitoring programmes based on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast (IMAP), as a tool to assess the state of the marine and coastal environment and the effectiveness of measures taken towards achieving and/or maintaining Good Environmental Status, the effectiveness of policies relevant to the United Nations Environment Programme/Mediterranean Action Plan - Barcelona Convention system and the achievement of strategic targets related to pollution reduction, hydrography and biodiversity conservation;

Reaffirm our commitment to strengthening national and regional capacities to ensure the implementation of commitments under the Barcelona Convention and its Protocols and the further improvement of national reporting on the implementation of the Barcelona Convention and its Protocols, aiming for comprehensive and integrated reporting that enables processing of the information and strengthening of the knowledge needed to underpin national and regional policymaking;

Also reaffirm the instrumental role of the United Nations Environment Programme/Mediterranean Action Plan - Barcelona Convention system in facilitating the implementation of the ocean-related targets of the 2030 Agenda for Sustainable Development in the Mediterranean;

Highlight the important contribution that coordination at the regional sea level can make towards delivering the 2030 Agenda for Sustainable Development, including through the Mediterranean Strategy for Sustainable Development 2016–2025;

Commit to promoting maximum coherence and synergy between regional monitoring mechanisms and global mechanisms for the purposes of monitoring for the 2030 Agenda for Sustainable Development;

Also commit to continue and enhance our engagement and partnership with global, regional and sub-regional bodies and programmes, the scientific community and academic institutions, the private sector, the donor community, non-governmental organizations, community groups, and other relevant actors to support the achievement of our common goals for the implementation of the ocean-related targets of the 2030 Agenda for Sustainable Development, including Sustainable Development Goal 14, and especially on the prevention and reduction of pollution and on the conservation of biodiversity.

Thematic Decisions

Decision IG.23/1

Revised reporting format for the implementation of the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, in particular article 26 of the Barcelona Convention and relevant articles of its Protocols addressing reporting obligations,

Recalling decision IG. 17/3 of the fifteenth meeting of the Contracting Parties (COP 15) (Almeria, Spain, 15-18 January 2008), by which the Contracting Parties adopted the reporting format for the implementation of the Barcelona Convention and its Protocols,

Recalling also decisions IG.22/16 and IG.22/20, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), by which the Contracting Parties requested a simplified and practical draft of the report form for the Barcelona Convention and its Protocols,

Reiterating that national reporting is an obligation for all Contracting Parties, and that timely submission of national reports is essential for keeping under review the implementation of the Barcelona Convention and its Protocols, thereby contributing to strengthening the impact of the Mediterranean Action Plan system,

Recalling article 17 (vi) of the Barcelona Convention, requesting the Secretariat to report regularly to the Contracting Parties on the implementation of the Barcelona Convention and its Protocols,

Recognizing the challenges faced by Parties in reporting on the implementation of the Barcelona Convention and its Protocols, and the need to ensure that legal and technical advice is delivered to facilitate their reporting process,

Noting with appreciation the efforts made by Contracting Parties to report on their implementation of the Barcelona Convention and its Protocols using the online Barcelona Convention Reporting System,

1. *Adopt* the revised reporting format for the implementation of the Barcelona Convention and its Protocols as set out in Annex I to the present decision;
2. *Urge* Contracting Parties to use the revised reporting format when submitting their national implementation reports, starting with those for the biennium 2016–2017, to be submitted by December 2018;
3. *Request* the Secretariat to ensure that the revised reporting format is accessible on the online Barcelona Convention Reporting System, with a view to enabling Contracting Parties to submit their national implementation reports, starting with those for the biennium 2016–2017;
4. *Request* the Secretariat to submit to each meeting of the Contracting Parties, on the basis of an analysis of the information contained in the national reports, a report on the general advances made in the region, including at the legal and institutional levels, in implementing the Barcelona Convention and its Protocols along with proposals for further measures, as necessary.

Revised Reporting Format: Section 01- Barcelona Convention

1. IMPLEMENTATION OF THE BARCELONA CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT AND THE COASTAL REGION OF THE MEDITERRANEAN AND ITS PROTOCOLS (BARCELONA CONVENTION)

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Please provide information on the reporting Party by completing the following table.

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Name of the officer who is the MAP focal point	
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Tel.	
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Full name of the institution	
Mailing address	
Tel.	
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Email	
Signature of the MAP Focal Point	
Date of submission of the Report	

Organizations/bodies/agencies providing information for the compilation of the report

Please provide information on the preparation of this report, including, where appropriate, stakeholders involved and material used, by completing the following table.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

I – REPORTING FORMAT TO BE COMPLETED

1. BILATERAL AND MULTILATERAL AGREEMENTS

2. LEGAL AND REGULATORY MEASURES

3. POLICY MEASURES

4. MONITORING AND PUBLIC ACCESS TO INFORMATION

PART I BILATERAL AND MULTILATERAL AGREEMENTS

Question 1: If during the period under review, the Party has signed, *as per* Article 3 para. 2 of the Convention, any bilateral and/or multilateral agreement(s), including, sub-regional and/or regional agreement(s) with another Party or with other States, falling under the scope of application of the Convention and its Protocols, please complete Table I below.

Table I - BILATERAL AND/OR MULTILATERAL AGREEMENTS,

Reference	Agreement name ¹	Indicate website/URL link/other reference
1		
2		
3		
4		
5		

¹ List of individual agreements are not needed. Agreements can be listed at a suitable level of aggregation to avoid unnecessary level of detail. Suitable aggregations could be, for instance: agreements dealing with maritime safety, prevention of pollution from ships, combating pollution, liability and compensation for pollution damage, biological diversity or contaminants.

PART II **LEGAL AND REGULATORY MEASURES**

Question 2: Has the Party, in accordance with Article14 of the Barcelona Convention, adopted legislation implementing the provisions of the Convention as listed in Table II below?

Table II - LEGAL AND REGULATORY MEASURES

BC related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities		
Article 4.3.a Precautionary Principle	1	Application of the Precautionary Principle											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 4.3.b Polluter Pays Principle	2	Application of the Polluter Pays Principle											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

Article 4.3.c Environmental Impact Assessment (EIA)	3	Undertake EIA for proposed activities that are likely to cause a significant adverse effect and/or are subject to an authorization by competent authorities												
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question			
			If your answer is "No", please in the column difficulties/challenges, tick all that apply											
Article 4.4.b. BAT and BEP	4	Use of Best available techniques (BAT) and Best Environmental Practices (BEP)												
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question			
			If your answer is "No", please in the column difficulties/challenges, tick all that apply											
Article 12 Monitoring	5	Establishment of a system to monitor the pollution of the marine environment and its coastal areas												
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question			
	6	Designation of competent authorities responsible for pollution monitoring within areas under national jurisdiction												
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question			
Article 15.1 and 2 Public information and Participation	7	Ensure public access to information on the state of the marine environment and its coastal areas												
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question			
			If your answer is "No", please in the column difficulties/challenges, tick all that apply											

Article 15.1 and 2 Public information and Participation	8	Ensure public access to information related to the activities adversely affecting or likely to affect the marine environment and its coastal areas					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	9	Ensure public access to information related to activities carried out and/or measures taken to implement the Barcelona Convention and its Protocols					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	10	Ensure public participation and consultation in decision-making processes related to the development of policies and legislation for the protection of the marine environment and its coastal area					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	11	Ensure public participation and consultation in the EIA process for proposed activities that are likely to cause damage to the marine environment and its coastal areas					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	12	Ensure public participation in the process of authorization of proposed activities likely to cause damage to the marine environment and its coastal areas					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question

OPTIONAL REPORTING												
Article 4.3.d Environmental Impact Assessment (EIA)	13	Promotion of cooperation on the basis of notification, exchange of information and consultation among parties concerned, when an EIA is undertaken in a transboundary context									<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
			<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>				<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>					
Article 4.3.e Integrated Coastal Zone Management (ICZM)	14	Promotion of integrated planning and management of coastal areas, when preparing coastal zone management plans at the national, regional or local level, taking into account areas of ecological and landscape interest and the rational use of natural resources									<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
			<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>				<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>					
Article 13 Scientific and Technological Cooperation	15	Cooperation in the fields of science and technology by inter alia the exchange of scientific data and other information									<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
			<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>				<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>					
	16	Promotion the research on, access to and transfer of environmental sound technology, including clean production technologies									<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
			<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>				<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>					
Article 16 Liability and Compensation	17	Implementation of the Guidelines for the Determination of Liability and Compensation for Damage resulting from Pollution of the Marine Environment in the Mediterranean Sea Area									<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
			<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>				<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>					

PART III POLICY MEASURES

Question 3: Has the Party undertaken any of the measures listed in Table III hereunder for the promotion of sustainable development and the integration of environmental protection when formulating and adopting development policies?

Table III - POLICY MEASURES

Article 4 General Obligations		Description of the measure	Status				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial Resources	Administrative management	Technical Guidance Capabilities		
Domestic Strategy for sustainable development	1	Protection of the marine environment and its coastal areas is part of the domestic strategy for sustainable development											
			If your answer is "Yes", on a voluntary basis please provide brief explanation (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Regional Strategies adopted in the framework of MAP	2	Protection of the marine environment and its coastal areas from land-based sources of pollution and activities and pollution from ships is part of the Party's NSSD and other relevant sectoral development policies such as industry, energy, agriculture, transport, etc. by giving due regard to priority objectives, actions and targets of the SAP MED and the respective NAPs and the regional strategy to combat pollution from ships											
			If your answer is "Yes", on a voluntary basis please provide brief explanation (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

PART IV MONITORING AND PUBLIC ACCESS TO INFORMATION

Question5: Has the Party undertaken the measures and actions listed in Table IV below, in order to implement the following provisions on monitoring and public access to information?

Table IV - MONITORING AND PUBLIC ACCESS TO INFORMATION

BC related Article		Description of the measure					Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities	Yes	No
Article 12 Monitoring	1	Establishment of monitoring programmes to assess the state of the marine environment and its coastal areas and compliance with domestic standards on releases and/or quality marine environment criteria for the effective implementation of the Barcelona Convention and its Protocols											
			If your answer is "Yes", on a voluntary basis please provide brief explanation (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 15.1 Public information and Participation	2	Publication of periodical assessment reports on the state of the marine environment and its coastal areas, including description of measures taken and related technical data or indicators, and their effectiveness for the implementation of the Barcelona Convention and its Protocols											
			If your answer is "Yes", on a voluntary basis please provide brief explanation (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

Revised Reporting Format: Section 02-Dumping Protocol

2. IMPLEMENTATION OF THE PROTOCOL FOR THE PREVENTION AND ELIMINATION OF POLLUTION OF THE MEDITERRANEAN SEA BY DUMPING FROM SHIPS AND AIRCRAFTS OR INCINERATION AT SEA (DUMPING PROTOCOL)

I. INFORMATION ON THE REPORTING PARTY

Please provide information on the reporting Party by completing the following table.

Contracting Party	
Reporting period (from D/M/Y to D/M/Y)	
Name of the institution/s responsible for the Dumping Protocol	
Name of the officer who is the focal point for the Dumping Protocol	
Mailing address	
Tel.	
Fax	
Email	
<i>Contact point for the national report, if any</i>	
Full name of the institution	
Mailing address	
Tel.	
Fax	
Email	
Signature of the Protocol's Focal Point	
Date of submission of the Report	

Organizations/bodies/agencies providing information for the compilation of the report

Please provide information on the preparation of this report, including, where appropriate, stakeholders involved and material used, by completing the following table.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

I – REPORTING FORMAT TO BE COMPLETED

- 1. LEGAL AND REGULATORY MEASURES**
- 2. DUMPING AT SEA PERMITS AND QUANTITIES**
- 3. QUANTITIES OF WASTES OR OTHER MATTER FOR EACH DUMPING SITE AND COORDINATES FOR DUMPSITES**
- 4. MONITORING**
- 5. PLACEMENT**

PART I LEGAL AND REGULATORY MEASURES

Has the Party, in accordance with Article 14 of the Barcelona Convention, adopted legislation implementing the provisions of the Dumping Protocol, as listed in **Table I** below?

Table I – LEGAL AND REGULATORY MEASURES

Dumping Protocol Related Article	No.	Description of the obligations	Status Please tick the box that applies				Difficulties/Challenges Please tick all that apply					Changes in the information provided in the previous report (please tick the box that applies)	
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Administrative management	Financial Resources	Technical Guidance and Capabilities	Yes	No
Article 4.1	1	Prohibition of dumping of wastes and other matter with the exception of those listed in Article 4.2 ¹											
			If your answer is "Yes", on a voluntary basis please, provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 5 Article 6 Article 10.1	2	Dumping of wastes and other matter listed in Article 4.2 is subject to a prior special permit from the designated competent national authority or authorities in conformity with the criteria set forth in the Annex to the Protocol ² and the related Guidelines adopted by the Meetings of the Contracting Parties ³											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

¹ Wastes or other matter listed in Article 4.2. are: "(a) dredged material; (b) fish waste or organic materials resulting from the processing of fish and other marine organisms; (c) vessels, until 31 December 2000; (d) platforms and other man-made structures at sea, provided that material capable of creating floating debris or otherwise contributing to pollution of the marine environment has been removed to the maximum extent, without prejudice to the provisions of the Protocol concerning Pollution Resulting from Exploration and Exploitation of the Continental Shelf, the Seabed and its Subsoil; (e) inert uncontaminated geological materials the chemical constituents of which are unlikely to be released into the marine environment".

² The Annex to the Protocol lists the factors to be considered in establishing criteria governing the issue of permits for the dumping of matter at sea taking into account Article 6. These are: "A. Characteristics and Composition of the Matter, B. Characteristics of Dumping Site and Method of Deposit and C. General Considerations and Conditions".

³ Guidelines adopted by the Meeting of the Contracting Parties refer to the wastes or other matter listed in Article 4.2.i.e .Guidelines for the management of the dredged material,1999; Guidelines for the management of fish waste or organic materials resulting from the processing of fish and other marine organisms,2001; Guidelines for the dumping of platforms and other man-made structures at sea,2003; Guidelines for the dumping of inert uncontaminated geological materials,2005.

Article 11	8	Application of measures to implement this Protocol to your vessels and aircrafts, those loading in your territory and those believed to be engaged in dumping in areas under your jurisdiction.										
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply									
OPTIONAL REPORTING												
Article 12	9	Issuing of instructions to maritime inspection ships and aircraft and other appropriate services to report to the relevant national authorities any incidents or conditions giving rise to suspicions that dumping in contravention to the Protocol had occurred or was about to occur										
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to the next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply									

PART II **DUMPING AT SEA PERMITS AND QUANTITIES¹**

Table 2a Biennial Summary of Dumping at Sea Permits and Quantities									
2.1 1976 Protocol Article or 1995 Protocol Article ²	2.2 Type of Permit ³	2.3 Waste Category ⁴	2.4 Total Number of New Permits Issued	2.5.1 Total Quantity of a Waste Category Permitted for Dumping at Sea	2.5.2 Waste Reporting Unit ⁵	2.6.1 Total Quantity of a Waste Category Actually Dumped at Sea	2.6.2 Waste Reporting Units ⁴	2.7 Dumping at Sea Operations Regulated by Other Means	2.8 Notes
Reference to Articles pertaining to permits	Permit types are listed in the 1976 Protocol or the 1995 Protocol;	1976 Protocol waste categories vary by permit; 1995 Protocol waste categories are defined in Article 4.2 of the Protocol	Total of all new permits issued, single year valid permits and valid multiple year permits under a "Type of	Total quantity of a specific waste that was permitted for dumping at sea at a dump site during the reporting period	Reporting units used by the permitting authority for a specific waste	Total quantity of a specific waste that was actually dumped at the dump site during the reporting period	Reporting units used by the permitting authority for a waste	Provide information on other programs that also manage dumping at sea operations,	Brief notes on any entry in Table 2
1976 Protocol Article 5, Annex II	Special Permit	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		
1976 Protocol Article 6	General Permit	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		
1976 Protocol Article 8	<i>Force Majeure</i>	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		Website/URL link or other reference to MEDPOL Report
1976 Protocol Article 9	Critical Situation	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		Website/URL link or other reference to MEDPOL Report
1995 Protocol Article 4.2.a	Permit	Dredged Material			[e.g. cubic metres, cubic yards, tonnes; expressed as dry weight, if possible]		[e.g. cubic metres, cubic yards, tonnes; expressed as dry weight, if possible]		
1995 Protocol Article 4.2.b	Permit	Fish Waste or Organic Materials Resulting from the Processing of Fish and other Marine Organisms			[e.g. tonnes (wet weight)]		[e.g. tonnes (wet weight)]		
1995 Protocol Article 4.d	Permit	Platforms or Other Man Made Structures at Sea			Number of Platforms or Other Man Made Structures at Sea		Number of Platforms or Other Man Made Structures at Sea		[Describe the platforms or other man-made structures]
1995 Protocol Article 4.e	Permit	Inert Uncontaminated Geological Material			[e.g. tonnes (dry weight)]		[e.g. tonnes (dry weight)]		
1995 Protocol Article 8	<i>Force Majeure</i>	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		Website/URL link or other reference to MEDPOL Report
1995 Protocol Article 9	Critical Situation	[Specify waste category]			[Depends on waste dumped]				Website/URL link or other reference to MEDPOL Report

¹Note: Tables 2 to 5 harmonized to follow the Revised Electronic Reporting Format of the London Convention and its Protocol on Dumping (LC 33/15 Annex 5)

²If countries have ratified both the 1976 Protocol and the 1995 Protocol, the report should include information on the 1995 Protocol only.

³The 1976 Protocol has specific permit categories (e.g. 1976 Protocol Article 5 – Special Permits, 1976 Protocol Article 6– General Permits, 1976 Protocol Article 8 –Force Majeureand1976ProtocolArticle9–CriticalSituation), while the1995 Protocol does not have specific categories, except Force Majeure(Article8) and Critical Situation (Article 9). If more than one permit was issued for a specific waste, please insert another row(s)for each additional permit to provide the information.

⁴The 1976 Protocol does not provide specific waste categories; however, the 1995 Protocol does provide specific waste categories (i.e. dredged material; fish waste or organic materials resulting from the processing of fish and other marine organisms; platforms and other man-made structures at sea and inert uncontaminated geological materials (see Column2.3).

⁵Specify the reporting units commonly used by the individual Contracting Party in their dumping at sea permits.

Part III **QUANTITIES OF WASTES OR OTHER MATTER FOR EACH DUMP SITE AND COORDINATES FOR DUMPSITES**

Table 3. Biennial Summary of Quantities of Wastes or Other Matter at Sea for Each Dump Site						
3.1 Dump Site Code¹	3.2 Map of Dumping Site²	3.3 Method of Dumping at Sea	3.4 Type of Waste Dumped at the Sea	3.5 Total Quantity of a Waste Actually Dumped at the Site	3.5.1 Waste Reporting Units	3.6 Notes
Two-letter prefix for country code and the Contracting Party's own alphanumeric dump site code	Confirm that a small scale map showing the dump site location has been "Provided" or "Not Provided" to UNEP/MA Secretariat	Dumping at sea operations conducted via: ship, vessel, barge, aircraft, or other [explain]	[Select from the list of waste categories provided in Table 2a]	Total dumped at a specific site	[Depends on waste dumped]	Brief notes on any entry in Table 3

¹Country Prefixes for Dump Sites Codes to be provided by UNEP/MAP Secretariat in line with the procedures set by the International Organization for Standardization (ISO), which manages a list of country names and two-letter codes that should be used as prefixes for the dump site codes (ISO 3166)

²The submission of a map is not a specific legal requirement of the 1976 Protocol or the 1995 Protocol, but the map is intended to be used by UNEP/MAP Secretariat to aid in providing the location of the dump site

Part V: PLACEMENT (Dumping Protocol, Article3.4.b)

Table 6: Biennial Summary of Information on Construction of Artificial Reefs							
Placement Site Code	Locations of the placement ¹	Purpose of Placement	Material Characteristics and Quantity ²	Is Impact Hypothesis conducted and when by who (yes/no; date; name)	The name of the permitting authority and the name of national legislation	Plans for Monitoring activities are in place ³ (3) (YES/NO)	Notes
National Code given	A Map showing the placement site location with coordinates including depth and distance to shore and distance to the other reefs marked (YES/NO)	(a) Environmental purposes including restoration of habitat, ecosystem management and biodiversity (b) Living marine resources (c) Tourism etc.	Detailed explanation of the composition of the material and their quantity (in tons)		Name of the authority; legislation name and number as official gazette	Explain the monitoring and modalities including a plan for pre-placement and post-placement monitoring and evaluation.	Other relevant information in details

¹As defined in the 2005 Guidelines for the Placement at Sea of Matter for Purpose other than the Mere Disposal (Construction of Artificial Reefs)

²Inert materials which do not cause pollution through leaching, physical or chemical weathering and/or biological activity

³Pre-placement monitoring plans should set a reference baseline. Post-Placement monitoring plans should aim to produce scientific evidence to impact hypothesis

Revised Reporting Format: Section 03-Prevention and Emergency Protocol

3. IMPLEMENTATION OF THE PROTOCOL CONCERNING COOPERATION IN PREVENTING POLLUTION FROM SHIPS AND, IN CASES OF EMERGENCY, COMBATING POLLUTION OF THE MEDITERRANEAN SEA (PREVENTION AND EMERGENCY PROTOCOL)

I - INFORMATION ON THE REPORTING PARTY

Please provide information on the reporting Party by completing the following table.

Contracting Party	
Reporting period (from D/M/Y to D/M/Y)	
Full name of the institution/s responsible for the implementation of the Prevention and Emergency	
Name of the officer who is the REMPEC focal point	
Mailing address	
Tel.	
Fax	
Email	
Contact point for the national report, if any	
Full name of the Institution	
Mailing address	
Tel.	
Fax	
Email	
Signature of the REMPEC Focal Point	
Date of submission of the Report	

Organizations/bodies/agencies providing information for the compilation of the report

Please provide information on the preparation of this report, including, where appropriate, stakeholders involved and material used, by completing the following table.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

II – REPORTING FORMAT TO BE COMPLETED

- 1. LEGAL AND REGULATORY MEASURES**
- 2. POLLUTION PREPAREDNESS AND RESPONSE: OPERATIONAL MEASURES**
- 3. POLLUTION INCIDENTS**

PART I LEGAL AND REGULATORY MEASURES

Has the Party, in accordance with Article 14 of the Barcelona Convention, adopted legislation implementing the provisions of the Prevention and Emergency Protocol, as listed in Table I below?

Table I – LEGAL AND REGULATORY MEASURES

Prevention and Emergency Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report (please tick the box that applies)	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial Resources	Administrative management	Technical Guidance and Capabilities		
Article 4.1	1	Maintenance and promotion of contingency plans and other means (i.e. pre-positioned response equipment and training courses for both operating and supervisory level response personnel) of preventing and combating oil and hazardous and noxious substances(HNS) pollution incidents											
	If your answer is "Yes", please provide link to relevant part of REMPEC Country Profile and/or title, date of enactment and a summary of the relevant provisions (Indicate website/URL link or other reference) If your answer is "No", please in the column difficulties/challenges, tick all that apply			On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				
Article 4.1	2	Designation of a national authority or authorities responsible for the implementation of the Prevention and Emergency Protocol											
	If your answer is "Yes" please provide link to relevant part of REMPEC Country Profile and/or title, date of enactment and a summary of the relevant provisions (Indicate website/URL link or other reference) If your answer is "No", please in the column difficulties/challenges, tick all that apply			On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				
Article 4.3	3	Informing the Regional Centre (REMPEC) every two years of the measures taken for the implementation of the Prevention and Emergency Protocol											
	If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (Indicate website/URL link or other reference) If your answer is "No", please in the column difficulties/challenges, tick all that apply			On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				
Article 5	4	Development of monitoring and surveillance programmes and activities aimed at detecting oil and HNS pollution incidents whether accidental or operational and illicit discharges											
	If your answer is "Yes", please provide link to MENELAS information system and/or title, date of enactment and a summary of the relevant provisions (Indicate website/URL link or other reference) If your answer is "No", please in the column difficulties/challenges, tick all that apply			On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				

Article 9.1	5	Issuing of instructions to masters of ships flying your flag and pilots of aircrafts registered in their territory to report on actual or potential oil and HNS pollution incidents to the designated national authority or authorities and the nearest Coastal State	<table border="1"> <tr> <td data-bbox="646 175 758 224"></td> <td data-bbox="758 175 869 224"></td> <td data-bbox="869 175 980 224"></td> <td data-bbox="980 175 1092 224"></td> </tr> <tr> <td colspan="4" data-bbox="646 224 1092 337">If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</td> </tr> <tr> <td colspan="4" data-bbox="646 337 1092 402">If your answer is "No", please in the column difficulties/challenges, tick all that apply</td> </tr> </table>					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				If your answer is "No", please in the column difficulties/challenges, tick all that apply				<table border="1"> <tr> <td data-bbox="1123 175 1234 224"></td> <td data-bbox="1234 175 1346 224"></td> <td data-bbox="1346 175 1457 224"></td> <td data-bbox="1457 175 1568 224"></td> <td data-bbox="1568 175 1680 224"></td> </tr> <tr> <td colspan="5" data-bbox="1123 224 1671 402">On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</td> </tr> </table>						On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					<table border="1"> <tr> <td data-bbox="1671 175 1829 224"></td> <td data-bbox="1829 175 1978 224"></td> </tr> <tr> <td colspan="2" data-bbox="1671 224 1978 402">If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</td> </tr> </table>			If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
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On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required																															
If your answer is "Yes", please update accordingly If your answer is "No", please go to next question																															
Article 9.2	6	Ensuring that the master of every ship sailing in their territorial waters report on actual or potential oil and HNS pollution incidents to the designated national authority or authorities and the nearest Coastal State	<table border="1"> <tr> <td data-bbox="646 402 758 451"></td> <td data-bbox="758 402 869 451"></td> <td data-bbox="869 402 980 451"></td> <td data-bbox="980 402 1092 451"></td> </tr> <tr> <td colspan="4" data-bbox="646 451 1092 565">If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</td> </tr> <tr> <td colspan="4" data-bbox="646 565 1092 613">If your answer is "No", please in the column difficulties/challenges, tick all that apply</td> </tr> </table>					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				If your answer is "No", please in the column difficulties/challenges, tick all that apply				<table border="1"> <tr> <td data-bbox="1123 402 1234 451"></td> <td data-bbox="1234 402 1346 451"></td> <td data-bbox="1346 402 1457 451"></td> <td data-bbox="1457 402 1568 451"></td> <td data-bbox="1568 402 1680 451"></td> </tr> <tr> <td colspan="5" data-bbox="1123 451 1671 613">On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</td> </tr> </table>						On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					<table border="1"> <tr> <td data-bbox="1671 402 1829 451"></td> <td data-bbox="1829 402 1978 451"></td> </tr> <tr> <td colspan="2" data-bbox="1671 451 1978 613">If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</td> </tr> </table>			If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
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If your answer is "Yes", please update accordingly If your answer is "No", please go to next question																															
Article 9.3 Article 9.4	7	Issuing of instructions to Port and Port Facility Authorities and offshore installations under their jurisdiction to report on actual or potential oil and HNS pollution incidents to the designated national authorities or authorities	<table border="1"> <tr> <td data-bbox="646 613 758 662"></td> <td data-bbox="758 613 869 662"></td> <td data-bbox="869 613 980 662"></td> <td data-bbox="980 613 1092 662"></td> </tr> <tr> <td colspan="4" data-bbox="646 662 1092 776">If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</td> </tr> <tr> <td colspan="4" data-bbox="646 776 1092 841">If your answer is "No", please in the column difficulties/challenges, tick all that apply</td> </tr> </table>					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				If your answer is "No", please in the column difficulties/challenges, tick all that apply				<table border="1"> <tr> <td data-bbox="1123 613 1234 662"></td> <td data-bbox="1234 613 1346 662"></td> <td data-bbox="1346 613 1457 662"></td> <td data-bbox="1457 613 1568 662"></td> <td data-bbox="1568 613 1680 662"></td> </tr> <tr> <td colspan="5" data-bbox="1123 662 1671 841">On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</td> </tr> </table>						On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					<table border="1"> <tr> <td data-bbox="1671 613 1829 662"></td> <td data-bbox="1829 613 1978 662"></td> </tr> <tr> <td colspan="2" data-bbox="1671 662 1978 841">If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</td> </tr> </table>			If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
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If your answer is "Yes", please update accordingly If your answer is "No", please go to next question																															
Article 9.6 Article 9.7	8	Communication to REMPEC and those Contracting Parties likely to be affected of information on actual or potential oil and HNS pollution incidents collected by masters of ships flying your flag, pilots of aircrafts registered in your territory, Port and Port Facility Authorities and offshore installations under their jurisdiction	<table border="1"> <tr> <td data-bbox="646 841 758 889"></td> <td data-bbox="758 841 869 889"></td> <td data-bbox="869 841 980 889"></td> <td data-bbox="980 841 1092 889"></td> </tr> <tr> <td colspan="4" data-bbox="646 889 1092 1003">If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</td> </tr> <tr> <td colspan="4" data-bbox="646 1003 1092 1127">If your answer is "No", please in the column difficulties/challenges, tick all that apply</td> </tr> </table>					If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				If your answer is "No", please in the column difficulties/challenges, tick all that apply				<table border="1"> <tr> <td data-bbox="1123 841 1234 889"></td> <td data-bbox="1234 841 1346 889"></td> <td data-bbox="1346 841 1457 889"></td> <td data-bbox="1457 841 1568 889"></td> <td data-bbox="1568 841 1680 889"></td> </tr> <tr> <td colspan="5" data-bbox="1123 889 1671 1127">On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</td> </tr> </table>						On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					<table border="1"> <tr> <td data-bbox="1671 841 1829 889"></td> <td data-bbox="1829 841 1978 889"></td> </tr> <tr> <td colspan="2" data-bbox="1671 889 1978 1127">If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</td> </tr> </table>			If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
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If your answer is "Yes", please update accordingly If your answer is "No", please go to next question																															

OPTIONAL REPORTING															
Article 7	22	Dissemination of information on designated national authorities with responsibilities, including operational responsibilities, in case of oil and HNS pollution incidents											<p>If your answer is "Yes", please provide link to relevant part of REMPEC Country Profile and/or title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly</p> <p>If your answer is "No", please go to next question</p>
	23	Dissemination of information on national regulations and other matters directly related to preparedness for and response to pollution of the sea by oil or other hazardous and noxious substances											<p>If your answer is "Yes", please provide link to relevant part of REMPEC Country Profile and/or title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly</p> <p>If your answer is "No", please go to next question</p>
24	Dissemination of information on new ways in which pollution of the sea by oil or other hazardous and noxious substances may be avoided, new measures for combating pollution, new developments in the technology of conducting monitoring and the development of research programmes.											<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly</p> <p>If your answer is "No", please go to next question</p>	
Article 8	25	Coordination of the means of communication to ensure, with the necessary speed and reliability, the reception, transmission and dissemination of reports and urgent information concerning pollution incidents											<p>If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly</p> <p>If your answer is "No", please go to next question</p>

Part II POLLUTION PREPAREDNESS AND RESPONSE: OPERATIONAL MEASURES

Table II – OPERATIONAL MEASURES

Prevention and Emergency Protocol related Article	Capacity response	Status Please tick the box that applies				Difficulties/Challenges Please, tick all that applies					
		Yes	Under preparation	Under revision	No	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance and Capabilities	
Article 4	1 National response strategy for marine pollution incidents adopted including a policy for the use of dispersants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes" provide link to the relevant part of REMPEC Country Profile and/or national datasets for details (website/URL link/other reference)					On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required				
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									
	2 National Contingency Plan covers: (Please, tick all that applies)	Oil		HNS (Hazardous and Noxious Substances)			Both oil and HNS				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 National stockpiles of pre-positioned oil and HNS spill response equipment, including naval and aerial means, established	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes" provide link to MEDGIS-MAR* and/or national datasets for details (website/URL link/other reference)					On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required				
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									
	4 Regular exercises are carried out to test the National Contingency Plan	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes, provide link to the relevant part of REMPEC Country Profile and/or national data sets for details (website/URL link/other reference)					On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required				
		If your answer is "No, please in the column difficulties/challenges, tick all that apply									

* Mediterranean Integrated Geographical Information System on Marine Pollution Risk Assessment and Response (MEDGIS-MAR)

Prevention and Emergency Protocol related Article		Capacity response	Status				Difficulties/Challenges				
			Please tick the box that applies				Please, tick all that applies				
Article 4	5	Local contingency plans, including port contingency plans, adopted	Yes	Under preparation	Under revision	No	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance and Capabilities
			If your answer is "Yes" provide link to the relevant part of REMPEC country profile and/or national datasets for details (website/URL link/other reference)				On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required				
	If your answer is "No", please in the column difficulties/challenges, tick all										
	6	Local plans, including port contingency plans, are integrated with the National Contingency Plan	Yes	No	In process of integration		Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance and Capabilities
			If your answer is "Yes" on a voluntary basis provide website/URL link/other reference for details				On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required				
	If your answer is "No", please in the column difficulties/challenges, tick all that apply										
	7	Local plans, including port contingency plans, are integrated with the industry emergency procedures	Yes		No		Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance and Capabilities
			If your answer is "Yes" on a voluntary basis provide website/URL link/other reference for details				On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required				
	If your answer is "No", please in the column difficulties/challenges, tick all that apply										
8	Participation in sub-regional agreements regarding emergency situations adopted	Yes		No		Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance and Capabilities	
		If your answer is "Yes" provide link to the relevant part of REMPEC country profile and/or national datasets for details (website/URL link/other reference)				On a voluntary basis , please briefly describe difficulties/challenges and the type of assistance that is required					
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									

Revised Reporting Format: Section 04-LBS Protocol

4. IMPLEMENTATION OF THE PROTOCOL FOR THE PROTECTION OF THE MEDITERRANEAN SEA AGAINST POLLUTION FROM LAND-BASED SOURCES AND ACTIVITIES (LBS PROTOCOL)

I - INFORMATION ON THE REPORTING PARTY

Please provide information on the reporting Party by completing the following table.

Contracting Party	
Reporting period (from D/M/Y to D/M/Y)	
Name of the institution/s responsible for the LBS Protocol	
Name of the officer who is the focal point for the LBS Protocol	
Mailing address	
Tel.	
Fax	
Email	
Contact point for the national report, if any	
Full name of the Institution	
Mailing address	
Tel.	
Fax	
Email	
Signature of the Protocol's Focal Point	
Date of submission of the Report	

Organizations/bodies/agencies providing information for the compilation of the report

Please provide information on the preparation of this report, including, where appropriate, stakeholders involved and material used, by completing the following Table.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

II – REPORTING FORMAT TO BE COMPLETED

1. LEGAL AND REGULATORY MEASURES

2. INVENTORY: LBS PROTOCOL (Article13(c))

3. IMPLEMENTATION OF REGIONAL ACTION PLANS (RAPs) AND THEIR EFFECTIVENESS

1. Regional Action Plans on POPs
2. Regional Action Plans on the Reduction of BOD5
3. Regional Plan on the Reduction of Inputs of Mercury (DecisionIG.20/8.1)
4. RegionalPlanonMarineLitterManagementintheMediterranean(DecisionIG.21/7)
5. RegionalActionPlanonSustainableConsumptionandProductionintheMediterranean(DecisionIG.22/5)

4. IMPLEMENTATION OF THE NATIONAL ACTION PLANS (NAPs) AND THEIR EFFECTIVENESS

5. MONITORING

6. ENFORCEMENT MEASURES

PART I LEGAL AND REGULATORY MEASURES

Question 1: Has the Party, in accordance with Article 14 of the Barcelona Convention, adopted legislation implementing the provisions of the Land Based Sources and Activities Protocol (LBS Protocol) as listed in Table I below?

Table I – LEGAL AND REGULATORY MEASURES

LBS Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report (please tick the box that applies)	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial Resources	Administrative management	Technical Guidance and Capabilities		
Article 5.1	1	Action Plans, programmes and measures (the NAPs and the SAP) to eliminate pollution from LBS activities particularly regarding the phasing out of inputs of the substances listed in Annex I to the Protocol that are toxic, persistent and liable to bioaccumulate, using BAT and BEP											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 5.2	2	Priorities and timetables for implementing the action plans, programmes and measures adopted taking into account the elements set out in Annex I to the Protocol and periodically updated											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

Article 5.5	3	Preventive measures taken to reduce to a minimum the risk of pollution caused by accidents											<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>
			<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>		<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>								
			<p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>										
Art. 6	4	Point source discharges into the Protocol Area and releases into water and/or air that reach and may affect the Mediterranean Area are strictly subject to authorization or regulation by the competent national authority or authorities											<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>
			<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>		<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>								
				<p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>									
	5	Establishment of inspection systems for the competent national authority or authorities to assess compliance with authorizations and regulations											<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>
			<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>		<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>								
				<p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>									
6	Application of appropriate sanctions in the event of non-compliance with authorizations and/or regulations											<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>	
		<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p>		<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>									
			<p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>										

PART III IMPLEMENTATION OF REGIONAL ACTIONS PLANS (RAPs) AND THEIR EFFECTIVENESS

Table III- IMPLEMENTATION OF RAPs AND THEIR EFFECTIVENESS

	Regional Plan Requirements: Measures taken	Status of implementation				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>		
		Please tick the box that applies				Please tick all that apply					Yes	No	
		Yes	No	Underdevelopment	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities			
Regional Action Plans on POPs* (COPIGDecisions19/8,19/9,20/8.3.1-4)	Prohibit and/or take legal and administrative measures necessary to eliminate the production and use, import and export of POPs and their wastes <i>(Provision that follows Article 3 of the Stockholm Convention)</i>												
		If your answer is "Yes", on a voluntary basis please provide further information <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question		
		If your answer is "No", please in the column difficulties/challenges, tick all that apply											
	Application of BAT and BEPs for environmentally sound management of POPs <i>(Provision that follows Article 5 of the Stockholm Convention)</i>												
		If your answer is "Yes", on a voluntary basis please provide further information <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question		
		If your answer is "No", please in the column difficulties/challenges, tick all that apply											
Take appropriate measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes, including products and articles upon becoming wastes <i>(Provision that follows Article 6 of the Stockholm Convention)</i>													
	If your answer is "Yes", on a voluntary basis please provide further information <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question			
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												

*Note: Table harmonized to follow the Electronic Reporting System of the Stockholm Convention (Third Reporting) (SC-6/21). In particular: (1) Section II. Article 3: Measures to reduce or eliminate releases from intentional production and use (Question 5), (2) Section IV. Article 5: Measures to reduce or eliminate releases from unintentional production (Question 14) and (3) Section V. Article 6: Measures to reduce or eliminate releases from stockpiles and wastes (Questions 19 and 20).

Regional Action Plans on BOD5 reduction (COPDecisionsG.19.7and20/8.2)	Adopt National Emission Limit Values (ELV) for BOD5 in urban wastewater after treatment in accordance with the requirements of the Regional Plan (Article III.2 and 3)										If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Monitor discharges from municipal waste water treatment plants to verify compliance with the requirements of the Regional Plan taking into account the Guidelines included in Appendix II to the Regional Plan(ArticleIII.4)										If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Ensure that all agglomerations of more than 2000 inhabitants collect and treat urban wastewater before discharging them into the environment (Article III, Appendix I and Appendix III).										If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Establishment of ELV and authorization compatible with the operation and the emission discharge values of the urban waste water treatment plan, in case the food sector installation discharges into the sewage system (Article IV.1)										If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Monitor food sector installation discharges into water to verify compliance with the requirements of the Regional Plan taking into account the Guidelines included in Appendix I to the Regional Plan (Article IV.2)										If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question

Regional Action Plan on Sustainable Consumption and Production in the Mediterranean (COPDecision(G.22/5))	<p>Food, Fisheries and Agriculture (FFA): Adoption and implementation of Good Agricultural Practices (GAP) in line with the EcAP ecological objectives and ICZM guidelines</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
		<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>		
	<p>Food, Fisheries and Agriculture (FFA): Adoption and implementation of Sustainable Fishing Practices, in line with the EcAP ecological objectives and ICZM guidelines</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
		<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>		
	<p>Food, Fisheries and Agriculture (FFA): Establishment of certification schemes (eco-labels) that confirm the sustainable production of food and fisheries products.</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
		<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>		
	<p>Food, Fisheries and Agriculture (FFA): Adoption of Sustainable Public Procurement (SPP) schemes for food and fisheries products.</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>
		<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>		
<p>Food, Fisheries and Agriculture (FFA): Adoption of measures in the field of communication and education to promote the consumption of sustainable, healthy and local food</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>	
	<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>			
<p>Goods Manufacturing: Adoption of measures to implement the waste management hierarchy, develop extended produced responsibility schemes, and encourage circular economy</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>	
	<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>			
<p>Goods Manufacturing: Development of policy instruments to support the private sector in the sustainable design, production and use of manufactured goods</p>	<p>If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is "Yes", please update accordingly If your answer is "No", please go to next question</p>	
	<p>If your answer is "No", please in the column difficulties/challenges, tick all that apply</p>			

Goods Manufacturing: Adoption and implementation of Sustainable Public Procurement (SPP) in the Goods Manufacturing Sector	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
Tourism: Creation of eco-taxes, eco-charges or fees to internalize externalities of tourism activities	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
Tourism: Revision of the current national tourism legislation to integrate sustainable principle and measures	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
Tourism: Adoption of measures to promote the diversification of the tourism offer from mass tourism to alternative forms of tourism	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
Tourism: Adoption of measures to promote tourism eco-labels and facilitate their award by tourist facilities.	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
Housing and Construction: Develop measures to support sustainable coastal urban development and green construction, taking into account the entire life cycle of buildings.	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
Housing and Construction: Promote sustainable public procurement in the public housing and construction sector	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question

PART IV IMPLEMENTATION OF NATIONAL ACTION PLANS (NAPs) AND THEIR EFFECTIVENESS

Table IV – IMPLEMENTATION OF NAPs AND THEIR EFFECTIVENESS

EO	Common Operational targets in the NAPs	Status of implementation				Difficulties/Challenges				Changes in the information provided in the previous report	
		Please tick the box that applies				Please tick all that apply				<i>(please tick the box that applies)</i>	
		Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Technical Guidance Capabilities	Yes	No
Common Operational targets in the NAPs underEO5	Provide XX% of agglomerations in excess of 2000 inhabitants with wastewater collection and treatment										
		If your answer is “Yes”, on a voluntary basis please provide further information <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is “Yes”, please update accordingly If your answer is “No”, please go to next question	
	If your answer is “No”, please in the column difficulties/challenges, tick all that apply										
	Reduce by XX% of BOD discharged to water bodies										
If your answer is “Yes”, on a voluntary basis please provide further information <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is “Yes”, please update accordingly If your answer is “No”, please go to next question			
If your answer is “No”, please in the column difficulties/challenges, tick all that apply											
Common Operational targets in the NAPs underEO9	Reduce discharge of hazardous substances from industrial plants (apply BAT/BEP) by XX% or dispose in a safe manner										
		If your answer is “Yes”, on a voluntary basis please provide further information <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is “Yes”, please update accordingly If your answer is “No”, please go to next question	
	If your answer is “No”, please in the column difficulties/challenges, tick all that apply										

Common Operational targets in the NAPs underEO10	Provide for the collection of XX% of solid waste																		
	-	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
		If your answer is "No", please in the column difficulties/challenges, tick all that apply																	
	Construct XX municipal solid waste landfills																		
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
		If your answer is "No", please in the column difficulties/challenges, tick all that apply																	
	Adopt good practices in solid waste management including waste reduction, sorting, recycling, recovery, and reuse																		
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
		If your answer is "No", please in the column difficulties/challenges, tick all that apply																	
	Regulate/reduce usage/ discharge of XX% of fraction of plastics																		
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
		If your answer is "No", please in the column difficulties/challenges, tick all that apply																	
	Close/ remediate XX% of illegal solid waste dump sites																		
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
		If your answer is "No", please in the column difficulties/challenges, tick all that apply																	

PART V MONITORING

Table V - MONITORING

	Monitoring requirements	Status Please tick the box that applies				Difficulties/Challenges Please tick all that apply					Changes in the information provided in the previous report (please tick the box that applies)	
		Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities	Yes	No
1	Implementation of quality status monitoring and Integrated Monitoring and Assessment (IMAP) or steps to revise national monitoring programmes in line with IMAP											
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
2	Ecological Objective-EO 5 Eutrophication											
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
3	Ecological Objective-EO 9-Pollution											
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
4	Ecological Objective EO 10 Marine litter											
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										

Revised Reporting Format: Section 05 - SPA and BD Protocol

5. IMPLEMENTATION OF THE PROTOCOL FOR THE SPECIALLY PROTECTED AREAS AND BIODIVERSITY INFORMATION ON THE REPORTING PARTY

Please provide information on the reporting Party by completing the following table.

Contracting Party	
Reporting period (from D/M/Y to D/M/Y)	
Full name of the institution/s responsible for the SPA and Biodiversity Protocol	
Name of the officer who is the SPÄ/RAC focal point	
Mailing address	
Tel.	
Fax	
Email	
Contact point for the national report, if any	
Full name of the institution	
Mailing address	
Tel.	
Fax	
Email	
Signature of the SPA/RAC Focal Point	
Date of submission	

Organizations/bodies/agencies providing information for the compilation of the report

Please provide information on the preparation of this report, including, where appropriate, stakeholders involved and material used, by completing the following table/s.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

II – REPORTING FORMAT TO BE COMPLETED

1. LEGAL AND REGULATORY MEASURES

2. SPECIALLY PROTECTED AREAS (SPAs)

3. SPECIALLY PROTECTED AREAS OF MEDITERRANEAN IMPORTANCE (SPAMIs)

4. ENDANGERED AND THREATENED SPECIES

5. MONITORING

6. ENFORCEMENT MEASURES

7. IMPLEMENTATION OF REGIONAL ACTIONS PLANS (RAPs)

1. *Action Plan for the conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea (DecisionIG21/4)*
2. *Updated Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea (DecisionIG.22/12)*
3. *Updated Action Plan for the Conservation of Cetaceans in the Mediterranean Sea (DecisionIG.22/12)*
4. *Action Plan for the conservation of Marine Vegetation in the Mediterranean Sea (DecisionIG20/6)*
5. *Action Plan for the conservation of Bird Species listed in Annex II of the SPA/BD Protocol in the Mediterranean (DecisionIG21/4)*
6. *Action Plan for the management of the Mediterranean Monk Seal*
7. *Action Plan for the conservation of Mediterranean Marine Turtles (DecisionIG21/4)*
8. *Updated Action Plan for the conservation of the Coralligenous and Other Calcareous Bio-concretions in the Mediterranean Sea (DecisionIG.22/12)*
9. *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) (DecisionIG21/4)*

PART I LEGAL AND REGULATORY MEASURES

Question 1: Has the Party, in accordance with Article 14 of the Barcelona Convention, adopted legislation implementing the provisions of the SPA and Biodiversity Protocol listed in Table I below?

Table I - LEGAL AND REGULATORY MEASURES

SPA BD Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities		
Article 2.1	1	Designation of the terrestrial areas (including wetlands) under their jurisdiction that are included in the area to which the SPA and Biological Diversity Protocol applies											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 3.1.a	2	Protection, preservation and management in a sustainable and environmentally sound way of areas of particular natural or cultural value, notably by the establishment of specially protected areas											
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

PARTII **SPECIALLY PROTECTED AREAS**

Question 2: Has the Party established specially protected areas and taken necessary measures for their protection and the implementation of their management plans?

Table II – MEASURES TO PROTECT SPAs

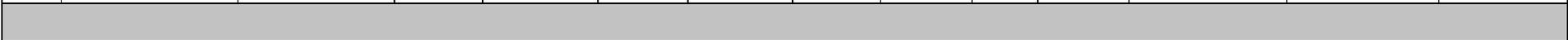
SPA BD Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report	
			Please tick the box that applies				Please tick all that apply					<i>(please tick the box that applies)</i>	
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities	Yes	No
Article 3.1.a	1	Setting up of protected areas that come within the Protocol's geographical coverage											
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 6.b	2	Prohibition of the dumping and any discharge likely to directly or indirectly harm the integrity of specially protected areas											
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

Article 6.h	8	Regulation and if necessary prohibition of any other activity likely to have an adverse impact on the specially protected areas. These include activities that may harm or disturb the species or that might endanger the state of conservation of the ecosystems or species or might impair the natural or cultural characteristics of the Specially Protected Area										
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply									
Article 18	9	Traditional subsistence and cultural activities of local populations taken into account when formulating protective measures for Specially Protected Areas										
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply									

Table IV - MANAGEMENT OF SPAs

SPA BD Protocol related Article		Management Plan elements	Status				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities		
Article 7.1	1	Adoption of planning, management, supervision and monitoring measures for Specially Protected Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 7.2.a	2	Elaboration and implementation of a management plan for each Specially Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 7.2.b	3	Programmes for the observation and scientific monitoring of changes in the Protocol Areas' ecosystems and of the impact of human activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 7.2.c	4	Measures for the involvement of local communities in the process of managing the protected areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

31	Tunisia TN1 La Galite Archipelago												
31	Tunisia TN2 Kneiss Islands												
32	Tunisia TN3 Zembra and Zembretta National Park												
34	France, Italy and Monaco Int1 Pelagos Sanctuary for the Conservation of Marine Mammals												



PART IV ENDANGERED AND THREATENED SPECIES

Question 5: Has the Party implemented measures to protect and conserve endangered and threatened species as indicated in Table VIII?

Table VIII - MEASURES TO PROTECT ENDANGERED AND THREATENED SPECIES

SPA BD Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities		
Article 11.2	1	Drawing up of a list of endangered or threatened species of fauna and flora and identification of their distribution in the zones subject to Party's jurisdiction											
			If your answer is "Yes", fill out the Table IX below as appropriate				On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
If your answer is "No", please in the column difficulties/challenges, tick all that apply													
Article 11.2 Article 12.1	2	Management of species of fauna and flora, listed in Annexes II and III to the Protocol, to ensure their favourable state of conservation											
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
If your answer is "No", please in the column difficulties/challenges, tick all that apply													

Article 12.6	8	Granting of exceptions, to the prohibitions prescribed for the protection of the species listed in the Annexes to the Protocol for scientific, educational, or management purposes necessary to ensure the survival of the species													
			If your answer is "Yes", on a voluntary basis please provide further information of the species concerned, the reasons for the exception and the quantities and beneficiaries (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				
			If your answer is "No", please in the column difficulties/challenges, tick all that apply												
Article 13	9	Taking steps to deal with the deliberate or accidental introduction into the wild of non-indigenous or genetically modified species and prohibiting those that may have harmful impacts on the ecosystems habitats or species													
			If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				
			If your answer is "No", please in the column difficulties/challenges, tick all that apply												
				If your answer is "No", please in the column difficulties/challenges, tick all that apply											

Table IX – MEASURES TO PROTECT SPECIES, PER EACH SPECIES

No.	List of species as per the Annexes to the Protocol <i>(For each species, tick the box that applies)</i>	Party's list of endangered/threatened animals and plants	Sub-regional cooperation for migrant species	Ex situ protection measures	Exemption granted	Introduction of species or genetically modified species	Comments/remarks
N	Posidonia Oceanica						
N+1	Xiphias gladius						

PART V MONITORING

	Monitoring requirements	Status				Difficulties/Challenges					Changes in the information provided in the previous report	
		Please tick the box that applies				Please tick all that apply					<i>(please tick the box that applies)</i>	
		Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities	Yes	No
1	Implementation of quality status monitoring and Integrated Monitoring and Assessment(IMAP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
2	Ecological Objective-EO 1 Biodiversity:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
3	Ecological Objective-EO 2 Non-indigenous species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
4	Ecological Objective -EO 3 Harvest of commercially exploited fish and shellfish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										
5	Ecological Objective EO 6 Sea-floor integrity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If your answer is "Yes", on a voluntary basis please provide a brief explanation on monitoring arrangements in place <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply										

PART VI **ENFORCEMENT MEASURES****Table XI – ENFORCEMENT MEASURES**

Enforcement measures for non-compliance with:	Number of inspections	Number of non-compliance cases	Number of fines issued and total amount	Number of other enforcement measures	Remarks/Comments
Article 6.g: Prohibition and regulation of all activities involving taking of species (i.e. fishing, hunting, taking of animals and harvesting of plants and their destruction, as well as trade in animals, parts of animals, plants and parts of plants) which originate in specially protected areas					
Article 11.3.a: Controlling and, where appropriate, prohibiting the taking, possession or killing, the commercial trade, the transport and the exhibition for commercial purposes of protected species of fauna, particularly those listed in Annex II to the Protocol					
Article 11.3.b Controlling and where appropriate prohibiting the disturbance of protected wild fauna, particularly during the period of breeding, incubation, hibernation or migration					
Article 11.5 Regulating and where appropriate prohibiting all forms of destruction and disturbance of protected species of flora, particularly those listed in Annex II to the Protocol					

PART VII IMPLEMENTATION OF REGIONAL ACTIONS PLANS (RAPs)

Table XII–IMPLEMENTATION OF RAPs

	Regional Plan Requirements: Measures taken	Status of implementation				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>		
		Please tick the box that applies				Please tick all that apply					Yes	No	
		Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities			
RAP for the conservation of Cartilaginous Fishes (Chondrichthyan) (COPDecisionIG21/4)	Formalize/reinforce synchronous submission of catch, bycatch and discard data to both scientific and management bodies, and annually to the General Fisheries Commission for the Mediterranean (GFCM)-Timeline: every year from 2014 to 2019												
		If your answer is “Yes”, on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is “Yes”, please update accordingly If your answer is “No”, please go to next question		
		If your answer is “No”, please in the column difficulties/challenges, tick all that apply											
	Establish strict legal protection for species listed in Annex II and GFCM Recommendation through national laws and regulations – Timeline: as soon as possible												
		If your answer is “Yes”, on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is “Yes”, please update accordingly If your answer is “No”, please go to next question		
		If your answer is “No”, please in the column difficulties/challenges, tick all that apply											
Support GFCM finning prohibition by enacting national regulations and monitoring their implementation and enforcement-Timeline: as soon as possible													
	If your answer is “Yes”, on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is “Yes”, please update accordingly If your answer is “No”, please go to next question			
	If your answer is “No”, please in the column difficulties/challenges, tick all that apply												

RAP for the conservation of Cartilaginous Fishes (Chondrichthyans) (COP Decision IG 21/4)	Complete and disseminate inventories of critical habitats (mating, spawning and nursery grounds)-Timeline: 2015	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									
	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-Timeline: from 2014 to 2015	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									
	Comply with obligations under GFCM Recommendations to collect and submit data on pelagic shark catches. _Timeline: as soon as possible	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									
	Improve programmes for the collection and reporting of data from coastal fisheries-Timeline: as soon as possible	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply									
Monitor Critically Endangered, Endangered and endemic species – Timeline: from 2014 to 2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Submit to the GFCM annual Shark Assessment Reports describing all national target and/or bycatch fisheries-Timeline: every year	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Develop and adopt (where these do not exist) national Shark Plans and specific regulations for fisheries exploiting chondrichthyans, whether target or bycatch-Timeline: as soon as possible	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply										

RAP concerning Species Introductions and Invasive Species (COP Decision IG 22/12)	Set up a mechanism to promote and coordinate the actions listed in paragraph 22 of the RAP ¹ -Timeline: 2016												If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Conduct a baseline study to feed the Marine Mediterranean Invasive Species (MAMIAS) ² _Timeline: 2017												If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Development of programmes for data collection and monitoring Timeline: 2017												If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Launch the procedures for enacting or strengthening national legislation governing the control of alien species introduction Timeline: 2017												If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	Develop programmes to raise the awareness of the general public and target groups, including decision-makers, concerning the risks associated with species introduction Timeline: 2017												If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>) If your answer is "No", please in the column difficulties/challenges, tick all that apply	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question

¹ Paragraph 22 of the Action Plan lists the following actions: (1) compiling an inventory of introduced species and assessing their pathways of introduction; (2) cooperating with SPA/RAC and supporting regional initiatives, in particular supporting and updating MAMIAS; (3) establishing a directory of relevant specialists and organisations; (4) setting up a group of experts who will be responsible for assessing all relevant issues; regarding introduction, spatial distribution, pathways of introduction, and impacts of alien species, and analysing risks and possible consequences, in close consultation with the other Parties and relevant International Organisations; (5) developing relevant training programmes; (6) strengthening and where necessary setting up systems to control the intentional import and export of alien marine species; (7) developing and implementing risk-assessment techniques; (8) promoting relevant scientific research; (9) cooperating with the concerned authorities in neighboring states regarding the detection of introduced species and risk assessment; (10) participating in international initiatives on invasive species; (11) promoting citizen science initiatives to support the monitoring of invasive species; and (12) developing programmes to raise the awareness of the general public and target groups, including decision-makers, concerning the risks associated with species introduction

² Paragraph 19 of the Action Plan specifies the points to be included in the study: (1) an inventory of all alien species in their territorial waters; (2) for each species: the year of first record, the pathway of introduction (together with the level of certainty in assessing the pathway: direct evidence, most likely, possible), and the state of the population; (3) geo referenced records of alien species presence and the date of each record; (4) studies on the impact of the alien species at national level; and (5) any relevant documentation.

RAP for the conservation of Bird Species (COP Decision IG 21/4)	Protect legally all bird species listed in Annex II to the SPA/BD Protocol- Timeline: by 2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "No", please in the column difficulties/challenges, tick all that apply								
	Optimize synergies with international agreements and organizations dedicated to bird conservation_ Timeline: from 2014 to 2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply								
	Organize specific training courses and workshops in coordination/synergy with international and/or national NGOs_ Timeline: from 2014 to 2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply								
	Establishment / support of research and monitoring programs to fill gaps in the knowledge of threatened species in partnership with other organizations –Timeline: from 2014 to 2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply								
Establishment and implementation of National Action Plans for the conservation of endangered and threatened bird species in the Mediterranean –Timeline: from 2014-2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply									
Identification of areas of important for birds on land and at sea (mapping of breeding, feeding, molting and wintering areas)- Timeline: from 2014 to2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply									
Legal establishment of Protected Areas with adequate management plans at breeding sites- Timeline: by 2019	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply									

RAP for the conservation of Marine Vegetation (COP Decision IG 20/6)	Take new vegetation species in Annex II to the SPA/BD Protocol into account: Timeline: as soon as possible	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply		
	Create MPAs to conserve marine vegetation: Timeline: as soon as possible	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply		
	Setup a programme for making national inventories on macrophyta species, with staggered planning according to the regions' priorities. Timeline: from 2012	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply		
	Make theoretical probable distribution maps for the main plant assemblages. Timeline: as soon as possible	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply		
	Implement targeted mapping and inventorying actions (Annex II species, priority sites). Timeline: from 2012	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
	If your answer is "No", please in the column difficulties/challenges, tick all that apply			
Establish a programme for setting up monitoring networks for the main marine plant assemblages at national and regional level. Timeline: as soon as possible	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply			
Set up and/or extend their networks for follow-up of plants in the Mediterranean. Timeline: from 2013	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply			
To develop short, medium and long-term action plans according to national and regional priorities. Timeline: from 2012	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "No", please in the column difficulties/challenges, tick all that apply			

RAP for the conservation of the Monk Seal (1985COP Decision)	Has the Party given the monk seal protection status?	<input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
											If your answer is "No", please in the column difficulties/challenges, tick all that apply			
	For fishing, does the Party explicitly ban the use of dynamite, the carrying of firearms on boats, and all fishing techniques that can endanger monk seals?	<input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
												If your answer is "No", please in the column difficulties/challenges, tick all that apply		
	If the Party still has breeding monk seal populations, have measures been taken to isolate monk seals from any human activity?	<input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question									
												If your answer is "No", please in the column difficulties/challenges, tick all that apply		
In the Party's territory, have SPAs been created to conserve monk seal populations or their potential habitats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
											If your answer is "No", please in the column difficulties/challenges, tick all that apply			
Has the Party established a list of breeding caves and other habitats that are of importance for monk seal conservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
											If your answer is "No", please in the column difficulties/challenges, tick all that apply			
Has the Party carried out programmes for data collection on the monk seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
											If your answer is "No", please in the column difficulties/challenges, tick all that apply			

RAP for the conservation of the Monk Seal (1985 COP Decision)	Has the Party developed programmes for awareness raising, information and training concerning monk sea conservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question		
	If your answer is "No", please in the column difficulties/challenges, tick all that apply				If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question		
	Does the Party have an action plan for the conservation of monk seal and its potential habitats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question				
If your answer is "No", please in the column difficulties/challenges, tick all that apply								If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question

RAP for the conservation of Mediterranean Marine Turtles (COP Decision IG 21/4)	Setting up and/or improving operation of Rescue Centers. Timeline: as soon as possible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required										
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												
	Identification of new mating, feeding and wintering areas and key migration passages. Timeline: from 2014 to 2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required										
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												
	Elaboration and execution of cooperative research projects of regional importance aimed at assessing the interaction between turtles and fisheries. Timeline: from 2014 to 2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required										
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												
	Tagging and genetic analysis (as appropriate). Timeline: from 2014 to 2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required										
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												
	Modification of gear, methods and strategies. Timeline: from 2014 to 2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required										
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												
	Setting up and/or improving long-term monitoring programmes. Timeline: from 2014 to 2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required										
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												

RAP for the conservation of Mediterranean Marine Turtles (COP Decision IG 21/4)	Setting up stranding networks. Timeline: as soon as possible										On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)						If your answer is "No", please in the column difficulties/challenges, tick all that apply						
	Public awareness and Information campaigns in particular for fishermen and local populations. Timeline: from 2014 to 2019										On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)						If your answer is "No", please in the column difficulties/challenges, tick all that apply						
	Training courses. Timeline: from 2014 to 2019										On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)						If your answer is "No", please in the column difficulties/challenges, tick all that apply						
	Elaboration of National Action Plans and assessment of progress in implementation. Timeline: from 2014 to 2019										On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)						If your answer is "No", please in the column difficulties/challenges, tick all that apply						
	If your answer is "No", please in the column difficulties/challenges, tick all that apply												

RAP for the conservation of Coralligenous and Other Calcareous Bio-concretions (COP Decision IG 22/12)	Improve habitat modeling methods could provide new predictive models on coralligenous distribution and guide cost-effective field surveys for data acquisition. Timeline: 2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)					
		If your answer is "No", please in the column difficulties/challenges, tick all that apply				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)					
	Promote research programs on coralligenous assemblages and maerl beds. Timeline: 2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "No", please in the column difficulties/challenges, tick all that apply					
	Develop and implement legislation initiatives for the conservation of coralligenous assemblages. Timeline: ongoing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)					
	Coordinate the design of an Integrated Monitoring and Assessment Program for the assessment of the state coralligenous/maerl assemblages in view to be included the assessment of the state of the Mediterranean. Timeline: 2016	If your answer is "No", please in the column difficulties/challenges, tick all that apply				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)					
		If your answer is "No", please in the column difficulties/challenges, tick all that apply				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required	If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
		If your answer is "Yes", on a voluntary basis please provide further information (<i>Indicate website/URL link or other reference</i>)					

Revised Reporting Format: Section 06 - Offshore Protocol

6. IMPLEMENTATION OF THE PROTOCOL FOR THE PROTECTION OF THE MEDITERRANEAN SEA AGAINST POLLUTION RESULTING FROM EXPLORATION AND EXPLOITATION OF THE CONTINENTAL SHELF AND THE SEA BED AND ITS SUBSOIL (OFFSHORE PROTOCOL)

I - INFORMATION ON THE REPORTING PARTY

Contracting Party	
Reporting period (from D/M/Y to D/M/Y)	
Name of the institution/s responsible for the implementation of the Offshore Protocol	
Name of the officer who is the Focal Point for the Offshore Protocol	
Mailing address	
Tel.	
Fax	
Email	
<i>Contact point for the national report, if any</i>	
Full name of the Institution	
Mailing address	
Tel.	
Fax	
Email	
Signature of the Protocol's Focal Point	
Date of submission	

Organizations/bodies/agencies providing information for the compilation of report

Please provide information on the preparation of this report including, where appropriate, stakeholders involved and material used, by completing the following table.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

II - REPORTING FORMAT TO BE COMPLETED

- 1. LEGAL AND REGULATORY MEASURES**
- 2. PERMITS AND QUANTITIES**
- 3. INVENTORY OF OFFSHORE INSTALLATIONS**
- 4. ENFORCEMENT MEASURES**

PART I LEGAL AND REGULATORY MEASURES

Question 1: Has the Party, in accordance with Article 14 of the Barcelona Convention, adopted legislation implementing the provisions of the Offshore Protocol as listed in Table I?

Table I – LEGAL AND REGULATORY MEASURES

Offshore Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report <i>(please tick the box that applies)</i>	
			Please tick the box that applies				Please tick all that apply					Yes	No
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities		
Articles 4, 5 and 6 Annex IV Granting of authorizations	1	Exploration and exploitation offshore activities subject to prior authorization issued by the national competent authority in accordance with Articles 5 and 6 and the criteria set forth in Annex IV	If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										
Article 8 BAT and BEP	2	Obligation upon operators to use the best available, environmentally effective and economically appropriate techniques in order to minimize the risk of offshore pollution	If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions <i>(Indicate website/URL link or other reference)</i>				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
			If your answer is "No", please in the column difficulties/challenges, tick all that apply										

Article 9 Harmful or noxious substances and materials	3	Prohibition of disposal of harmful and noxious substances and materials listed in Annex I to the Protocol										If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					
	If your answer is "No", please in the column difficulties/challenges, tick all that apply											
	4	Disposal of harmful and noxious substances and materials listed in Annex II to the Protocol is subject to a prior special permit from the competent national authority in conformity with the criteria set forth in Annex III to the Protocol										If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					
	If your answer is "No", please in the column difficulties/challenges, tick all that apply											
	5	Disposal of harmful and noxious substances and materials that are not listed in Annexes I and II to the Protocol is subject to a prior general permit from the competent national authority in conformity with the criteria set forth in Annex III to the Protocol										If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					
	If your answer is "No", please in the column difficulties/challenges, tick all that apply											
	6	Use and storage of offshore chemicals is approved by the competent national authority on the basis of the Chemical Use Plan										If your answer is "Yes", please update accordingly If your answer is "No", please go to next question
			If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)				On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required					
	If your answer is "No", please in the column difficulties/challenges, tick all that apply											

PART II PERMITS AND QUANTITIES

TABLE II. Biennial Summary of Permits and Quantities

2.1 1994 Protocol Article	2.2 Type of Permit ¹	2.3 Waste Category	2.4 Total Number of New Permits Issued,	2.5.1 Total Quantity of a Waste Category Permitted for Disposal at Sea	2.5.2 Waste Reporting Unit	2.6.1 Total Quantity of a Waste Category Actually Disposed at Sea	2.6.2 Waste Reporting Units	2.7 Disposal at Sea Operations Regulated by Other Means	2.8 Notes
Reference to Articles pertaining to permits	Permit types are listed in the 1994 Protocol	1994 Protocol waste categories vary by permit;	Total of all new permits issued, single year valid permits and valid multiple year permits under a "Type of Permit"	Total quantity of a specific waste that was permitted for disposal at sea during the reporting period	Reporting units used by the permitting authority for a specific waste	Total quantity of a specific waste that was actually dumped at the dump site during the reporting period	Reporting units used by the permitting authority for a waste	Provide information on other programs that also manage offshore operations,	Brief notes on any entry in Table II
1994 Protocol Article 9.5, Annex II	Special Permit	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		
1994 Protocol Article 9.6	General Permit	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		
1994 Protocol Article 14.1.a	<i>Force Majeure</i>	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		
1994 Protocol Article 14.1.b	Minimize Pollution Permit	[Specify waste category]			[Depends on waste dumped]		[Depends on waste dumped]		

¹The 1994 Protocol has specific permit categories (e.g. 1994 Protocol Article 9.5 – Special Permits, Article 9.6– General Permits and Article 14.1a –Force Majeure Permit and Article 14.1.b Permits for the purpose of minimize pollution damage.

PART IV

ENFORCEMENT

Table IV – ENFORCEMENT MEASURES

Enforcement measures for non-compliance with:	Number of inspections	Number of non-compliance cases	Number of fines issued and total amount	Number of suspensions of authorizations or permits	Number of operation shutdowns	Number of other enforcement measures	Number of clean measures implemented	Remarks/Comments
Protocol obligations and national legislation and regulations implementing the Protocol –Article 3 of the Protocol								
Specific conditions attached to authorizations or permits-Article 4 and 5								
Provisions regarding to illegal disposal-Article 9								
Provisions regarding safety measures-Article 15								

Revised Reporting Format: Section 07- Hazardous Wastes Protocol

7. IMPLEMENTATION OF THE PROTOCOL ON THE PREVENTION OF POLLUTION OF THE MEDITERRANEAN SEA BY TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL (HAZARDOUS WASTES PROTOCOL)

I - INFORMATION ON THE REPORTING PARTY

Please provide information on the reporting Party by completing the following table.

Contracting Party	
Reporting period (from D/M/Y to D/M/Y)	
Name of the Institution/s responsible for the Hazardous Wastes Protocol	
Name of the officer who is the focal point for the Hazardous Wastes Protocol	
Mailing address	
Tel.	
Fax	
Email	
<i>Contact point for the national report, if any</i>	
Full name of the institution	
Mailing address	
Tel.	
Fax	
Email	
Signature of the Protocol's Focal Point	
Date of submission of the Report	

Organizations/bodies/agencies providing information for the compilation of the report

Please provide information on the preparation of this report including, where appropriate, stakeholders involved and material used, by completing the following table.

Full name of the institution	
Name of the contact point (optional)	
Mailing address	
Tel.	
Fax	
Email	

II- REPORTING FORMAT TO BE COMPLETED***1. LEGAL AND REGULATORY MEASURES****2. GENERATION OF HAZARDOUS WASTES AND OTHER WASTES****3. TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES AND OTHER WASTES****4. DISPOSALS WHICH DID NOT PROCEED AS INTENDED AND ACCIDENTS****5. ENFORCEMENT MEASURES**

**Note: Questionnaire harmonized to follow the Revised Questionnaire on Transmission of Information (in accordance with Articles 13 and 16 of the Basel Convention)*

PART I LEGAL AND REGULATORY MEASURES

Question 1: Has the Party, in accordance with Article 14 of the Barcelona Convention, adopted legislation implementing the provisions of the Hazardous Wastes Protocol as listed in Table I below?

Table I - LEGAL AND REGULATORY MEASURES

HW Protocol related Article		Description of the obligations	Status				Difficulties/Challenges					Changes in the information provided in the previous report	
			Please tick the box that applies				Please tick all that apply					(please tick the box that applies)	
			Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Administrative management	Technical Guidance Capabilities	Yes	No
Article 4.1 Article 3.1(a) (b) Wastes Controlled for the Purpose of Transboundary Movement	1	National definition of waste used for the purpose of transboundary movements of waste										If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)		If your answer is "No", please in the column difficulties/challenges, tick all that apply		On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required								
	If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)		If your answer is "No", please in the column difficulties/challenges, tick all that apply							On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required			
2	National definition of hazardous waste used for the purpose of transboundary movements of waste												
											If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)		If your answer is "No", please in the column difficulties/challenges, tick all that apply
If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)		If your answer is "No", please in the column difficulties/challenges, tick all that apply		On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required									
If your answer is "Yes", on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)		If your answer is "No", please in the column difficulties/challenges, tick all that apply							On a voluntary basis , please briefly describe difficulties/challenges and the type of attention or assistance that is required				

Article 4.1 Article 3.1(a) (b) Wastes Controlled for the Purpose of Transboundary Movement	3	National definition of hazardous wastes cover wastes other than those listed in Annex I to the Protocol	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>
	4	Regulation and control for the purpose of transboundary movements of any additional wastes as hazardous that are not included in Annex I to the Protocol	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>
Article 5.2 Reduction /elimination of the generation of hazardous wastes	5	Reduction to a minimum or where possible elimination of the generation of hazardous waste	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>	
	6	Reduction to a minimum and possibly elimination of the transboundary movement of hazardous waste through bans on the import of hazardous waste, and refusal of permits for export of hazardous waste to States which have prohibited their import	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>	
Article 5.4 Restrictions/prohibitions on the export and transit of hazardous wastes	7	Subject to the specific provisions referred to in Art. 6 para. 4 relating to the transboundary movement of hazardous waste through the territorial sea of the State of transit, prohibition of the export and transit of hazardous waste, within the area under their jurisdiction, to developing countries	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>If your answer is “Yes”, on a voluntary basis please provide title, date of enactment and a summary of the relevant provisions (<i>Indicate website/URL link or other reference</i>)</p> <p>If your answer is “No”, please in the column difficulties/challenges, tick all that apply</p>	<p>On a voluntary basis, please briefly describe difficulties/challenges and the type of attention or assistance that is required</p>	<p>If your answer is “Yes”, please update accordingly</p> <p>If your answer is “No”, please go to next question</p>	

Table IV: Generation of hazardous wastes and other wastes by Y-categories

CATEGORIES		YEARS				
		N				N+1
Waste streams (Annex I to the Protocol)		N				N+1
Y1	Clinical wastes from medical care in hospitals, medical centres and clinics					
Y2	Wastes from the production and preparation of pharmaceutical products					
Y3	Waste pharmaceuticals, drugs and medicines					
Y4	Wastes from the production of biocides and phytopharmaceuticals					
Y5	Wastes from the manufacture of wood preserving chemicals					
Y6	Wastes from the production, formulation and use of organic solvent					
Y7	Wastes from heat treatment and tempering operations containing cyanides					
Y8	Waste mineral oils unfit for their originally intended use					
Y9	Waste oils/water, hydrocarbons/water mixtures, emulsion					
Y10	Waste substances containing or contaminated with PCBs, PCTs, PBBs					
Y11	Waste tarry residues from refining, distillation and any pyrolytic treatment					
Y12	Wastes from production of inks, dyes, pigments, paints, etc.					
Y13	Wastes from production resins, latex, plasticizers, glues, etc.					
Y14	Waste chemical substances whose effects on the environment are not known					
Y15	Wastes of an explosive nature not subject to other legislation					
Y16	Wastes from production, formulation and use of photographic chemicals...					
Y17	Wastes resulting from surface treatment of metals and plastics					
Y18	Residues arising from industrial waste disposal operations					
Wastes having as constituents (Annex I to the Protocol)		N				N+1
Y19	Metal carbonyls					
Y20	Beryllium; beryllium compounds					
Y21	Hexavalentchromium compounds					

Y22	Copper compounds						
Y23	Zinc compounds						
Y24	Arsenic; arsenic compounds						
Y25	Selenium; selenium compounds						
Y26	Cadmium; cadmium compounds						
Y27	Antimony; antimony compounds						
Y28	Tellurium; tellurium compounds						
Y29	Mercury; mercury compounds						
Y30	Thallium; thallium compounds						
Wastes having as constituents (Annex I to the Protocol)		N					N+1
Y31	Lead; lead compounds						
Y32	Inorganic fluorine compounds excluding calcium fluoride						
Y33	Inorganic cyanides						
Y34	Acidic solutions or acids in solid form						
Y35	Basic solutions or bases in solid form						
Y36	Asbestos (dust and fibres)						
Y37	Organic phosphorus compounds						
Y38	Organic cyanides						
Y39	Phenols; phenol compounds including chlorophenols						
Y40	Ethers						
Y41	Halogenated organic solvents						
Y42	Organic solvents excluding halogenated solvents						
Y43	Any congener of polychlorinated dibenzo-furan						
Y44	Any congener of polychlorinated dibenzo-p-dioxin						
Y45	Organohalogen compounds other than ... (e.g. Y39, Y41, Y42, Y43, Y44)						
Household wastes (Annex I to the Protocol)		N					N+1
Y46	Wastes collected from households						
Y47	Residues arising from the incineration of household wastes						

PART III TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES OR OTHER WASTES

Table V - Export of hazardous wastes and other wastes

Total amounts exported:

Total amount of hazardous wastes under Article 3.1.a Annex IA(Y0-Y45) exportedin metric tonnes

Total amount of hazardous wastes under Article3.1.a Annex IB(Y46-Y47) exported in metric tonnes

Total amount of hazardous wastes or other wastes exported in metric tonnes

Category of waste		Hazardous characteristics (Annex II)			Other information				
Annex I ¹		UN class ³	H' code ³	Characteristics ³	Amount exported (metric tonnes)	Country/countries of transit ⁴	Country of destination ⁴	Final disposal operation (Annex IIIA D Code)	Recovery operation (Annex IIIB R Code)
Y code	Waste streams/ having wastes as constituents ²								

- 1 The Y code must be specified or, if non applicable, the waste streams/having wastes as constituents.
- 2 Not required to fill in if the Y-code has been specified.
- 3 Optional to fill in.
- 4 Use ISO codes as in the attached list.

Table VI - Import of hazardous wastes and other wastes

Total amounts imported:

Total amount of hazardous wastes under Article 3.1.a Annex IA(Y0-Y45) importedin metric tonnes

Total amount of hazardous wastes under Article3.1.a Annex IB(Y46-Y47) imported in metric tonnes

Total amount of hazardous wastes or other wastes imported in metric tonnes

Category of waste		Hazardous characteristics (Annex II)			Other information				
Annex I ¹		UN class ³	H' code ³	Characteristics ³	Amount imported (metric tonnes)	Country/countries of transit ⁴	Country of origin ⁴	Final disposal operation (Annex IIIA D Code)	Recovery operation (Annex IIIB R Code)
Y code	Waste streams/ having wastes as constituents ²								

- 1 The Y code must be specified or, if non applicable, the wastes streams/having wastes as constituents.
- 2 Not required to fill in if the Y-code has been specified.
- 3 Optional to fill in.
- 4 Use ISO codes as in the attached list.

PART IV. DISPOSALS WHICH DID NOT PROCEED AS INTENDED AND ACCIDENTS**Table VII: Disposals which did not proceed as intended**

Date of the incident	Countries involved	Type of wastes	Amount (in metric tonnes)	Reason for the incident	Measures taken to deal with the incident	Effectiveness of the measures taken
<i>Remarks</i>						

Table VIII. Accidents occurring during the transboundary movement and disposal of hazardous wastes and other wastes

Date and place of the accident	Countries involved	Type of wastes	Amount (in metric tonnes)	Type of accident	Measures taken to deal with the accident	Effectiveness of the measures taken
<i>Remarks</i>						

PART V ENFORCEMENT MEASURES**Table VI – Enforcement measures**

Enforcement measures in the event of contravention of the Protocol	Number of inspections	Number of contraventions	Number of criminal sanctions applied	Number of other enforcement measures applied	Number of clean measures implemented	Remarks/ Comments
Requirements of Articles 5.5 and 9: Prevention and punishment of illegal traffic of hazardous wastes						

Decision IG.23/2**Compliance Committee: biennium 2016–2017**

The Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, in particular article 27 thereof on compliance,

Recalling decision IG.17/2 of the fifteenth meeting of the Contracting Parties (COP 15) (Almeria, Spain, 15-18 January 2008) on procedures and mechanisms on compliance under the Barcelona Convention and its Protocols, as amended by decision IG. 20/1 of the seventeenth meeting of the Contracting Parties (COP 17) (Paris, France, 8-10 February 2012) and decision IG. 21/1 of the eighteenth meeting of the Contracting Parties (COP 18) (Istanbul, Turkey, 3-6 December 2013),

Recalling also decision IG. 19/1 of the sixteenth meeting of the Contracting Parties (COP 16) (Marrakesh, Morocco, 3-5 November 2009) on the rules of procedure of the Compliance Committee, as amended by decision IG. 21/1 of the eighteenth meeting of the Contracting Parties (COP 18) (Istanbul, Turkey, 3-6 December 2013),

Emphasizing the role of the Compliance Committee in assessing specific situations of actual or potential non-compliance by individual Contracting Parties and general compliance issues, and in providing advice and assisting Contracting Parties in facilitating and promoting compliance with their obligations under the Barcelona Convention and its Protocols,

Reminding Contracting Parties of the importance of timely providing nomination to the Compliance Committee to ensure its renewal and proper functioning and in this respect strongly emphasizing the obligation of the Contracting Parties to ensure the active and consistent participation of their approved nominees to the work of the Compliance Committee,

Noting with appreciation the work undertaken by the Compliance Committee during the biennium 2016–2017,

Seeking to promote identification, as early as possible, of the challenges faced by Contracting Parties in implementing the Barcelona Convention and its Protocols, and ensuring that the most appropriate and effective measures are taken to address those challenges,

Conscious of the need to further enhance the effectiveness of compliance mechanisms and procedures, thus strengthening the role of the Compliance Committee in facilitating and promoting compliance with the Barcelona Convention and its Protocols,

Having considered the meeting reports of the biennium 2016–2017 submitted by the Compliance Committee to the Contracting Parties at their twentieth meeting,¹

1. *Take note* of the Activity Report of the Compliance Committee for the biennium 2016-2017, as contained in Annex I to the present decision;
2. *Take note* of the agreement reached by the Compliance Committee on the Admissibility Criteria of Relevant Information Sources and Procedure under Paragraph 23.bis of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, as contained in Annex I to the present decision;

¹UNEP (DEPI)/MED IG.23/Inf.4.

3. *Adopt* the Programme of Work of the Compliance Committee for the biennium 2018-2019, as contained in Annex II to the present decision;
4. *Elect and/or renew*, in accordance with the Procedures and Mechanisms on Compliance, the membership of the Compliance Committee, as set out in Annex III to the present decision;
5. *Request* the Compliance Committee to report to the Contracting Parties at their twenty-first meeting on the work it has carried out to fulfil its functions in accordance with paragraph 31 of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols.

Annex I

Activity Report of the Compliance Committee for the biennium 2016-2017

Activity Report of the Compliance Committee for the biennium 2016-2017

Section 1: Introduction

1. The role and functioning of the Compliance Committee is governed by Decision IG.17/2 on Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, as amended by Decisions IG. 20/1 and IG. 21/1 and Decision IG. 19/1 on the Rules of Procedure of the Compliance Committee, as amended by Decision IG. 21/1.
2. The Compliance Committee met twice for the biennium 2016-2017. The 12th and 13th Meetings of the Compliance Committee were held on 24-25 January 2017 and 26-27 September 2017 respectively, in Athens, Greece at the premises of the UN Environment/Mediterranean Action Plan (UN Environment/MAP) Coordinating Unit.
3. At its 12th Meeting, pursuant to Paragraph 10 of the Procedures and Mechanisms on Compliance and Rule 6 of the Rules of Procedure of the Compliance Committee, the Compliance Committee elected for the biennium 2016-2017: (1) Milena Batakovic (Group III) as Chairperson of the Compliance Committee; (2) José Juste-Ruiz (Group II) as Vice-Chairperson of the Compliance Committee, and (3) Samira Hamidi (Group I) as Vice-Chairperson of the Compliance Committee.
4. The 13th Meeting of the Compliance Committee elected the same Chairperson and two Vice-Chairs for the biennium 2018-2019, provided that they continue to be members of the Compliance Committee after the 20th Meeting of the Contracting Parties (COP 20) (Tirana, Albania, 17-20 December 2017).
5. The paragraphs below highlight the main points raised and deliverables at the 12th and 13th meetings of the Compliance Committee for each of the activities of the Programme of Work of the Compliance Committee for the biennium 2016-2017 (COP 19, Decision IG. 22/15).

Section 2: General issues of Compliance and Implementation under the Barcelona Convention and its Protocols

2016-2017 Programme of Work, Activity 9: "Elaboration of an explanatory note for the revised reporting format of the Barcelona Convention and its Protocols"

Draft Revised Reporting Format

6. At its 12th Meeting, the Compliance Committee examined a draft Revised Reporting Format for the Implementation of the Barcelona Convention and its Protocols. The draft was prepared by the Secretariat in close coordination with MAP components following Decisions 22/16 and 22/20 of COP 19, by which the Meeting of the Contracting Parties requested a simplified and practical draft of the reporting format for the Barcelona Convention and its Protocols.
7. The Revised Reporting Format triggered a number of questions, such as the possibility to simplify the quantitative sections of the Revised Reporting Format, the importance to give Contracting Parties further room to explain difficulties and challenges faced when implementing the Barcelona Convention and its Protocols and the need to distinguish between mandatory reporting and optional reporting when assessing compliance.
8. Based on discussion, and keeping in mind the scheduled exercise test of the Revised Reporting Format among MAP Focal Points, arrangements were made for the Compliance Committee to provide comments interessionally. As a result, a further refined version of the Revised Reporting Format was produced for MAP Focal Points to test.
9. At its 13th Meeting, at the time of preparing its Programme of Work for the biennium 2018-2019, the Compliance Committee agreed to include among its activities the development of an Explanatory Note for the Revised Reporting Format of the Barcelona Convention and its Protocols. This should be taken forward once the Revised Reporting Format for the implementation of the Barcelona Convention and its Protocols is adopted by COP 20.

2016-2017 Programme of Work, Activity 3: “Analysis in accordance with paragraphs 17 (b) and (c) of the Procedures and Mechanisms on Compliance, of general issues of non-compliance arising out of the reports submitted by the Contracting Parties for the periods 2012-2013 and 2014-2015”

2016-2017 Programme of Work, Activity 10: “Examination, in close coordination with the MAP Components, of possible difficulties in the interpretation of the provisions of the Protocols, for consideration at the Meeting of the Contracting Parties”

Draft Guidelines for the Preliminary Assessment of Reports submitted under Article 26 of the Barcelona Convention and relevant Articles of its Protocols

10. At its 12th Meeting, the Compliance Committee examined the draft Guidelines for the Evaluation of Reports to Identify Actual or Potential Cases of Non-Compliance and made arrangements for the draft Guidelines to be tested intersessionally by the Committee against three national implementation reports for the reporting period 2014-2015.

11. The results of the testing exercise were tabled at the 13th Meeting of the Compliance Committee, which highlighted the importance of setting criteria for assessing compliance. The Committee noted that work in that direction requires a thorough examination of the results of the testing exercise and that under the given tight time constraints, it would not be prudent to do so at this stage.

12. In light of the above, the Compliance Committee agreed to analyse the results of the testing of the draft Guidelines for the Preliminary Assessment of Reports to Identify Actual or Potential Cases of Non-Compliance at its 14th Meeting, and include among the activities of its Programme of Work for the biennium 2018-2019 the establishment of a set of criteria for assessing compliance, within the context of the Draft Guidelines

Evaluation of National Implementation Reports following Section IV of the Procedures and Mechanisms of Compliance

13. At its 12th Meeting, the Compliance Committee examined the Synthesis Analysis of the information provided in the national implementation reports submitted following the 11th Compliance Committee Meeting for the period 2012-2013 and agreed, in preparation for its next meeting, to instruct the Secretariat to prepare an analysis of the information submitted by Contracting Parties for the reporting period 2014-2015.

14. At its 13th Meeting, the Compliance Committee held a general discussion on the most effective way to address the Synthesis Analysis of the information provided in the national implementation reports submitted by Contracting Parties for the biennium 2014-2015, as well as the General Status of the Progress in the Implementation of the Barcelona Convention and its Protocols, which had been presented at the Meeting of the MAP Focal Points (Athens, Greece, 12-15 September 2017) as information document UNEP(DEPI)/MED WG. 443/Info.11 and then transmitted to the Committee.

15. The Compliance Committee noted that the thorough and comprehensive nature of the two documents deserved them to be analysed in-depth. Tight time constraints prevented the Committee from doing so and made it advisable to undertake such analysis at the next meeting of the Compliance Committee, based on an updated version of both the Synthesis Analysis and the General Status of Progress and involving MAP components, as deemed necessary.

16. In light of the above, the Compliance Committee agreed to request the Secretariat to update the Synthesis Analysis and the General Status of Progress documents for consideration and action to take by the 14th Meeting of the Compliance Committee. In addition, should further clarification be required, especially regarding the technical analysis of the information submitted in the national implementation reports, the Secretariat will contact MAP Components and provide the relevant information, as appropriate.

2016-2017 Programme of Work, Activity 7: “Follow up of determination of criteria of admissibility of relevant information sources (Article 23.bis of Decision IG. 17/2 related to the Initiative Power of the Compliance Committee)”

Admissibility Criteria and Procedure under Paragraph 23.bis of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols

17. At its 12th Meeting, the Compliance Committee discussed how to operationalise Paragraph 23.bis of the Procedures and Mechanisms on Compliance, under which the Committee may examine, on the basis of the biennial activity reports or in the light of any other relevant information, any difficulties encountered by a Contracting Party in the implementation of the Convention and its Protocols. The Compliance Committee made arrangements for work to be taken forward intersessionally by the Committee in order to prepare a document on admissibility criteria addressing the source and quality of information.

18. The 13th Meeting of the Compliance Committee welcomed and examined the results of this work in the form of draft Admissibility Criteria and Procedure under Paragraph 23.bis of the Procedures and Mechanisms on Compliance and raised the following key points as regards the draft Admissibility Criteria and Procedure: 1) they provide a well articulate step-by-step approach to facilitate the flow of information from the public and observers to the Compliance Committee; 2) they articulate a framework to facilitate members of the public and observers to address the Compliance Committee; 3) they provide an efficient and rational way of handling the communications from the public and observers by the Compliance Committee, thus enhancing public participation and access to information, without overloading the agenda of the Compliance Committee; 4) they are not binding, providing an internal tool for the Compliance Committee to use when processing communications from the public and observers under Paragraph 23.bis of the Procedures and Mechanisms on Compliance. The Compliance Committee also discussed the most appropriate way to present the draft Admissibility Criteria and Procedure to COP 20.

19. Based on intense deliberations and work carried out during the meeting to produce a consensual version of the document, the Compliance Committee agreed on the Admissibility Criteria of Relevant Information Sources and Procedure under Paragraph 23.bis of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, as annexed to this report for COP 20 to take note of them.

20. The Compliance Committee further agreed that the Admissibility Criteria should be made available at the MAP website, Compliance Committee section, with a view to ensure their accessibility by the general public and MAP components.

2016-2017 Programme of Work, Activity 9: “Analysis of the effectiveness of the application of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, taking into account the feedback from the Parties on the conditions under which the supporting role of the Committee could be improved”

2016-2017 Programme of Work, Activity 6: “Continuation of the examination of the proposals aimed at strengthening the Committee under the Barcelona Convention and its Protocols”

Methods to enhance the Compliance Mechanisms’ and Procedures’ effectiveness

21. At its 12th Meeting, the Compliance Committee discussed how to strengthen the Compliance Committee’s role and arrangements were put in place for collecting input from MAP Focal Points through a questionnaire devised to identify practical ways and means for the Compliance Committee to best support Contracting Parties in implementing the Barcelona Convention and its Protocols, thus reinforcing its own role in facilitating and promoting compliance.

22. The Compliance Committee noted with disappointment the low level of responses, as inputs were only made by six of the 22 MAP Focal Points.

23. In the ensuing discussion, the Committee further noted that the results of this exercise were a good opportunity to reflect on the visibility of the Compliance Committee. Raising awareness among Contracting Parties and the public of the Compliance Committee's role and work could be very effective in promoting and facilitating compliance.

24. The Compliance Committee agreed to include among the activities of its Programme of Work for the biennium 2018-2019, to continue to work in order to enhance Compliance Mechanisms' and Procedures' effectiveness, with focus on awareness raising activities. In this context, the Committee put in place arrangements for a small group of its members, in coordination with the Secretariat, to revisit the text on the Compliance Committee, as currently appearing on the MAP webpage, and redraft it as appropriate; as well as to identify key elements for future communication materials (i.e. brochure) targeting mainly the general public, MAP Components and MAP Focal Points.

Proposal to amend the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols

25. Under the Agenda item "Other Matters" of its 13th Meeting, a proposal to amend the Procedures and Mechanisms on Compliance was tabled. Tight time constraints prevented the meeting from analysing the proposal in-depth and the Compliance Committee agreed to consider it at its next meeting under a specific Agenda item addressing the amendment of Procedures and Mechanisms on Compliance and include this activity in the Programme of Work of the Compliance Committee for the biennium 2018-2019.

2016-2017 Programme of Work, Activity 11: "Provision of opinion on the assessment to be carried out by the Secretariat with the help of appropriate legal expertise, on the extent of the legally binding nature for the Contracting Parties of programmes of measures and their implementation timetables as adopted in the framework of the Protocols of the Barcelona Convention"

Legal nature of the main obligations of COP Decisions

26. At its 12th Meeting, the Compliance Committee discussed how to take forward the following activity of its programme of work: "Provision of opinion on the assessment to be carried out by the Secretariat with the help of appropriate legal expertise, on the extent of the legally binding nature for the Contracting Parties of programmes of measures and their implementation timetables as adopted in the framework of the Protocols of the Barcelona Convention". The Compliance Committee made arrangements to work intersessionally with the aim of developing a preliminary scoping paper addressing the legal nature and the main obligations of thematic decisions.

27. At its 13th Meeting, the Compliance Committee considered the main elements that should frame further work on the legal nature of the main obligations of COP thematic decisions for the purposes of compliance, highlighting that the initial standing point for any further analysis of this subject is that all acts adopted by the Meetings of the Contracting Parties (COP Decisions) have a normative nature and as such are mandatory.

28. From this point forward, the legal nature of the main obligations contained in COP thematic Decisions, such as the Decisions on Regional Actions Plans, should be analysed, being this exercise of particular relevance within the framework of the Revised Reporting Format, under which the implementation of the Regional Action Plans adopted by COP Decisions plays a key role.

29. The Compliance Committee agreed to include among the activities of its Programme of Work for the biennium 2018-2019 the analysis, within the framework of the Revised Reporting Format, of the legal nature of the main obligations of COP thematic decisions for the purpose of assessing compliance. The Committee further agreed on arrangements for a small group of its members, in coordination with the Secretariat, to take this work forward, starting with the analysis of the legal nature of the main obligations contained in the Land Based Sources Protocol related Regional Plans adopted by COP.

2016-2017 Programme of Work, Activity 5: “Analysis of broader issues requested by the meeting of the Contracting parties in accordance with paragraph 17 (c) of the procedures and mechanisms on compliance, including a detailed examination of the issues raised by MAP Components on the application of the Protocols”

30. At its 13th Meeting, the Compliance Committee noted the General Status of the Progress in the Implementation of the Barcelona Convention and its Protocols, which had been presented at the Meeting of the MAP Focal Points (Athens, Greece, 12-15 September 2017) and then transmitted to the Committee following the MAP Focal Points Meeting. The Committee agreed to proceed as detailed in paragraph 16 above.

Section 3: Specific submissions under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols

2016-2017 Programme of Work, Activity 1: “Examination of any referrals by the Contracting Parties in accordance with Paragraphs 18 and 19 of the Procedures and Mechanisms on Compliance”
2016-2017 Programme of Work, Activity 2: “Examination of any referrals by the Secretariat in accordance with Paragraph 23 of the Procedures and Mechanisms on Compliance”

31. No submissions were received under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols neither at the 12th nor the 13th Compliance Committee meetings.

2016-2017 Programme of Work, Activity 4: “Consideration at the Committee’s initiative, of any difficulties encountered by a Contracting Party in applying the Convention and its Protocols in accordance with Paragraph 23.bis of the Procedures and Mechanisms on Compliance”

32. At its 13th Meeting, the Compliance Committee considered the status of reporting for the reporting periods 2012-2013 and 2014-2015, and concluded that the submission of reports by Contracting Parties under Article 26 of the Barcelona Convention is a basic and legally binding requirement. Therefore, the Compliance Committee considers the non-submission of reports for the reporting period(s) 2012-2013 and/or 2014-2015 according to Article 26 of the Convention by the Contracting Parties shown in Table 1 as a potential situation of non-compliance and will take action under Article 23.bis of the Procedures and Mechanisms on Compliance. The Compliance Committee will ask, through the Secretariat, the abovementioned Parties to provide an explanation of the non-submission of their reports and the Parties concerned shall have a period of two months to respond.

Contracting Party	Reporting Period	
	2012-2013	2014-2015
Egypt	Non submission	Non submission
Libya	Non submission	Non submission
Monaco	Non submission	Non submission
Slovenia	Submission	Non submission
Spain	Non submission	Non submission
Syria	Non submission	Non submission
Tunisia	Non submission	Non submission

33. Noting the communication from Ecologistas en Acción de la Región de Murciana, Spain, regarding the implementation of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean by Spain, the 13th Meeting of the Compliance Committee, requested the Secretariat to address the organization in order for them to possibly provide a translation and summary, of twelve pages at maximum, of its communication in English or French.

34. Following the Admissibility Criteria of Relevant Information Sources and Procedure under Paragraph 23.bis of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, the Compliance Committee, designated Dr. Orr Karassin as Rapporteur for the case, in order to provide a summary for consideration at the 14th Meeting of the Compliance Committee.

Section 4: Recommendations to COP from the Compliance Committee

35. Given the intensive Programme of Work and long hours that committee members invest during the meetings and intersessionally, the Compliance Committee stresses the need to be allocated additional time for its meetings.

Admissibility Criteria of Relevant Information Sources and Procedure under Paragraph 23.bis of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols

1. By Decision IG.21/1, the 18th Meeting of the Contracting Parties (COP 18) (Istanbul, Turkey, 3-6 December 2013) amended the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols (Decision IG. 17/2, as amended) by including a new Paragraph 23.bis under which:

“The Committee may examine, on the basis of the biennial activity reports or in the light of any other relevant information, any difficulties encountered by a Contracting Party in the implementation of the Convention and its Protocols. The Committee may ask the Party concerned to provide all additional information. The Party concerned shall have a period of two months to respond.

Paragraphs 24 to 30 and 32 to 34 shall apply, *mutatis mutandis*, in the case of referral to the Committee on its own initiative”.

2. *Source of communications.* The term “any other relevant information” in Paragraph 23.bis of the Procedures and Mechanisms on Compliance is intended to be comprehensive in its coverage so as to include all sources of information.

3. Concerning public and observers, any member of the public and observers, as defined in Rule 3.12² and Rule 3.14³ of the Rules of Procedure of the Compliance Committee (Decision IG. 19/1 as amended) respectively, may submit a communication to the Compliance Committee in the context of Paragraph 23.bis of the Procedures and Mechanisms on Compliance.

4. *Form of the communication.* Communications addressed to the Compliance Committee should be in writing or in electronic form through the Secretariat and as concise and concrete as possible. It is preferable that the communication should not be more than twelve pages in total. Visual means are also welcomed.

5. The following minimum requirements should be included in any communication addressed to the Compliance Committee

- (a) name and contact details of the communicant, whether this is a natural or legal person, the communication should be signed and be accompanied by a brief statement of the purpose of the communication. The Compliance Committee will not consider anonymous submission, but it will however respect any request of confidentiality by the communicant;
- (b) clear identification of the Party or Parties concerned;
- (c) it is advisable a one to two-page summary with the main facts of the case;

² Rule 3.12 of the Rules of Procedure of the Compliance Committee defines the term “The Public” as: “one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organizations or groups”.

³ Rule 3.14 of the Rules of Procedure of the Compliance Committee defines the term “Observers” as: “the organizations referred to in article 20 of the Convention and those included in the list of MAP partners as approved by the Meeting of the Contracting Parties”.

Article 20.1 “Observers” of the Barcelona Convention reads: “The Contracting Parties may decide to admit as observers at their meetings and conferences:

- (a) any State which is not a Contracting Party to the Convention;
- (b) any international governmental organization or any non-governmental organization the activities of which are related to the Convention”.

See COP19 Decision IG. 22/18 “Cooperation and Partners” for the List of new MAP Partners.

- (d) a document presenting the facts of the alleged non-compliance, and clearly stating how the facts presented constitute a case of non-compliance with the Barcelona Convention and/or its Protocols;
 - (e) indication of whether steps have been taken to use the remedies available at national and/or international level.
6. Translation into one other working language of the Compliance Committee will be provided by the Secretariat up to a maximum of twelve pages as described above.
7. *Sending of communications:* Communications should be addressed to the Compliance Committee through the UNEP/MAP Coordinating Unit. Communications should not be sent to the individual members of the Compliance Committee or to its Chairperson.
8. *Processing of communications:* Upon receipt of a communication the Secretariat will send an acknowledgement of the receipt and transmit the communication to the Party concerned and to the Compliance Committee within two weeks from the receipt clarifying that, at the present stage it has not been deemed admissible by the Compliance Committee.
9. Communications forwarded by the Secretariat will be considered by the Committee at its next meeting for the Committee to take a decision whether to enter into their preliminary admissibility
10. *Criteria of admissibility:* The Compliance Committee will consider the admissibility of communications addressed to it. To that end the Chair of the Compliance Committee in consultation with the Compliance Committee will appoint from among its members a Rapporteur for each communication.
11. *Determination of admissibility:* For determining admissibility of the communication the Compliance Committee after a brief introduction by the designated Rapporteur will deliberate on its admissibility.
12. When determining admissibility the Compliance Committee will consider whether the communication is:
 - (a) anonymous;
 - (b) *de minimis*;
 - (c) manifestly ill founded
13. In addition, the Compliance Committee will consider whether domestic remedies have been exhausted.
14. If the Compliance Committee determines that the communication is inadmissible, it will inform the Party concerned and the communicant accordingly, through the Secretariat.
15. If the Compliance Committee determines that the communication is admissible, it will notify the Party concerned and the communicant accordingly, through the Secretariat.
16. The Compliance Committee may after making a positive decision on admissibility present the questions raised with the Party concerned, if any, when forwarding the communication. Such questions will be transmitted to the Party concerned by letter from the Secretariat, together with the confirmation of preliminary admissibility.
17. The Compliance Committee may also address any questions to the communicant it might find necessary to clarify the facts of the communication. Such questions will be transmitted to the communicant by letter from the Secretariat, together with the confirmation of preliminary admissibility.
18. The Party concerned should, as soon as possible but no later than two months from the date of the Secretariat's letter, submit written explanations or statements on the matter.

19. If the Party concerned contests the admissibility of the communication, the Compliance Committee will consider this and the communicant will be given an opportunity to comment and/or provide additional information.

20. If the Compliance Committee confirms the admissibility of the communication, it will proceed to the examination of the substance of it. Otherwise, the Compliance Committee will reverse its preliminary decision. The non-admissibility of the communication by the Committee is final. The Compliance Committee will inform the Party concerned and the communicant through the Secretariat.

21. The Compliance Committee should start the formal discussion on all particular communications at the first meeting that takes place following either the receipt of a response to the communication from the Party concerned or within the deadline of two months if no response has been received by then.

22. When the Compliance Committee discuss the substance of any communication at a particular meeting, the Secretariat will notify the Party concerned and the communicant that the communication will be discussed following *mutatis mutandis* the proceedings established in paragraphs 24 to 30 of the Procedures and Mechanisms on Compliance⁴.

⁴ Article 23.bis *in fine* of the Procedures and Mechanisms on Compliance states that: “Paragraphs 24 to 30 [Proceedings] and 32 to 34 [Measures] shall apply *mutatis mutandis*, in the case of referral to the Committee on its own initiative”.

Annex II

Programme of Work of the Compliance Committee for the biennium 2018-2019

Programme of Work of the Compliance Committee for the biennium 2018-2019		
Activity	Lead/Who	Timetable/When
Specific submissions under Section V of the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocol		
1. To consider any submissions and/or referrals in accordance with Section V of the Procedures and Mechanisms on Compliance	Compliance Committee	14 th and 15 th Compliance Committee Meetings
General issues of Compliance and Implementation under the Barcelona Convention and its Protocols		
2. To consider specific situations of actual or potential non-compliance by individual Parties in accordance with Section IV, Paragraph 17(a) of the Procedures and Mechanisms on Compliance	Compliance Committee	14 th and 15 th Compliance Committee Meetings
3. At the request of the Meeting of the Contracting Parties, to consider general compliance issues in accordance with Section IV, Paragraph 17(b) of the Procedures and Mechanisms on Compliance	Compliance Committee	14 th and 15 th Compliance Committee Meetings
4. To consider any other issues as requested by the Meeting of the Contracting Parties in accordance with Section IV, Paragraph 17(c) of the Procedures and Mechanisms on Compliance	Compliance Committee	14 th and 15 th Compliance Committee Meetings
5. Within the framework of the Revised Reporting Format, to analyse the legal nature of the main obligations of COP thematic Decisions for the purpose of assessing compliance	Compliance Committee	14 th and 15 th Compliance Committee Meetings
6. In the context of the Draft Guidelines for the preliminary assessment of reports to identify actual or potential cases of non-compliance, to establish a set of criteria for assessing compliance	Compliance Committee	14 th and 15 th Compliance Committee Meetings
7. Development of an Explanatory Note for the Revised Reporting Format of the Barcelona Convention and its Protocols (subject to adoption of the Revised Reporting Format by COP 20)	Compliance Committee	14 th and 15 th Compliance Committee Meetings
8. To continue work in order to enhance Compliance Mechanisms' and Procedures' effectiveness, with focus on awareness raising activities	Compliance Committee	14 th and 15 th Compliance Committee Meetings
9. Examination, in close coordination with the MAP Components, of possible difficulties in the interpretation of the provisions of the Barcelona Convention and its Protocols, for consideration at the Meeting of the Contracting Parties, taking into account the findings of the General Status of Progress in the Implementation of the Barcelona Convention and its Protocols	Compliance Committee	14 th and 15 th Compliance Committee Meetings
10. To consider proposals to amend the Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols	Compliance Committee	14 th and 15 th Compliance Committee Meetings

Annex III

Renewal or Election of the Membership of the Compliance Committee

**Members and Alternate Members of the Compliance Committee renewed or elected by the
20th Meeting of the Contracting Parties**

Group I: Algeria, Egypt, Lebanon, Libya, Morocco, Syria and Tunisia

Mr. Ezzeddine JOUINI-BERZINE, a national of Tunisia, as a Member of the Compliance Committee for a term of four years, until COP 22.

Lebanon to nominate an expert as an Alternate Member of the Compliance Committee for a term of four years, until COP 22, subject to the election of the first meeting of the Bureau during the biennium 2018-2019.

Group II: Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia, Spain and the European Union

Mr. Bernard BRILLET, a national of France, as a Member of the Compliance Committee for a term of four years, until COP 22.

Ms. Daniela ADDIS, a national of Italy, as an Alternate Member of the Compliance Committee for a term of four years, until COP 22.

Mr. François GUERBER, a national of France, as an Alternate Member of the Compliance Committee, for a term of two years, until COP 21, replacing Mr. Bernard Brillet, which was elected as an Alternate Member by COP 19.

Group III: Albania, Bosnia and Herzegovina, Israel, Monaco, Montenegro and Turkey

Ms. Selma OSMANAGIĆ-KLICO, a national of Bosnia and Herzegovina as a Member of the Compliance Committee for a term of four years, until COP 22.

Ms. Milena BATAKOVIC, a national of Montenegro, as an Alternate Member of the Compliance Committee for a term of four years, until COP 22.

Monaco to nominate an expert as an Alternate Member of the Compliance Committee for a term of two years, until COP 21, subject to the election of the first meeting of the Bureau during the biennium 2018-2019.

Decision IG.23/3

Governance

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean at their twentieth meeting,

Recalling decision IG.17/5 on the governance of the Mediterranean Action Plan Barcelona Convention system, adopted by the Contracting Parties at their fifteenth meeting (COP 15) (Almeria, Spain, 15-18 January 2008), and decision IG.19/6 on the Mediterranean Action Plan Civil Society Cooperation and Partnership, adopted by the Contracting Parties at their sixteenth meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009),

Recalling also decisions IG.20/13 and IG.21/13 on governance, addressing the transition from Mediterranean Action Plan components to thematic focal points, and host country agreements in line with a unified template, adopted by the Contracting Parties at their seventeenth (COP 17) (Paris, France, 8-10 February 2012) and eighteenth (COP 18) (Istanbul, Turkey, 3-6 December 2013) meetings respectively,

Recalling further decision IG.22/1 on the Mid-Term Strategy for 2016–2021 of the Mediterranean Action Plan, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), and, there under, the Communication Strategy of the Plan and the thematic focal point approach,

Recalling the mandate given by the Contracting Parties at their nineteenth meeting for the implementation of decision IG.21/16 on the assessment of the Mediterranean Action Plan and having considered the views expressed by the open-ended working group established for that purpose under the guidance of the Bureau of the Contracting Parties, and the report of the meeting of the Mediterranean Action Plan focal points held in September 2017,

Appreciating the guidance and advice provided to the Secretariat by the Bureau of the Contracting Parties to the Barcelona Convention on all policy and administrative matters related to the implementation of the Convention and its Protocols during the 2016–2017 biennium,

Having considered the reports of the eighty-second, eighty-third and eighty-fourth meetings of the Bureau,

1. *Thank* the Secretariat and the Regional Activity Centre for Information and Communication for their work on the Mediterranean Action Plan Communication Strategy 2018–2023 as set out in annex I to the present decision and acknowledge its elements as an initial approach towards the Communication Strategy;

2. *Request* the Secretariat, in collaboration with the Regional Activity Centre for Information and Communication and other Mediterranean Action Plan components, as appropriate, to further work on the basis of those elements to develop an operational Communication Strategy, including clear and concrete objectives, target audiences, key messages, methodologies, gap analysis, relevant implementation activities, timelines and indicators, and to submit them to the Contracting Parties at their twenty-first meeting;

3. *Also request* the Secretariat and Mediterranean Action Plan components to enhance the engagement of Mediterranean Action Plan partners and other relevant stakeholders in the delivery of their mandates;

4. *Invite* the Secretariat to continue discussions on the Draft Joint Cooperation Strategy on Spatial-based Protection Management Measures for Marine Biodiversity with the Contracting Parties and relevant partners for submission of the conclusions of these discussions to COP 21 for its consideration;
5. *Endorse* the list of new Mediterranean Action Plan partners, set out in annex II to the present decision;
6. *Request* the Specially Protected Area Regional Activity Centre to prepare on a trial basis, a meeting of the thematic focal points for Specially Protected Areas/Biological Diversity for the biennium 2018–2019, under the guidance of the Coordinating Unit, to achieve the greatest possible integration with the other themes of the Mid-Term Strategy;
7. *Also request* the Coordinating Unit to present the results of the assessment of that trial, together with any other relevant analysis, to the Contracting Parties prior to their twenty-first meeting;
8. *Urge* the Coordinating Unit, in consultation with the Contracting Parties hosting Regional Activity Centres, to find and propose, under the guidance of the Bureau, ways and means to address a list of common reference provisions to be applied, taking into account the specificities of each Centre, with a view to have a discussion and a possible agreement by the Contracting Parties at their twenty-first meeting;
9. *Reiterate* the importance of the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (Mediterranean Action Plan Phase II) document and its relevance for the protection of the marine environment and the coastal region of the Mediterranean, as well as its contribution to sustainable development; and decides to retain at this stage the original text of the Mediterranean Action Plan Phase II as approved by the Conference of Plenipotentiaries on the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols (Barcelona, 9-10 June 1995);
10. *Invite* the United Nations Environment Programme / Mediterranean Action Plan Secretariat to continue its involvement and contribution to the global debate on issues related to its mandate including Sustainable Development Goal 14, Biodiversity Beyond National Jurisdiction, follow-up to the Paris Agreement and Convention on Biological Diversity and to present to COP 21 any updates from global fora of relevance to the Mediterranean Action Plan system and its future;
11. *Confirm* the current composition of the Mediterranean Commission on Sustainable Development for the biennium 2018–2019 as set out in decision IG.22/17, adopted by the Contracting Parties at their nineteenth meeting, and call upon the members of the Mediterranean Commission on Sustainable Development, the Secretariat of the Mediterranean Action Plan and the Mediterranean Action Plan partners to mobilize expressions of interest in membership of the Mediterranean Commission on Sustainable Development for the biennium 2020–2021.

Annex I
UNEP/MAP Communication Strategy 2018-2023

1. Introduction

1. At COP 17 (Paris, France, February 2012) the Contracting Parties to the Barcelona Convention adopted the Communication Strategy of UNEP/MAP for the period 2012-2017. At COP 19 (Athens, Greece, February 2016), the Contracting Parties requested the Secretariat, through Decisions IG.22/2 on the Mid-Term Strategy 2016-2021 and Decision IG.22/18 on the Programme of Work and Budget 2016-2017, the preparation of an updated Communication Strategy of UNEP/MAP. The Communication Strategy for the period 2018-2023 presented in the current document, builds on the previous version and refines its approach and implementation modalities.

1.1. Overview

2. The Mediterranean Action Plan (MAP) has come a long way since its inception in 1975. Its main political achievement is the adoption of the Barcelona Convention and seven legal protocols conceived to protect the Mediterranean marine and coastal environment, and establishing an institutional framework of cooperation covering all 21 countries bordering the Mediterranean Sea. The Barcelona Convention (signed in 1976 and amended in 1995) with its related seven Protocols is the only regional multilateral legal framework for the protection of the Mediterranean marine and coastal environment, setting the obligations "to prevent, abate, combat and to the fullest extent possible eliminate pollution of the Mediterranean Sea Area" and "to protect and enhance the marine environment in that area so as to contribute towards its sustainable development".

3. In this context, the Coordinating Unit and the MAP Components assist Mediterranean countries to fulfil their commitments under the Barcelona Convention and its Protocols, and implement the decisions of the meetings of the Contracting Parties, including the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD) and the recommendations of the Mediterranean Commission on Sustainable Development (MCSD). Counting 22 Contracting Parties, the 21 countries bordering the Mediterranean and the European Union, MAP sets out a coherent legal and institutional cooperation framework to facilitate, support and coordinate regional action to improve the quality of life of the Mediterranean population through responding to pressures on the environment and reducing negative impact as well as restoring and maintaining ecosystem status, structures and functions.

4. An effective and targeted communication strategy supports the environmental objectives put forward in the Barcelona Convention and amplifies the reach of MAP messages.

5. The MAP's main advocacy objectives are to:

- Assess and control marine pollution;
- Ensure sustainable management of natural marine and coastal resources;
- Integrate the environment in social and economic development;
- Protect the marine environment and coastal zones through prevention and reduction of pollution, and as far as possible, elimination of pollution, whether land or sea-based;
- Protect the natural and cultural heritage;
- Strengthen solidarity among Mediterranean coastal States;
- Contribute to improvement of the quality of life.

6. The priorities of the Mid-Term Strategy 2016-2021 (MTS) are intended to be: *“action-oriented, concise and easy to communicate, limited in number, aspirational, universally applicable to all countries in the region, while taking into account different national realities, capacities and levels of development and respecting national policies and priorities. (...)”*. They are developed to be *“focused on priority areas for the achievement of sustainable development”*.

7. The priority themes of the MTS reflect legal commitments and major needs at the regional and national levels, are in line with the global efforts for sustainable development and the objectives of the Mediterranean Strategy for Sustainable Development 2016-2025.

8. The ultimate objectives are the achievement of Good Environmental Status (GES) of the Mediterranean and the contribution to sustainable development. The Strategic Themes are selected accordingly, and will be promoted under the Overarching Theme of Governance.

9. The Core Themes are:

- Land and sea-based pollution;
- Biodiversity and ecosystems;
- Land and sea interactions and processes.

10. The Cross-cutting Themes are:

- Integrated coastal zone management;
- Sustainable consumption and production;
- Climate change adaptation.

11. The MTS proposes, under the Overarching Theme of Governance, Strategic Outcome 1.6 *“Raised awareness and outreach”* and Indicative Key Outputs 1.6.1 *“The UNEP/MAP communication strategy updated and implemented”*. This Communication Strategy seeks to support the political and substantive objectives of the Barcelona Convention and its Protocols and is aligned with the abovementioned priorities. This strategy builds on the original communication approach.

12. The MTS Strategic outcome 1.5 *“MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding”* is also of relevance for the Communication Strategy 2018-2023.

1.2. Overall Communication Approach

13. Although the UNEP/MAP goals remain ambitious, they are set against the backdrop of financial realism. The formulation of this strategy has been guided by an understanding that UNEP/MAP financial and human resources are finite. Practical and budgetary feasibility has therefore been taken into account when developing this strategy and focus has been placed on the approaches which can be implemented with MAP’s resources.

14. This strategy builds on the groundwork achieved over the recent years and consolidates key achievements, for instance the increased regional and global visibility and specific events such as regional annual Coast Day celebrations. Concurrent to this, the strategy outlines new structures, approaches and tools necessary to increase MAP’s visibility and maximize the impact of common policies, strategies, action plans and analysis designed to advance the implementation of the Barcelona Convention and its Protocols in the Mediterranean region and beyond.

15. The three-pillar approach, on which this strategy is based are to:

- Pass a MAP common message across with a view to clearly brand all MAP Components as part of the same organization;
- Identify and mobilize strong partners from the civil society and from private sector;
- Use a campaign approach with a view to inspire other actors, at regional and national levels and the public at large, around key issues.

16. This strategy seeks to:

- Improve communication:
 - Internal communication (among the various elements of the MAP system)
 - Outgoing communication (information shared with stakeholders)
 - Incoming communication (feedback from stakeholders)
 - Clearly defined responsibilities
- Outline communication goals and specific objectives:
 - Communicate with a clearly stated goal in mind
 - Communicate to clearly targeted groups of people and organizations
 - Communicate a small number of clear, concise, consistent and memorable ideas
- Use the right language:
 - Appropriate to audience and communication medium
 - Tailored to coincide with what matters and interests the audience
- Use the right channels:
 - Identify for each identified audience the most appropriate channels for communicating with them. These might include e-bulletins, conferences, workshops, leaflets, press releases, events – or broader methods such as media and website
 - Handle relations with the media to ensure that press releases appear in the right publications and gaining editorial coverage in influential media
 - Choose interactive channels to obtain feedback and monitor opinions on the policies

2. Communication Strategic Directions

2.1. Strategic Issues Assessment

17. A strategic communication audit is a systematic assessment, either formal or informal, of an organization's capacity for, or performance of, essential communication practices. It determines what is working well, what is not, and what might work better if adjustments are made.

18. A strategic communication audit has both evaluative and formative value. It is evaluative in that it provides a "snapshot" of where an organization currently stands in terms of its communication capacity or performance. It is formative in that it also points to areas in which the organization can strengthen its performance.

19. Before starting any strategic communication audit, it is essential to fix the starting point and to understand benefits and barriers related to the communication process.

Benefits

External:

20. Effective external communication increases visibility and public support for MAP’s objectives for the protection of marine and costal environment of the Mediterranean. It will further enhance MAP’s credibility as a regional body supporting and coordinating the implementation of the Barcelona Convention and Protocols. This strategy is envisaged to act as a further springboard for communicating globally about MAP’S key issues and in key upcoming environmental fora.

Internal:

21. Internal communication is the life blood of any organization. Both internal and external communication is equally important to control the day-to-day operations of an organization. Effective internal communication leverages existing synergies, increases the probability of achieving organizational goals, optimizes impact and enhances awareness and involvement of staff. The goal of streamlined internal communication processes is a more integrated approach towards creating a bigger push for the same environmental issues from the MAP Coordinating Unit, components, and partners, thereby strengthening the organization’s collective capacity to communicate and engage externally.

Barriers

External:

22. In the real world, there are many diverse barriers to communicating about environmental issues to the public. According to recent studies, there are six barriers in the process of communication, including: (1) sender barriers, (2) encoding barriers, (3) medium barriers, (4) decoding barriers, (5) receiver barriers, and (6) feedback barriers (Eisenberg, E. M. (2010). *Organizational communication: Balancing creativity and constraint*. New York, NY: Saint Martin’s).

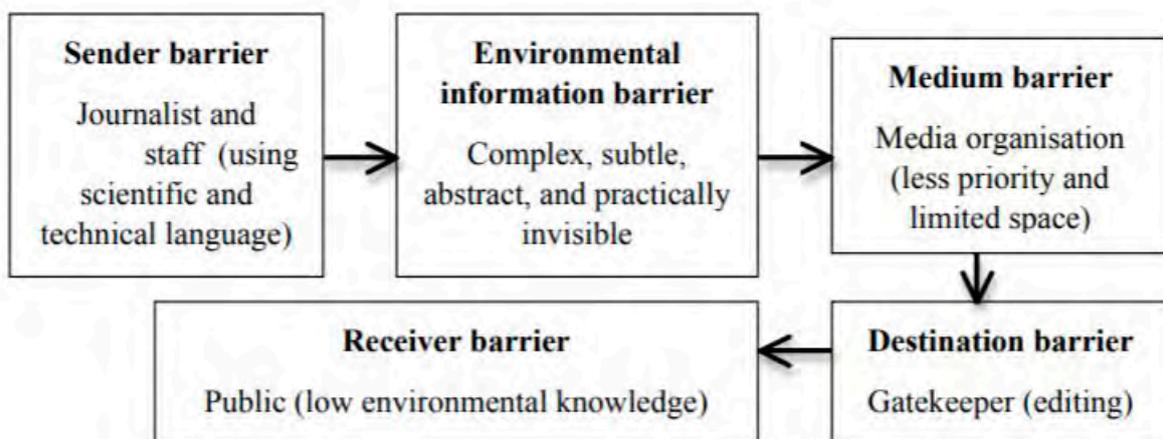


Figure 1: Barriers in the process of environmental communication among the media, adapted from Eisenberg (2010) *Organizational communication: Balancing creativity and constraint*, and Shannon (1948) *A Mathematical Theory of Communication*.

23. The greatest barrier of the environmental communication is that the communicators must have great understanding and knowledge about the subtle complexities of the environmental issues before they can communicate these to the public. The communicator is a translator and must translate the information from specialized sources to something that can be understood by the audience.

24. The other barrier is a lack of capacity to centralize information and to act as a single voice; this is a consequence, *inter alia*, of structural deficiencies in the communication network.

25. The division of communication responsibilities constitutes a barrier to impactful external communication since tasks and structural relations are not always clearly defined.

2.2. Communication Objectives

26. As stated above, the UNEP/MAP communication strategy must facilitate two types of communication, which should be both considered when defining the objectives:

External:

27. The main goal is to maximize the visibility of MAP's activities and achievements in promoting environmental protection and sustainable development in the Mediterranean region in order to increase their impact. Furthermore, it aims to promote public participation and to build on the fact that, within the framework of the Barcelona Convention and its Protocols, MAP is coordinating action and facilitating cooperation amongst its Contracting Parties and other stakeholders in the region, in order to deliver tangible results in the protection of the Mediterranean environment.

28. Media, mainstream and social, are considered as an important channel for stimulating a constructive conversation around MAP issues and its role therein and thereby actively advancing its implicit and explicit advocacy. The importance of information collection, production and dissemination has been recognized and proposals have been made to improve ways to inform and engage target audiences.

Internal:

29. The overall goal is to foster an organizational culture in which communication is considered equally critical to the success of the UNEP/MAP mission. Furthermore, the aim is to align internal stakeholders around common objectives and assign a more active role in the roll-out of jointly-agreed activities to all parties.

30. Clear, specific, and measurable objectives have been defined to be the key to the success. These specific objectives are:

- Ensure the visibility of the UNEP/MAP-Barcelona Convention system, its role and achievements;
- Raise awareness, among a wide but targeted group of audiences and user groups, about the critical role that the UNEP/MAP system plays in the protection of the Mediterranean environment and the promotion of sustainable development in the region;
- Strengthen MAP's status as an authoritative voice on the environment in the Mediterranean;
- Secure the commitment of key stakeholders in order to support UNEP/MAP issues and activities in public fora and act as advocates, directly and/or indirectly;

- Highlight the need for good governance and integrated marine and land ecosystem management in the Mediterranean;
- Inform and mobilize the Mediterranean population (general public) with the MAP narrative, through key information and media channels;
- Improve internal communication practices within MAP and its Components;
- Increase quality and quantity of media coverage;
- Improve quality and dissemination of information materials;
- Influence specific policies or policymakers around key aspects;
- Encourage participation among researchers or partner bodies.

2.3. Target Audiences

31. UNEP/MAP takes a focused approach to communication to ensure maximum output in the implementation of the MTS. The available tools and resources set an operating framework within which target audiences have been divided into three categories:

1. **Primary:** direct partners responsible for implementing programmes, policies and activities such as Contracting Parties, National Focal Points, MCSDD members, MAP partners, MAP Components;
2. **Secondary:** partners and potential donors that have direct interest in the strategy and its outcomes, such as multilateral organizations, national and local administrations, NGOs, businesses and academics/researchers;
3. **Tertiary:** individuals, general public, or institutions that have direct or related interests in the strategy's work and goals and whose involvement will increase progress and success, and also who act as relays for more targeted initiatives.

2.4. Key Messages

32. For this communication strategy to be truly successful, MAP's overall goal, specific objectives and key messages need to fully align across its components. Effective message frameworks are dynamic and adaptable over time as conditions change, and as behaviors evolve, and where successes and barriers are encountered. The broader audiences are not always conversant in the specialized terminology used by MAP. The messages need to be tailored to the specific needs of the various target audiences.

33. A solid message platform will provide a framework for understanding MAP and its role in a way that differs from others. Applying and reapplying common messaging consistently, broadly and coherently will lead to a clear, recognizable identity and an ability to speak with one voice and many "accents". Ultimately, there is a clear link between effective communication and impactful advocacy.

34. The fundamental messages to broadcast are:

- MAP: What we are;
- MAP: What we do and deliver;
- MAP's goal and vision of success;
- Areas MAP works in;

- How MAP's work brings solutions to Mediterranean issues;
- What MAP concentrates on.

35. More messages can be added taking into consideration the global environmental and sustainable development agenda and specific political developments.

2.5. Tools and Methods

36. The deployment of targeted, specific and achievable methods and actions is essential in reaching the communication objectives set above. When focusing on more singled-out messages, the simultaneous use of multiple channels and tools will be favored, paying particular attention to social media and mobile devices, as well as other web-friendly design and distribution. The more traditional means, such as print, will coexist.

37. For effective UNEP/MAP communication, depending on the sub-objective and message, audience, timeframe, etc., a mix of both modern and well-established communication channels, tools and materials will be used. These include the website, social media, press releases and newsletters, involvement of mass media, print products, and multimedia, among others.

3. Communication Campaign

3.1. Campaign model

38. The UNEP/MAP Communication Strategy 2012-2017 was based on a "campaign model" – Unify, Mobilize and Inspire. This campaign model creates a solid but sufficiently agile communication framework that can guide MAP's activities in the next six years. It sets out a forward-looking campaign that is to unfold sequentially based on a series of tactical approaches in line with key political priorities, milestone projects and platforms.

39. Building on the Communication Strategy 2012-2017 and in order to be more effective, additional approaches are listed below:

- Multiply through listening to the different targets and to the consequent multiplication of approaches and languages. This requires a lot of listening efforts and a two-way approach attentive to external feedback.
- Mobilize and inspire through innovative, emotional, and adventurous communicative language and style, combining "scientificity" and immediacy. Good communicators are capable to translate bureaucracy and technical language in something digestible for different targets.
- This model of a public-oriented campaign needs to be mirrored also inside the system. This requires a great deal of internal communication and a work on the image, approach and communication's attitude of those who work in UNEP/MAP.
- Keep it simple and straight-forward avoiding unnecessary complexity. Some ways to do it: (i) be direct to get your points across to your audience; (ii) ask questions before moving forward; (iii) tell a story to simplify conversations so that audience can relate; (iv) avoid oversimplification to make sure that important information is not lost.

3.2. Targeted Campaigns: Stimulating Active Awareness

40. This strategy utilizes a combination of complementary communication tools to ensure an optimal message uptake and the broadest possible reach in target areas. It also factors in the need to remain agile and locally relevant: different countries have different communication cultures, and with a toolbox of materials and initiatives, the communication mix can be varied and adapted as required whilst maintaining the overall message.

41. Key directions:

- Focus on key milestone projects and/or platforms each year to demonstrate impact and relevance and to drive steady media coverage that also taps into longer lead feature opportunities;
- Drive interest in and support for Regional Assessment Reports (State of the Environment and Development, Mediterranean Quality Status Report, etc.) and regular events such as the regional Mediterranean Coast Day;
- Capitalize on synergies with stakeholders and local partners around key milestone projects/platforms in order to drive the news agenda;
- Leverage international milestones and observances to ensure broader relevance of the MAP work;
- Optimize impact of the MAP information materials through better design, thematic focus and new distribution channels.

3.3. Proactive Partnerships: Raising the Profile of MAP Actions

42. This strategy outlines a set of approaches that seek to enhance MAP's overall visibility and impact. MAP partners and stakeholders play a valuable role in this process as they lend their voice to MAP information and communication campaigns. Taking into consideration the limit of MAP resources and capabilities, improving stakeholder coordination, aligning messages, directions and resources will increase efficiency and will demonstrate impact and on-the-ground relevance.

43. Key directions:

- Engage selected advocacy NGOs / MAP partners to amplify media outreach efforts as well as to engage the general public with whom they have more direct ties;
- Enlist and empower third party advocates to amplify MAP messages through media and in information materials;
- Showcase work/collaboration with the private sector through business-media;
- Joint outreach with partner international organizations, such as GEF, in media to raise MAP's visibility with key audiences;
- Align in-country/regional communication efforts with key challenges and priorities to demonstrate relevance of MAP issues.

3.4. Implementation of the Communication Strategy

44. The major information and communication activities, depending on available resources, are detailed below:

1. Digital activities including Website management and update

- Align Website content with the target audience and strategic communication goals;
- Keeping it up-to-date;
- Wider dissemination of the projects' results;
- Social Media Channel Management.

2. Media relation

Interactions with editors, reporters and journalists. The media can be newspapers, radio, television and the internet. The goal is to communicate a newsworthy message, story or information using the appropriate media outlets.

3. Branding and visibility

Build visibility and trust through the creation and reinforcement of a clear identity.

4. Information material

Regular production of online and hard-copies publications, both on specific themes and events, to be regularly disseminated.

5. Designs and layouts

Consistent use of common graphic appearance to benefit the overall image of the MAP system.

6. Networking and information dissemination

In line with the established procedures of MAP, INFO/RAC shall ensure information dissemination to existing networks and endeavors to expand them:

- Communication Task Force
- Communication Focal Points of Contracting Parties
- MAP National Focal Points (with the clearance of MAP Coordinator)
- MAP Components' National Focal Points
- Partners
- Media

Thematic panels and periodical meetings between communicators of each organization involved are beneficial for a more productive exchange.

Upgrade meetings on communication tool, processes, results and feedback can be held either on dedicated online platforms or in person, whenever possible.

Innovative forms of collaboration should be considered such as team-building, world cafés, brainstorming and focus groups to improve knowledge, synergy and therefore internal communication.

7. Photo library, with contributions by Contracting Parties and MAP Components.

3.5. Measurement

45. It is important to consider measurement at the beginning and to be clear from the start about what is to be achieved, how the objectives will be met and what measurements will be used along the way, to monitor progress and success.

46. Measuring is directly linked with strategy and impact. It not only concerns quantitative results but also qualitative analysis of the significance and meaning behind the findings. In an environment where communication has the power to shape conversation and drive policy outcomes, it is critical to measure the effectiveness of all directions and tactics.

47. As it is impossible to measure everything, and not everything that is important can be measured, a manageable number of key indicators have to be identified as areas of focus. The metrics that can be used are numerous and varied, including: tracking the number of information requests put to INFO/RAC, number of press briefings, perception tracking surveys, analyzing website traffic, setting up ratings' buttons for online content, etc.

48. A three-pronged approach to measurement will be applied, combining relevant metrics, strategic interpretation and forward-looking insights, including the following:

- Quantitative measures, such as media metrics, website hits and information requests;
- Advocacy measures, which track and evaluate engagement and delivery of messages by others;
- Reputation measures, which tap into media influencers to assess progress and inform changes to tactics and approaches.

49. Success will result in key audiences having a positive regard for UNEP/MAP and its mission, accompanied by an awareness of key messages, and/or perceptions consistent with this communication strategy. Based on the above, a small number of key indicators need to be identified to monitor the implementation of the Communication Strategy.

4. Resources

50. This strategy can be partially implemented with the use of existing financial resources and support by INFO/RAC. The Coordinating Unit has proposed a budget of approximately EUR 80,000 for the two-year period of 2018-2019 dedicated to operationalizing external communications activities in addition to some additional resources in the Regional Activity Centres.

51. At present, the UNEP/MAP system needs related to Information and Communication, Library, IT and document management are addressed only by one support staff (Information Assistant).

52. In order to implement the Communication Strategy, a position of Information/Communication Officer needs to be reestablished within the UNEP/MAP Coordinating Unit. This would also support and benefit the implementation of the Resource Mobilization Strategy.

53. Complementary capacities must also be built in the role of the INFO/RAC, to perform information and communication activities for the entire MAP system.

Annex II
List of New MAP Partners

LIST OF NEW MAP PARTNERS

The following institutions are accredited as new MAP Partners:

- International Federation for Sustainable Development and Fight to Poverty in the Mediterranean-Black Sea (FISPMED)
- Fondation Mohamed VI pour la Protection de l'Environnement
- Sustainable Development Solutions Network (SDSN) through the Università di Siena (UNISI)
- Plastics Europe AISBL
- Youth Love Egypt

Decision IG.23/4

Implementation and monitoring of the Mediterranean Strategy for Sustainable Development 2016–2025 and of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, and in particular article 4 thereof on general obligations,

Recalling decisions IG.22/2, IG.22/5 and IG.22/17 on the Mediterranean Strategy for Sustainable Development 2016–2025, the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean, and reform of the Mediterranean Commission on Sustainable Development respectively, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016),

Recalling the role of the Mediterranean Strategy for Sustainable Development 2016–2025 as a strategic guiding document for all stakeholders and partners to translate the 2030 Agenda for Sustainable Development at the national, subregional and regional levels, and the leading role of the Barcelona Convention system of the United Nations Environment Programme / Mediterranean Action Plan in facilitating the coordinated implementation of the 2030 Agenda and the relevant Sustainable Development Goals, in particular Goal 14, in the Mediterranean region and in ensuring the transition towards a green and blue economy (Mediterranean Strategy for Sustainable Development Objective 5),

Recognizing that for the successful delivery of the Mediterranean Strategy for Sustainable Development 2016–2025 a collective effort is needed, involving all Mediterranean stakeholders and partners, in particular for the implementation of the flagship initiatives,

Having considered the conclusions of the meeting of the Plan Bleu Regional Activity Centre National Focal Points held in Nice, France, on 25 and 26 April 2017, the eleventh meeting of the Sustainable Consumption and Production Regional Activity Centre National Focal Points, held in Barcelona, Spain, on 3 and 4 May 2017, and the seventeenth meeting of the Mediterranean Commission on Sustainable Development, held in Athens, Greece, from 4 to 6 July 2017,

1. *Welcome the work and take note of the list of indicators of the Mediterranean Sustainability Dashboard for the monitoring of the implementation of the Mediterranean Strategy for Sustainable Development 2016–2025, set out in annex I to the present decision, as a basis for further work, and invites the Steering Committee of the Mediterranean Commission on Sustainable Development to coordinate the work on ensuring full consistency and synergy with the ongoing work on Sustainable Development Goal indicators at the global level, within the context of the leading role of the Barcelona Convention system of the Mediterranean Action Plan in facilitating the coordinated implementation of the 2030 Agenda and the relevant Sustainable Development Goals, in particular Goal 14, in the Mediterranean region and in ensuring the transition towards the green and blue economy;*

2. *Request the Secretariat and Plan Bleu Regional Activity Centre to use existing sources of information and reliable data to populate the selected indicators, giving priority to those addressing coast-related and sea-related issues;*

3. *Encourage* the Contracting Parties to strengthen efforts to build sustainable partnerships with relevant stakeholders (such as international governmental organizations, donor agencies, non-governmental organizations, industry, business organizations and academic institutions) for the development or refining of statistical databases for populating Mediterranean Strategy for Sustainable Development and Sustainable Consumption and Production indicators;
4. *Encourage* the Contracting Parties to participate in future editions of the Simplified Peer Review Mechanism, taking into account the lessons learned from the 2016–2017 exercise and with a view to enhancing the interlinkage with the 2030 Agenda and its Sustainable Development Goals and the Voluntary National Reviews presented at the High-level Political Forum;
5. *Encourage* the Contracting Parties and partners to strengthen their efforts and leadership for the implementation of the Mediterranean Strategy for Sustainable Development 2016–2025 and its flagship initiatives;
6. *Welcome* the MED 2050 road map, and endorse its phase I as set out in annex II to the present decision, and request the Secretariat and the Plan Bleu Regional Activity Centre to undertake a participatory process for the elaboration of a foresight study on the environment and development in the Mediterranean region with the horizon 2050 and to present comprehensive information on the outcome and progress of phase I at the COP 21 to allow the Contracting Parties to provide further guidance for phase II;
7. *Welcome* the work and take note of the list of indicators for the monitoring of the implementation of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean, set out in annex III to the present decision, and request its further elaboration in synergy with the work undertaken for the relevant Sustainable Development Goals and Mediterranean Strategy for Sustainable Development indicators.

Annex I
**Indicators of the Mediterranean Sustainability Dashboard for the Monitoring of the
Implementation of the MSSD 2016-2025**

Annex I: Indicators of the Mediterranean Sustainability Dashboard for the Monitoring of the Implementation of the MSSD 2016-2025

No.	MSSD 2016-2025 Objective	Name of indicator
1	Global	Ecological footprint (*)
2	Global	Human Development Index
3	Global	Gross Domestic Product (*)
4	Global	Youth literacy rate (*)
5	Global	Girl/Boy primary and secondary school registration ratio (*)
6	1	Number of ratifications and level of compliance as reported by Contracting Parties to the Barcelona Convention
7	1	Percentage of protected coastal and marine areas [under national jurisdiction] (*)
8	2	Water efficiency index (*)
9	2	Number of protected areas participating in the Green list initiative (*)
10	2	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems (*)
11	2	Global Food Security Index
12	2	Water demand, total and by sector, compared to GDP (*)
13	2	Share of population with access to an improved water source (total, urban, rural) (*)
14	2	Share of population with access to an improved sanitation system (total, urban, rural) (*)
15	2	Proportion of agriculture quality products and Share of the agricultural land area used by organic farming (*)
16	2	Number of Mediterranean threatened species included in legal documents (*)
17	3	Proportion of urban population with access to a decent dwelling (*)
18	3	Status of UNESCO world heritage sites or population trends in historic urban areas (*)
19	3	Waste generated and treated by type of waste and treatment type (*)
20	4	Green House Gas emissions (related to GDP)
21	4	Energy consumption (related to GDP)
22	5	Material intensity of the economy (*)
23	6	Number of National Strategies for Sustainable Development adopted or updated [and number of updates since first edition] (*)
24	6	Proportion of bank credit allocated to the private sector – Existence of alternative financing systems using bank credit
25	6	Public and private expenses for research and development in percentage of GDP
26	6	Existing mechanisms to ensure public participation and access to environmental publication (*)

(*) Corresponding/linked to SDG indicators

Annex II

**MED 2050 Roadmap towards a Foresight Study on the Environment and Development in the
Mediterranean**

Annex II: MED 2050 Roadmap towards a Foresight Study on the Environment and Development in the Mediterranean

I. Introduction

1. Since the late 1970's, Mediterranean countries have decided to cooperate to put "*at the disposal of political leaders and decision-makers all information that will enable them to develop plans likely to ensure sustained optimal socio-economic development without degrading the environment*" (Inter-governmental Meeting, UNEP/IG.5/7, 1977). The MAP Mid-Term Strategy (MTS) 2016-2021 reiterates the objective "*to deliver knowledge-based assessments of the Mediterranean environment and scenario development for informed decision-making and stakeholder work*" (Decision IG.22/1). To reach this objective, the Contracting Parties to the Barcelona Convention included in the Programme of Work and Budget 2016-2017 the development of "*a roadmap for the preparation of Med2050 report*", a foresight study on the environment and development in the Mediterranean region at the horizon 2050, as the Main Activity 1.4.1.3 (Decision IG.22/20).

2. To prepare such roadmap, the Secretariat through its Plan Bleu/Regional Activity Centre (PB/RAC) organized an expert workshop (December 2016), conducted a benchmark study on the strengths, weaknesses and gaps of 35 recent foresight studies in the Mediterranean region, and consulted with national representatives and experts. These analyses and consultations established that a new foresight exercise on the environment and development would be necessary in the Mediterranean, and provided guidance on how this exercise should be shaped to fill gaps and facilitate decision-making in the next decade, while building on existing knowledge and resources.

3. The meeting of the Plan Bleu Focal Points (Nice, France, 25-26 April 2017) recommended to adopt a participatory process for building a shared vision of the future based on national visions and exercises, to incorporate lessons learnt and input from existing exercises and reports, and to mobilize additional external resources. The 17th Meeting of the Mediterranean Commission on Sustainable Development (Athens, Greece, 4-6 July 2017) concluded that it was essential to include the perspective of rapid socio-economic, environmental and governance changes in MAP policies, and underlined that MED 2050 should provide valuable information on future developments based on science-based scenarios and on anticipating actions to promote sustainable development in the Mediterranean region (working document UNEP(DEPI)/MED WG.441/9). The meeting of the MAP Focal Points (Athens, Greece, 12-15 September 2017) insisted on synergies between MED 2050 and recent or concomitant MAP and non-MAP activities. The proposed roadmap for MED 2050 has been developed on this basis.

II. Timing for a Foresight Study on the Environment and Development in the Mediterranean at the horizon 2050 (MED 2050)

4. There are five major reasons for undertaking MED 2050:
- i. Firstly, the last MAP foresight exercise was performed in 2005-2006, over ten years ago, and the context has completely changed. Oil glut, global and regional geopolitical changes, Arab Spring, European economic crisis, acceleration of climate change, transformed the environment and development context in the Mediterranean. These changes may realistically be further accentuated by 2050 in all areas – technology, demographics, geopolitics, economics, ecology, etc. It is essential to include this perspective of rapid transformation in MAP policies, as the Mediterranean is and will be particularly affected.
 - ii. Secondly, most existing foresight analyses in the Mediterranean have now too short a time frame and are not able to take into account more long-term issues, such as climate change or possible ecosystem disruptions, nor consider transitions with an effect in the long term.

- iii. The third reason is that previous foresight exercises overlooked impacts on the sea, or even on the marine economy, which does not reflect the concerns of the UNEP/MAP-Barcelona Convention system.
- iv. Past work has only focused on one possible aspect of foresight: forecasting. The aim of foresight is not only to extrapolate current statistics to reveal trends in some well-understood variables or problems. Undertaking a new exercise would provide the opportunity to alert policy-makers to possible disruptions, to promote comparison of visions and discussion, involving decision-makers and stakeholders in a participatory approach, and to jointly build and compare long-term strategies for the diversity of the Mediterranean countries.
- v. Finally, experience has shown that major foresight exercises can be very useful tools for communication and funding, including for the general public and media. Undertaking MED 2050 would put the MAP system back in the heart of public debate on the environment and development in the Mediterranean.

III. Key directions for MED 2050

5. Following the results of the aforementioned benchmark and consultations, the proposed MED 2050 roadmap adopts a participatory strategic foresight approach. It relies on a combination of futures analysis (forecasting, forward thinking); planning (strategic analysis and priority setting through backcasting); and networking (stakeholder participation and dialogue). In addition, MED 2050 will capitalize on existing and on-going studies. Specific synergies with foresight studies and scientific networks have already been identified, others will be organized as MED 2050 and on-going works develop. As detailed in the working document UNEP(DEPI)/MED IG.23/22, MED 2050 activities will also be conducted in close synergy with other MAP activities, in particular activities on indicators, and the 2019 State of the Environment and Development Report.

6. The proposed roadmap is organized around six key sets of activities, all of which scientists and MAP experts will be associated to. It is tentatively planned over two biennia. However, distinct activities are proposed for each biennium with specific outputs. It is important to note that, since this is still an early stage of the initiative, further consultation is planned with Contracting Parties to the Barcelona Convention on the design of MED 2050. An updated version of the roadmap will be presented at COP 21, based on further consultations and achievements during biennium 2018-2019.

7. A core set of activities – sufficient to produce a MED 2050 report by COP 22 – will only rely on technical partnerships, MTF funding and limited co-funding. The corresponding activity budget has been estimated at 200,000 Euros over two biennia. Additional or more ambitious activities would require mobilising additional co-funding or partnerships. MED 2050's organisation in modules and sets of activities will help research funding associated with explicit activities and outputs.

Tentative planning (further detailed in working document UNEP(DEPI)/MED IG.23/22)

Component	Period	Deliverable
1. Mobilizing existing resources and building a network on Mediterranean futures. Capitalization; Consultation with the Contracting Parties to the Barcelona Convention; Networking; Science-policy interface – stakeholder dialogue	- 2018: Setting up - Continuation over the entire period	Web-based products (broad audience): - Newsletters (starting 2018) - Thematic booklets/briefs - Updated roadmap for COP 21
2. Assessing trends, breakthroughs and scenarios in a new Mediterranean context. Business-as-usual scenario as basis for development of other scenarios	- 2018-2019 in close coordination with SoED, QSR, etc.	- Workshops or webinars - Chapter
3. Zooming on under-documented priorities with a focus on sea and marine ecosystems	- 2019: trends - 2020: scenarios	- Workshops or webinars on sea and marine ecosystems - Chapter
4. Comparing and sharing contrasted visions across the Mediterranean. Co-construction of alternative scenarios, following a wide participatory approach	- Mid-2020	- Workshops or webinars - Consultation (questionnaires or sub-regional/country workshops) - Chapter
5. Co-constructing transition paths and strategies for the short, medium and long-terms	- Late 2020, early 2021	- Workshops or webinars - Chapter
6. Disseminating the results; transferring to action Capacity building and technical assistance	- Whole period (communication) - 2020-2021 (transfer)	- Broad communication - Final Report: for consultation in 2021 and presentation at COP 22 - Regional and national workshops

Annex III

**Indicators for the Monitoring of the Implementation of the Regional Action Plan on Sustainable
Consumption and Production in the Mediterranean**

Annex III: Indicators for the Monitoring of the Implementation of the Regional Action Plan on Sustainable Consumption and Production in the Mediterranean

Thematic area covered and indicator n°	Indicators identified	Is the indicator currently available?	Is it a SDG indicator?	Is it an MSSD indicator?	Is it included in the UN System of Environmental and Economic Accounting?	Indicator type (I/R) Thematic issue: I Response: R	
LAND USE							
1a-Futur	Proportion of agricultural area under productive and sustainable agriculture	No	Yes	2.4.1	No	TBC	I
1b-Temporary	Agricultural area organic, total	High	No	Target 2.4	Yes	TBC	I
2	Global food loss index	No	Yes	12.3.1	No	No	I
3a- future	Index of sustainable forest management	No	Yes	15.2.1	No	TBC	R
3b- temporary	Area of Certified forest	Low	No	Target 15.2	No	TBC	R
WATER (EFFICIENCY)							
1	Freshwater withdrawal as a proportion of available freshwater resources (also known as water withdrawal intensity)	Low	Yes	6.4.2	No	No	I
2	Water Productivity	High	No	Target 6.4	Yes	Yes	I
3	Degree of integrated water resources management (IWRM) implementation (0-100)	No - Only aggregates	Yes	6.5.1	No	No	R
ENERGY (EFFICIENCY)							
1	Renewable energy share in the total final energy consumption	High	Yes	7.2.1	Yes	Possibly	I
2	Energy intensity measured in terms of primary energy and GDP	High	Yes	7.3.1	Yes	Yes	I
3	Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels	No	Yes	12.c.1	Yes	Possibly	R
POLLUTION							

Thematic area covered and indicator n°	Indicators identified	Is the indicator currently available?	Is it a SDG indicator?		Is it an MSSD indicator?	Is it included in the UN System of Environmental and Economic Accounting?	Indicator type (I/R) Thematic issue: I Response: R
1	CO2 emission per unit of value added	High	Yes	9.4.1	No	Yes	I
2	Signatory of 1 to 3 international multilateral environmental agreements (Basel, Rotterdam and Stockholm conventions) on hazardous waste, and other chemicals	High	Yes	12.4.1	No	No	R
3	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	High	Yes	11.6.2	No	Possibly	I
RESOURCE (EFFICIENCY)							
1a- <i>future</i>	Material footprint (MF) per GDP	High	Yes	12.2.1; 8.4.1	Yes	Yes	I
1b- <i>temporary</i>	Domestic material consumption (DMC) per GDP	High	Yes	12.2.2; 8.4.2	No	Yes	I
2a- <i>future</i>	Material footprint (MF) per capita	High	Yes	12.2.1; 8.4.1	No	Yes	I
2b- <i>temporary</i>	Domestic material consumption (DMC) per capita	High	Yes	12.2.2; 8.4.2	No	Yes	I
3a- <i>future</i>	Proportion of fish stocks within biologically sustainable levels	No - only global result available	Yes	14.4.1	Yes	No	I
3b- <i>temporary</i>	Marine Trophic Index (also called Mean Trophic Level (TL) of fisheries landings)	Not freely available	No	Target 14.4	No	No	I
BEHAVIOR (PRODUCERS & CONSUMERS)							
1	Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or target into national policies	No	Yes	12.1.1	No	No	R

Thematic area covered and indicator n°	Indicators identified	Is the indicator currently available?	Is it a SDG indicator?		Is it an MSSD indicator?	Is it included in the UN System of Environmental and Economic Accounting?	Indicator type (I/R) Thematic issue: I Response: R
2	SPP/GPP as a percentage of total public procurement (in terms of monetary value)	No International database	No	Target 12.7	Yes	TBC	R
3	Green Patents (also called Patents of Importance to Green Growth and Development of environment-related technologies, % all technologies)	High	No	Target 12.7	No	TBC	R
4	Generation of waste	Low	No	Targets 11.6 & 12.4	Yes*	Yes	I
5	Organic agriculture (retail sales, all million euro) (also available as euro per person)	Low	No	SDG 12	No	TBC	I
6	Index of coastal eutrophication and floating plastic debris density	No	Yes	14.1.1	No	TBC	I
7	Prevalence of overweight and obesity	High	No	Target 2.2	No	No	I
THEMATIC MACRO-INDICATORS							
1	Carbon Footprint	Low	No	Target 9.4	No	Yes	I
2	Water Footprint	Yes	No	Target 6.4	No	Yes	I
3	Ecological Footprint	Yes	No	Targets 12.2 & 8.4	Yes	Yes	I

Decision IG. 23/5

Updated Resource Mobilization Strategy

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Recalling Decision IG.20/13 of the 17th Meeting of the Contracting Parties (COP 17) (Paris, France, 8-10 February 2012) on Governance, including on the Resource Mobilization Strategy for UNEP/MAP,

Recalling also Decision IG.22/1 of COP 19 (Athens, Greece, 9-12 February 2016) on the UNEP/MAP Mid-Term Strategy 2016-2021 and Resource Mobilization Strategy,

Underlying that the effective involvement and coordination in resource mobilization by all actors is essential for the implementation of the UNEP/MAP Mid-Term Strategy 2016-2021,

Recognizing the successful efforts of the Secretariat to secure the funding and support needed for the adequate functioning and fulfilment of the mandate of the MAP system,

Conscious of the need to further mobilize and diversify funding sources to ensure a thorough matching of the Parties' level of ambition and approved mandates with available resources,

Recognizing that the effective and coordinated implementation of the Resource Mobilization Strategy and the increased resource availability generate additional demands on the Secretariat and MAP Components to develop, deliver and monitor a wider set of activities,

Conscious that resource mobilization requires also well-structured and continuous work on communication issues, in order to ensure awareness of the work and role of the MAP system and tailoring of messages for the various categories of possible donors,

1. *Adopt* the updated Resource Mobilization Strategy, contained in Annex I to this Decision;
2. *Request* the Secretariat to further refine for consideration at COP 21 the Appendix to the Annex, to take account of the resources requirement for each strategic outcome, and the relevance of potential donors to each of these outcomes;
3. *Urge* Contracting Parties to support the implementation of the updated Resource Mobilization Strategy, in order to ensure adequate financial resources for the implementation of the UNEP/MAP Mid-Term Strategy 2016-2021 and associated Programme of Work;
4. *Invite* donor and partner organizations to take into account as appropriate the priorities set out in the Mid-Term Strategy and updated Resource Mobilization Strategy in their programming.

Annex I
Updated Resource Mobilization Strategy

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Appendix I: Indicative List of Main Potential Donors for the Implementation of the UNEP/MAP MTS

LIST OF ABBREVIATIONS AND ACRONYMS

ABNJ	Areas Beyond National Jurisdiction
ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
AfDB	African Development Bank
BBNJ	Areas Beyond National Jurisdiction
BCRS	Barcelona Convention online Reporting System
CAMP(s)	Coastal Area Management Programme(s)
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
COP	Conference of Parties
CPs	Contracting Parties
CRS	Corporate Social Responsibility
CU	Coordinating Unit
DESA	Development Policy and Analysis Division
DG	Directorate-General
DG CLIMA	Directorate-General for Climate Action
DG MARE	Directorate-General for Maritime Affairs and Fisheries
DG NEAR	Directorate-General for Neighbourhood and Enlargement Negotiations
DG RTD	Directorate-General for Research and Innovation
DPSIR	Driving forces, Pressure, State, Impact, Response
EBRD	European Bank for Reconstruction and Development
EBSA	Ecologically or Biologically Significant Marine Areas
EC	European Commission
EcAp	Ecosystem Approach
ECP	Executive Coordination Panel
EFC	European Foundation Centre
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMFF	European Maritime and Fisheries Fund
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FRAs	Fisheries Restricted Areas
GCF	Green Climate Fund
GEF	Global Environmental Facility
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
GPGC	Global Public Goods and Challenges
H2020	Horizon 2020 initiative
ICZM	Integrated Coastal Zone Management

IDLO	International Development Law Organization
IGOs	Intergovernmental Organizations
IMAP	Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria
IMELS	Italian Ministry for the Environment, Land and Sea
IMO	International Maritime Organization
INFO/RAC	Information and Communication Regional Activity Centre of MAP
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IsDB	Islamic Development Bank
IUCN	International Union for Conservation of Nature
LBS	Land-Based Sources
MAP	Mediterranean Action Plan
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Region
MedProgramme	GEF Mediterranean Sea Programme: Enhancing Environmental Security
MPA(s)	Marine Protected Area(s)
MSP	Marine Spatial Planning
MSSD	Mediterranean Strategy for Sustainable Development 2016-2025 - Investing in environmental sustainability to achieve social and economic development
MTF	Mediterranean Trust Fund
MTS	UNEP/MAP Mid-Term Strategy 2016-2021
NAP(s)	National Action Plan(s)
NBB	National Baseline Budget
NFPs	National Focal Points
NGOs	Non-Governmental Organizations
NSSD	National Strategy for Sustainable Development
POPs	Persistent Organic Pollutant(s)
PoWs	Programme(s) of Work
PRTR	Pollutant Release and Transfer Register
PSSAs	Particularly Sensitive Sea Areas
RAC(s)	Regional Activity Centre(s)
RMS	Resource Mobilization Strategy
SAP BIO	Strategic Action Programme for the conservation of Biological Diversity in the Mediterranean Region
SAP-MED	Strategic Action Programme to Address Pollution from Land-Based Activities
SCCF	Special Climate Change Funds
SCP	Sustainable Consumption and Production
SDG(s)	Sustainable Development Goal(s)
SEA	Strategic Environmental Assessment
SIA	Strategic Impact Assessment
SPAMI(s)	Specially Protected Area(s) of Mediterranean Importance
TAIEX	Technical Assistance and Information Exchange
TEEB	The Economics of Ecosystems and Biodiversity
UfMS	Secretariat for Union of the Mediterranean

UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WFP	World Food Programme
WWF	Worldwide Fund for Nature

UPDATED RESOURCE MOBILIZATION STRATEGY

1. Introduction

1. The 17th Ordinary Meeting of the Contracting Parties (COP 17) (Paris, France, 8-10 February 2012), adopted the Resource Mobilization Strategy (RMS) of UNEP/MAP, included in Annex III of Decision IG.20/13.

2. During COP 19 (Athens, Greece, 9-12 February 2016), the Contracting Parties adopted two decisions that addressed the UNEP/MAP resource mobilization issues. The first decision (IG.22/1) on the UNEP/MAP Mid-Term Strategy 2016-2021 (MTS), identified the availability of the financial resources as the main challenge for MAP to achieve its objectives (paragraph 107). The MTS notes that “the MTS and the PoWs will be complemented by the updated, comprehensive Resource Mobilization Strategy” (paragraph 108). Past Programmes of Work were based on Budgets that required raising a large proportion (up to 64%) of the necessary resources from external resources; yet a raise of more than 30% of the total Budget from such sources was not achieved, resulting in significant funding gaps that hindered successful implementation of the Programmes of Work.

3. The second decision (IG.22/20) on the Program of Work and Budget 2016-2017 (PoW) called for the Secretariat to prepare an updated Resource Mobilization Strategy. More specifically, the MTS includes a Key Output 1.1.4: “Funding opportunities for regional and national priorities identified, donors/partners informed and engaged, through the implementation of the updated Resource Mobilization Strategy, and Contracting Parties assisted in mobilizing resources”. To this end, the PoW decision specified the need to prepare a ground mapping study for identifying funding opportunities for regional and national priorities and to update the MAP Resource Mobilization Strategy including the development of a coherent MAP-wide communication mechanism targeting donors/partners.

4. This updated RMS responds to that request by the Contracting Parties and follows the recommendations of the MAP Focal Points Meeting (Athens, Greece, 12-15 September 2017), which provided further guidance on the mandate given to the Secretariat in putting into effect paragraphs 106-108 of the MTS. The decision to update the RMS seeks to strengthen the UNEP/MAP-Barcelona Convention system, to enable it to secure the required resources to fulfill its PoWs in their entirety, and to ensure that MAP Components could work to their full capacity. The COP 19 decisions demonstrate the Contracting Parties’ intent to support the identification and expansion of funding opportunities for UNEP/MAP, assure stable, adequate and predictable resources, and strengthen linkages between activities of the PoWs and funding sources.

2. Objectives

5. The updated RMS aims at ensuring that adequate funding is made available to support UNEP/MAP programmatic activities in the short and medium term on the basis of the MTS priorities. More particularly, the updated RMS has the following objectives:

- a. To establish clear directions for the mobilization of resources, coming from both traditional and non-traditional sources, for the full implementation of the PoW and to identify the main counterparts and potential donors;
- b. To define the needs and changes required to effectively mobilize resources, with a particular focus on those thematic areas of the mandate of UNEP/MAP that are most in need for external funding.

3. Scope

6. The updated RMS has a horizon period of ten years, with the view to ensuring a full implementation of the current MTS (2016-2021) and taking a forward-looking step towards the implementation of the next MTS cycle (2022-2027), with emphasis on its first biennium.

4. Overview of UNEP/MAP funding

7. UNEP/MAP is *in primis* financed by the Contracting Parties through the assessed contributions to the Mediterranean Trust Fund (MTF). Other sources of funding include discretionary contributions from the European Union and *ad hoc* voluntary contributions by other Contracting Parties, the Host Country contributions, project funding by the Global Environmental Facility (GEF) and the European Commission, and other *ad hoc* donors. The assessed contributions generally do not provide sufficient resources to fully meet the financial requirements of the biennial PoW. The voluntary and project funding is in general secured on an *ad hoc* basis and takes considerable staff time and efforts for the Coordinating Unit(CU) and MAP Components to achieve tangible results.

a. Contracting Parties contributions (ordinary, voluntary, host country)

8. The contributions of the Contracting Parties, including the assessed ordinary, the EU discretionary and the host country contribution for the Coordinating Unit, are crucial for the implementation of the MAP MTS and PoWs, as they provide a stable and secure source of funding, ensuring the functioning of the system by covering the administrative costs, as well as allowing effective planning by supporting certain core activities. As regards the Regional Activity Centres (RACs), the contributions of the host countries, and of IMO in the case of REMPEC, represent a noticeable part of their funding.

9. From 2004 to 2016, the total assessed contributions remained unchanged. The Contracting Parties provided in 2016 a one-time 3% increase of their assessed contributions to assist with financial obligations for organizing and hosting the COP meetings, so as to enable all Contracting Parties to host a COP meeting. The contributions from the Contracting Parties do not seem to have kept up with the inflationary costs and with the growing MAP mandates. Therefore, a possible regular increase of the assessed contributions to the MTF should be considered, since these contributions provide the main guarantee for stable and predictable resources and demonstrate the continued commitment of Contracting Parties.

10. MAP has benefited on a regular basis from additional voluntary contributions of the Contracting Parties to support the implementation of the PoW. They include the recent (2016) cooperation agreement between the Italian Ministry for the Environment, Land and Sea (IMELS) and UNEP, which is an excellent development and a very good example of voluntary funding in line with the MTS, as well as the voluntary contribution from Turkey for the implementation of the first edition of the Istanbul Environment Friendly City Award. Until COP 19, voluntary contributions also included the expenses of organizing COP meetings, which were covered by the respective host country.

b. Additional sources of funding

11. The European Union (EU) and the Global Environment Facility (GEF) are, and are expected to remain significant contributors to the implementation of the MTS and the biennial MAP PoWs.

12. The EU has a number of funding mechanisms and resource streams available. UNEP/MAP has used to a large extent over the past twenty years such mechanisms, including the strategic partnership with UNEP, the participation in calls for tender/project proposals, and the direct contracts between UNEP/MAP and the European Commission. While the Directorate-General (DG) for Environment

will remain a key partner, the approved MTS includes a number of core development issues for which interaction and engagement with other relevant DGs (DG DEVCO, DG NEAR, DG Mare etc.) is desirable to meet the resource requirements.

13. UNEP/MAP has a long-standing strong collaboration with the Global Environment Facility (GEF), which dates back to 1997. Since then, GEF supported 3 considerable investments in the region including the 47 million USD “Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security”, approved in October 2016, now being developed by UNEP/MAP and its executing partners. It is important to maintain MAP engagement with GEF, and to seek further opportunities for funding, focusing on areas in which MAP has a comparative advantage or can build desirable partnerships, in line with its mandate and with the key priorities of the GEF-7 Replenishment (e.g. biodiversity conservation and sustainable management of natural resources through spatial protection measures, such as MPAs, FRAs, etc.).

14. With regards to alternative sources of funding, recently there has been progress in benefiting from interaction with large environmental foundations, such as MAVA, mainly supporting specific activities; with the private sector, where there is an effort at partnerships building (e.g. with the oil and gas industry through REMPEC), without however significant financial contributions so far. From the latter, new/innovative funding possibilities (such as social and development impact bonds/loans, crowdfunding, etc.) are not explored at the moment.

15. Most of the projects financed by the main sponsors (i.e. the EU and GEF) were prepared and submitted to them by UNEP/MAP, in coordination with the concerned Components and in some cases other partners, while proposals for projects financed by foundations (e.g. MAVA) have been mainly prepared and submitted by the respective Components.

16. In addition to the donors mentioned above, UNEP/MAP relations and collaborations with key international organizations, such as the World Bank (WB), United Nations Development Programme (UNDP), Islamic Development Bank (IsDB), African Development Bank (AfDB), as well as the European Investment bank (EIB) which is fully involved in the EU H2020 initiative for a clean and healthy Mediterranean by 2020, and the European Bank for Reconstruction and Development (EBRD), should be further developed and strengthened, building on existing examples of successful cooperation.

c. External resource gap analysis

17. Figure 1 provides an overview of the external resources mobilized/required for each theme of the current MTS, for the biennia 2016-2017 and (proposed) 2018-2019. It shows that there are some themes which traditionally attract a large amount of external resources compared to the ordinary contributions, including the themes of Land and Sea Interactions and Processes (external resources more than 11 times higher than MTF), SCP (external resources up to 40 times higher than MTF), and Climate Change (external resources around 16 times higher than MTF). In addition, for some themes, including the Biodiversity and Ecosystems and the Land and Sea Interactions and Processes there is a very low percentage of non-secured external funding, while for others, such as the Climate Change Adaptation theme, the external resources are mainly non-secured in both biennia. This analysis shows the areas in which external funding is most required and those for which it is more challenging to secure external funding.

18. While all themes have benefited from external funding, the status of external funding in relation to specific types of activities vary. Taking an overview of the few past Programmes of Work, namely from the last three biennia, it can be seen that governance-related activities are mainly covered by the MTF, while others appear to rely mainly/largely on external sources, including:

- Preparation of national strategies and action plans
- National implementation of action plans

- Awareness raising and outreach activities
- Monitoring, inventory and assessment
- Building of platforms/networking
- Technical assistance and capacity building, including support to ratification of legal instruments
- Cooperation and partnerships

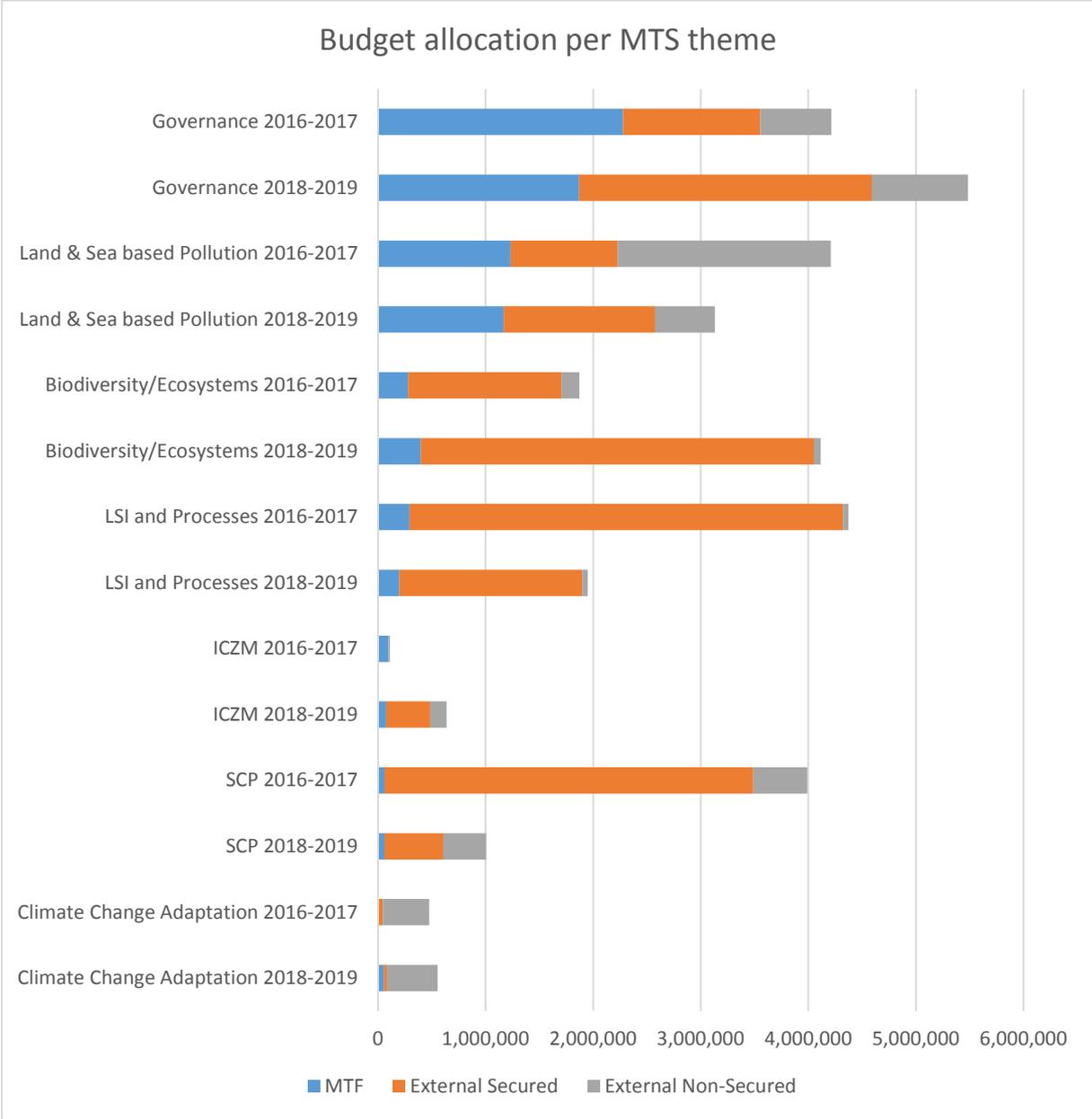


Figure 1. Budget allocation per MTS theme (2016/17 and 2018/19 PoW and Budgets)

19. The adoption of a structured MTS and the development of biennial PoWs based on the MTS, has been an important step in supporting the preparation and validation of project documents and proposals for external fund raising. A concise Resource Mobilization Strategy is expected to enable a clear planning for attracting external funds to implement the PoWs and to ensure the streamlining of external funding to support MAP programmatic priorities.

20. In order to enable new opportunities and to enhance outreach to new donors and entities, the Contracting Parties' support is essential for the diversification of the funding sources. It will enable the UNEP/MAP-Barcelona Convention system to widen its networks and partnerships with various entities and funding sources, broaden the outreach to foundations, private sector, and innovative financing mechanisms and explore novel ways to mobilize resources, such as setting up online website fundraising mechanisms to secure private donations and contributions.

5. External resource needs

21. The mandate of UNEP/MAP has increased significantly over time, addressing emerging issues of priority for the region. New or updated legal instruments, strategies and action plans have been adopted, whose implementation requires additional funding. The enlarged scope of action of MAP is reflected in the MTS, which is structured around seven different themes with a considerable number of strategic outcomes and outputs, aiming at achieving Good Environmental Status of the Mediterranean Sea and coast and contributing to the sustainable development of the region.

22. This widened mandate has not been accompanied by a proportionally higher provision of resources through the assessed contributions by the Contracting Parties. As a result, the current allocation of assessed contributions (MTF) does not provide sufficient resources to fully meet the financial requirements of the biennial PoWs.

23. With a view to address the lack of sufficient resources, a proactive approach was taken in developing the PoW 2018-2019, and securing a large part of the external funding required; therefore, only 15% of the resources required are not already available. In addition, in 2016-2017, the Secretariat has successfully achieved a major boost in funding for the implementation of activities both by the UNEP/MAP-Barcelona Convention system and by the Mediterranean partners by obtaining the approval of the new GEF MedProgramme. Once fully developed, the USD 47 million allocated by the GEF Council to the Programme are expected to support technical assistance and mobilize investments for about USD 600 million in the GEF eligible countries. During the next three biennia and beyond, this will undoubtedly have a transformational and beneficial effect on the region.

24. Resource mobilisation efforts in the next years will focus on MTS themes and strategic outcomes that have been proven as the most dependant on external resources, and especially on those outcomes for which external resources are difficult to be found and secured. In addition to the information provided in Figure 1 above, the Secretariat has assessed the budget allocated (MTF / external secured / external non-secured) per strategic outcome-related categories for the 2016-2017 and 2018-2019 biennia (see Figure 2).

25. This analysis has shown that the strategic outcomes requiring the highest rate of non-secured external funding are those related to national implementation and compliance, thematic policy development, and capacity building activities. There are some specificities in each biennium. For example, there is a large proportion of external resources for outcomes related to partnerships and outreach as well as monitoring and assessment in the biennium 2016-2017, while in (proposed) 2018-2019 there is a need for higher external funding for the development and implementation of technical tools. Therefore, mobilisation of funding should be focused more on these programmatic areas. Furthermore, since the gap in the 2018-2019 (proposed) budget to be covered by external resources that are not yet secured is small, the main challenge is to effectively plan the actions needed for an effective resource mobilization in the mid-term, i.e. for the biennium 2020-2021 and beyond.

26. The updated RMS is therefore two-fold. It first aims at ensuring that the gap in 2018-2019 overall budget is filled through fund-raising actions specifically targeted on the activities for which external funding is not yet secured. Such actions are also relevant to the next, 2020-2021, biennial budget. The second objective of the updated RMS is to identify actions that would support the mobilization of external funding (with a horizon of 10 years, by the end of the next MTS cycle, and

with a focus on that cycle’s first biennium), in order to support the implementation of the MAP programmatic objectives and actions. In this regard, the updated RMS aims to enable the Secretariat to enhance engagement with existing donors, and build relations and outreach to new partners and funders.

27. The updated RMS proposes a diversification of resource flows from a variety of donors. Such an approach would also enable the Secretariat to broaden the visibility and recognition of UNEP/MAP-Barcelona Convention and enhance the support and collaboration with new partners and donors.

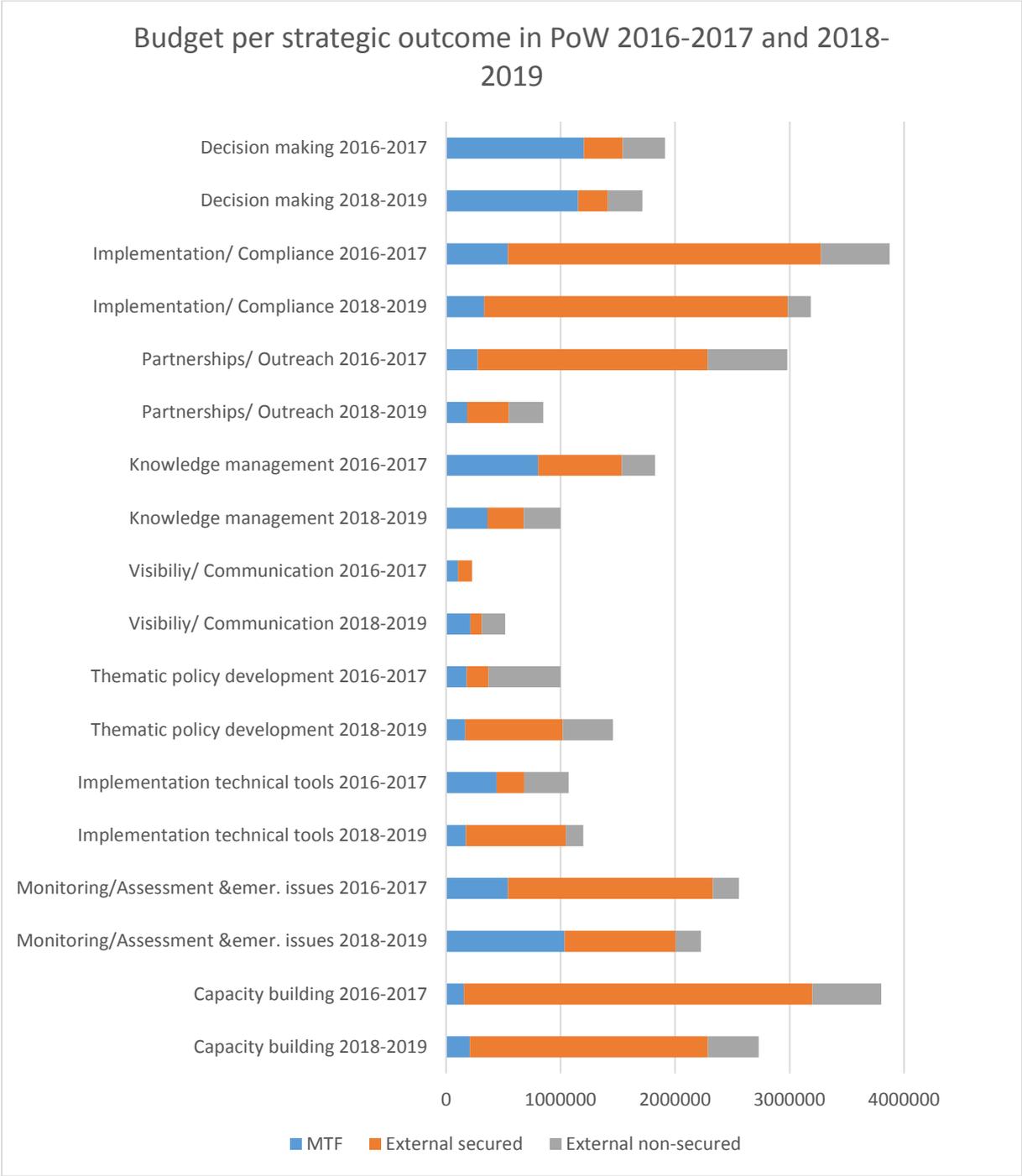


Figure 2. Budget per strategic outcome in PoW 2016-2017 and 2018-2019

6. Key actions needed to ensure effective resource mobilisation

28. Taking into account the funding situation, gaps and needs of the UNEP/MAP-Barcelona Convention system, as outlined above, and in order to ensure the effective implementation of its biennial PoWs and the overall implementation of the current and next MTSs, the updated RMS focuses on: (i) strengthening the contributions from “traditional donors”, including voluntary contribution from the Contracting Parties, and multilateral entities and MAP partners; and (ii) ensuring funding from sources not yet fully explored by MAP, including foundations, private sector and innovative mechanisms.

a. Investing more ineffective outreach and communication

29. In order to increase the resource basis of the UNEP/MAP-Barcelona Convention system, it is critical to invest more in outreach and communication towards the Contracting Parties, MAP partners, key donors and the general public. Focus should be placed on promoting the impacts of MAP work and demonstrating the comparative advantages of the UNEP/MAP-Barcelona Convention system on the protection of marine environment in the Mediterranean region, especially regarding legal instruments, decision making, regional coordination, capacity building, science-policy interface, production and dissemination of environmental information, emergency response, monitoring and assessment, etc.

30. In this respect, the Coordinating Unit, in collaboration with MAP Components, could enhance outreach activities and organize annual donor consultation meetings, as described in detail in section 7, on communication tools and strategies.

b. Reaching out to the Contracting Parties

31. Funds originating from the Contracting Parties are, and should remain, the backbone of the MAP resource base, as they provide a predictable and secure source of funding for its core mandate. It is therefore important to raise the Contracting Parties’ engagement in supporting the MAP PoW with the aim to:

- Ensure a regular and prompt payment of the assessed ordinary contributions from the Contracting Parties;
- Support an increased number of voluntary contributions from the CPs, through strategic programme level agreements;
- Increase the assessed ordinary contributions of the Contracting Parties in line with the growing MAP mandate;
- Maintain an acceptable ratio between ordinary assessed and external funding for all the MTS themes.

c. Continuing and strengthening cooperation with multilateral entities and UNEP/MAP partners

32. Funding from “traditional” donors should be maintained and if possible enhanced. In particular:

- a. With regards to the EU-funded projects, work should continue on the same path, while additional funding opportunities could be also explored, including funds which are not purely destined to environmental protection but are relevant to the overall MAP mandate, such as the funds from Directorate-General for Maritime Affairs and Fisheries-DG MARE (EMFF), Directorate-General for Climate Action-DG CLIMA, Directorate-General for Research and Innovation - DG RTD, Directorate-General for European Neighbourhood Policy and Enlargement Negotiations-DG NEAR, etc.

- b. The existing effective cooperation with GEF should be continued in the future. Although it might be challenging to receive additional funds from GEF after the large-scale MedProgramme, funding opportunities should be explored, in line with the new GEF-7 Programming directions and policy agenda, building on MAP comparative advantages and on existing partnerships with other key regional and global actors (i.e. MoU with GFCM for sustainable fisheries and biodiversity conservation goals).

33. Based on the analysis of the past PoWs, it has been identified that the MTS cross-cutting theme on climate change adaptation is one of the themes most dependent on external funding, with a high proportion of non-secured external resources. In this regard, the MAP Secretariat should seek additional external funding opportunities to support related activities of the current and future MTS. New development funds established in response to the climate change agenda should be further explored and approached by UNEP/MAP, including the Green Climate Fund (GCF), the Adaptation Fund, etc. These funds could be pursued through joint programming and partnership collaboration with other international organizations and partners, in order to reduce work load while combining the technical expertise of the partners in joint proposal submissions. A similar approach should be followed for other MTS themes identified as more dependent on external funding, such as sustainable consumption and production.

34. In addition, it is important to continue strengthening the effective coordination with the MAP Components for the mobilization of resources and preparation of project proposals in a coordinated manner. Synergistic proposals should be further explored, through the Executive Coordination Panel (ECP), covering a wide range of MAP priorities and aiming at attracting more large-scale funding. The current practice of shared calls for proposal and information on on-going projects will support complementarity and amplification of impact.

d. Exploring opportunities for partnerships with foundations and the private sector

35. There are many foundations and private sector entities focused and engaged in the thematic areas of concern that could be enlisted in becoming partners and supporters in the implementation of national and regional priorities within the MAP mandate. This requires a coordinated approach and communication outreach to bring on board a wide range of partners as funders. Furthering relations and engagement with the private sector will require for the Contracting Parties to approve a private sector guidance policy based on the one of UNEP, and agree to specific criteria and a policy for public-private partnership development. Having an agreed policy in place will assist the Coordinating Unit and the MAP Components in the establishment of the new donor relations, especially with private sector partners.

i. Foundations

36. The prioritized themes of the relevant foundations indicate that most funding is going to nature/biodiversity and less to “industrial” activities, such as transport and chemicals. Surprisingly, climate change funding is not the most significant priority. Encouragingly, “sustainable communities” and “circular economy” are moving up the priority list. This shows that environmental funders are adjusting their programmes in order to ensure better coherence with political priorities and general developments.

37. MAP should aim at enhancing funding from foundations. In doing so, it is important both to prioritize foundations that are interested in the MAP priorities and activities and to build relationships, as foundations prefer not to be seen as donors receiving funding proposals, but as partners. In addition, appropriate mechanisms should be established, which would make the modality of payments more attractive to foundations. This could be done in line with the respective actions of the broader UNEP RMS.

ii. Private sector

38. There are various ways for UNEP/MAP to engage in securing resources from the private sector. Corporate fundraising is a more complicated undertaking; engagement with the private sector should be undertaken on the basis of a long-term strategic partnership, offering more than just money. UNEP/MAP should first develop and adopt criteria for engagement with these entities based on the existing UNEP Policy and long-standing experience.

39. The following are a list of potential interactions that MAP could consider to establish with the private sector entities: (a) Philanthropic donations, (b) Grants from company foundations, (c) Technical support or collaboration on special activities or initiatives with the private sector entities, (d) Sponsorship of events, e.g. UN Coastal Clean Up Day, World Water Day, World Oceans Day, World Biodiversity Day, Mediterranean Coast Day and other similar events, and publications, (e) Exchange or donation of technical skills, services, personnel, etc. (for example, WFP has a special relationship with a private courier company and the company advises WFP on logistical issues and other efficiency factors in delivery issues).

40. With the view to building partnerships with the private sector and raising financial and non-financial contributions, there is a need to identify and map priority sectors, niche markets and industries relevant to MAP activities and assess appropriate tools and funding mechanisms for private sector contributions. Opportunities for tapping onto Corporate Social Responsibility (CRS) Funds should be also explored.

e. New and innovative source of funding

41. New and innovative funding possibilities should be further explored by UNEP/MAP. These may include crowd-funding, lotteries, environmental levies, etc.

42. To this end, examples that could be examined include the introduction of a 1 Euro surcharge on the ticket of passenger travelling on cruise ships in the Mediterranean in cooperation with the International Maritime Organization (IMO), the establishment of partnerships with regional hotel chains and tour operators to promote and distribute to their guests or clients a short promotional material on UNEP/MAP, and the production of a pin or ocean blue bracelet with the MAP's logo to be given as a token of appreciation to the voluntary contributors or further employed as a marketing tool to promote UNEP/MAP and expand its awareness to wider audiences.

7. Communication tools and strategies to approach donors

43. The initiatives proposed in the updated RMS will also require that the Coordinating Unit enhances its communications functions, with the view to finding new and innovative ways to showcasing the work undertaken in the framework of the UNEP/MAP-Barcelona Convention system, and especially the impacts of this work, as well as to improving MAP visibility and public recognition towards funding partners, new potential donors and the general public.

44. In any approach to mobilizing resources for the forthcoming programmatic periods, UNEP/MAP will have to contend with other institutions and initiatives in an increasingly competitive and demanding funding environment. Therefore, emphasis should be placed on raising awareness of the comparative advantages of UNEP/MAP-Barcelona Convention regarding policy development, implementation, regional coordination and capacity building potential.

45. In this regard, developing new relations with this wide range of partners will require dedicated staff with skill sets and experience in interacting with the present and new funding partners. The promotion of communication activities under the RMS should be also linked with the Communication Strategy.

46. In order to support the communication efforts towards enhanced resource mobilisation it is advisable for the Coordinating Unit, in collaboration with MAP Components, to organize annual donor consultation meetings, possibly on the occasion of major international ocean-related events such as Our Ocean conferences and ocean races and private sector fairs and events. Funding proposals and concept notes could be prepared and presented at the donors meeting, involving relevant resource mobilization or communication staff and with the promotion by volunteer Contracting Parties. This could help the enhanced coordination between the Coordinating Unit and MAP Components, develop a common approach towards donors, and help minimize staff travels to present individual proposals to donors.

47. Bilateral meetings with interested donors should be also considered during the preparation phase of the PoWs, focusing on relative parts/outcomes of the PoW requiring external funding, taking into account donors specific priorities, and building on past experiences.

48. Furthermore, with the view to approaching donors, information fiches on projects under implementation, would be very useful, including also projects that are developed but not yet funded.

49. The Secretariat should strengthen its participation in relevant global, regional and national meetings and conferences, as well as in events of the foundations where contacts can be established with funders and opportunities for funding of specific activities can be explored. Such efforts could be pursued in collaboration with other regional organizations, such as GFCM, UfMS, etc. UNEP/MAP could also develop a flexible and mobile exhibit to showcase at various meetings and events its published materials and documentation relevant to its thematic and strategic objectives.

8. The way forward

50. the Secretariat will prepare timelines for the various deliverables and initiatives proposed herein with the relevant budgetary requirements. This will make it possible for UNEP/MAP to evaluate the steps and measures taken to ensure it is on track with the deliverables and effectively demonstrate progress made, while also informing the Contracting Parties of any obstacles encountered.

51. The Contracting Parties' support is essential in ensuring the successful implementation of the RMS and mitigating unforeseen circumstances that could adversely impact and/or delay the implementation of the RMS.

52. The role of the ECP should be further strengthened in the identification of external resources and the preparation of project proposals. Focus can be placed on the development of synergistic proposals for potential donors, displaying the opportunities for delivering strategic outcomes by using the full MAP system in an effective and integrated manner, and promoting the development of multi-donor funds.

53. The tables in the Appendix list the strategic outcomes and key outputs of the MTS and indicate possible donors to be approached for their funding. This is not meant to be a comprehensive listing of funding sources to be approached but rather an indicative one; it represents an analysis of existing funding instruments and agencies (at the global, regional and national/bilateral levels), taking into account their priorities and mandates in relation to the marine and coastal environment, and their matching with the strategic outcomes and key outputs of the MTS, at a general level.

9. Recommendations

54. The following recommendations are addressed to the Secretariat and the Contracting Parties. They build upon the existing RMS recommendations and introduce new elements and proposals to

enhance the potential of UNEP/MAP in securing new resources. Some of the recommendations can be implemented without additional or new resources provided, while others will require further resources to be allocated before these specific recommendations can be implemented.

1. Strengthen the commitment of Contracting Parties, including through assessed contributions;
2. Ensure adequate funding to fill the gaps from non-secured resources for the activities of PoW 2018-2019, focusing on strategic outcomes of the MTS that appear to be the most dependent on external funding, such as those related to implementation and compliance, thematic policy development and capacity building;
3. Continue the effective coordination between the Coordinating Unit and the MAP Components for the mobilization of resources and preparation of project proposals. To this end, develop, through the ECP, synergistic proposals, covering a broad scope of MAP priorities, to attract more large-scale funding, taking into account the MTS themes for which it has been proved difficult to secure the external resources needed;
4. Continue and give high priority to the implementation and recommendations for better coherence, coordination and programme management as outlined in the forward of the Governance Paper;
5. Make the management of donor funds and approaches an integral part of the programme management cycle, ensuring that all approaches for funding are guided by the MTS and the biennial Programmes of Work;
6. Develop a system for close coordination at the country level between Focal Points of UNEP/MAP, MED POL and RACs, and GEF focal points, EU focal points and/or delegations, UN country offices, in order to help Contracting Parties to coordinate internally and to exploit funding opportunities;
7. Encourage Contracting Parties to continue providing and to enhance voluntary contributions for the implementation of the MTS and the biennial PoWs;
8. Maintain close cooperation with the EU and, working through the EU MAP Focal Point, identify funding opportunities relevant to the approved Mid-Term Strategy;
9. Enhance participation in EU funded projects, analyzing potential funding opportunities on various little accessed funding sources relevant to PoW implementation, i.e. in addition to the European Neighborhood Policy and GPGC, include Horizon 2020 and Technical Assistance and Information Exchange (TAIEX) opportunities;
10. Identify additional funding opportunities from GEF, in line with GEF-7 Programming directions and policy agenda, considering the possibility of joint proposals using existing partnerships with key regional and global actors. Explore the opportunities offered by the planned stronger focus of GEF-7 on biodiversity protection at regional level, as well as new areas of potential support such as marine litter and sustainable fisheries (e.g. joint proposal with GFCM on issues of sustainable fisheries and biodiversity conservation through spatial protection measures etc.);
11. Explore additional funding opportunities relating to the MTS themes, in particular on climate change adaptation, such as the Green Climate Fund, the Adaptation Fund, etc.;
12. Establish or reinforce the cooperation with major international financial institutions such as EBRD, EIB, World Bank, IsDB;
13. Establish relationships with major foundations, including the European Foundation Centre (EFC), and assess ways to improve the existing fund reception mechanisms in order to make them more attractive to possible donors;
14. Identify areas of collaboration with the private sector, including by mapping key relevant sectors and themes, identifying donors with funding priorities matching the MTS themes most in need for external funding, and assessing tools and funding mechanisms to receive contributions from the private sector as well as opportunities for tapping on to Corporate Social Responsibility (CSR) funds and to specific technical partnerships (for example opportunistic monitoring activities);
15. To this end, prepare specific private sector guidelines for UNEP/MAP, in line with relevant UNEP guidelines, to engage and develop the long-term collaboration with the private sector

- partners. Ensure the guidelines developed would protect the organization from reputational risks and would secure the credibility of the organization, while on the same time they will promote environmental protection and sustainable development;
16. Identify and analyze potential new/innovative funding opportunities, including, as appropriate, green financial products, green investment mechanisms, crowdfunding, lotteries, environmental levies, etc., and make best use of innovative communication tools, such as social media;
 17. Strengthen and operationalize partnerships with other regional actors in approaching possible donors, by bringing an integrated plan of activities to the table;
 18. Establish a monitoring and evaluation mechanisms to measure progress on the updated RMS and prepare time lines for deliverables and report on results to the Contracting Parties;
 19. Design and implement new communication tools and strategies, to approach donors, putting the emphasis on the comparative advantages of the UNEP/MAP-Barcelona Convention system and the positive impacts of MAP action;
 20. Organize consultation meetings with donors especially in the phase of preparation of the PoW;
 21. Strengthen awareness of Contracting Parties on funding opportunities and best practices, which are relevant to them to meet their obligations under the Barcelona Convention and the MTS implementation;
 22. Increase MAP representation in relevant meetings and events, and MAP visibility towards donors, foundations, the private sector and the general public;
 23. Keep the project fiches compilation regularly updated, including for projects not yet funded, as a tool to be used for communication and resource mobilization purposes;
 24. Increase human resource capacity for resource mobilization as well as for relevant communication activities in the Coordinating Unit; establish a mechanism to consistently manage the pool of projects financed by extra budgetary resources to consistently and efficiently support the management of external resources and the implementation of the activities that they fund.

Appendix I

Indicative List of Main Potential Donors for the Implementation of the UNEP/MAP MTS

TABLE 1. Strategic Outcomes and Indicative Key Outputs for Governance

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
1.1 Contracting Parties supported in the implementation of the Barcelona Convention, its Protocols, Regional Strategies and Action Plans.	1.1.1 Ratification of the Barcelona Convention and its Protocols by all Contracting Parties supported.	Bilateral donors ¹
	1.1.2 Effective legal, policy, and logistic support provided to MAP decision-making process including advisory bodies meetings.	Bilateral donors, EU
	1.1.3 Strengthen interlinkages between Core and Cross-cutting themes and facilitate Coordination at national level across the relevant sectors. In this context, examine the impacts of a transition to Thematic Focal Points within UNEP/MAP system for consideration at the COP 20.	Bilateral donors and national governments and regional development institutions
	1.1.4 Funding opportunities for regional and national priorities identified, donors/partners informed and engaged, through the implementation of the updated Resource Mobilization Strategy and Contracting Parties assisted in mobilizing resources.	
1.2 Contracting Parties supported in compliance with the Barcelona Convention, its Protocols, Regional Strategies and Action Plans.	1.2.1 Compliance mechanisms effectively functioning and technical and legal advice provided to Contracting Parties, including technical assistance to enhance implementation of the Convention and its Protocols including reporting.	International Development Law Organization (IDLO) could be a potential partner for technical/legal assistance to countries. Global Foundations could be funders
1.3 Strengthened participation, engagement, synergies and complementarities among global and regional institutions.	1.3.1 Regional cooperation activities promoting dialogue and active engagement of global and regional organizations and partners, including on SAP BIO, Marine Litter, SCP, ICZM, Related entities could support funding for regional co-operation MSP and Climate Change (e.g. regional conference, donor meetings).	Bilateral Donors, EU, Regional Development Banks, UNDP, UNFCCC,

¹ Bilateral donors also include ad hoc voluntary contributions from Contracting Parties

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
		IGOs, GEF, UfMS
	1.3.2 Participation in relevant existing or new international initiatives and dialogue (e.g. ABNJ, MPAs, Offshore, Sustainable Development) to highlight the Mediterranean regional specificities and increase synergies.	Bilateral, IGOs, private sector/foundations
	1.3.3 MSSD implementation set in motion through actions on visibility, capacity building and the preparation of guidelines to assist countries adapt the Strategy to their national contexts.	UN Sustainable Development Fund, Adaptation Fund, other similar funds
1.4 Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.	1.4.1 Periodic assessments based on DPSIR approach and published addressing inter alia status quality of marine and coastal environment, interaction between environment and development as well as scenarios and prospective development analysis in the long run. These assessments include climate change related vulnerabilities and risks on the marine & coastal zone in their analysis, as well as knowledge gaps on marine pollution, ecosystem services, coastal degradation, cumulative impacts and impacts of consumption and production.	Bilateral donors, Private sector entities and Foundations, European Investment Bank, European Bank for Reconstruction, and Development, EU
	1.4.2 MSSD implementation monitored, as appropriate and evaluated, as appropriate on periodic basis through the agreed set of indicators in line with SDG and the sustainability dashboard.	GEF, Private sector Foundations, IGOs
	1.4.3 Implementation of IMAP (the EcAp-based integrated monitoring and assessment programme) coordinated, including GES common indicators fact sheets, and supported by a data information centre to be integrated into Info/MAP platform.	EU (relevant EU Directorates), GEF

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
	1.4.4 Interface between science and policy-making strengthened through enhanced cooperation with global and regional scientific institutions, knowledge sharing platforms, dialogues, exchange of good practices and publications.	EU, Foundations, Bilateral donors, Scientific institutions
	1.4.5 Educational programmes, including e-learning platforms and college level degrees, on governance and thematic topics of MAP relevance organized in cooperation with competent institutions.	Foundations, Universities and Educational institutions
1.5 MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding.	1.5.1 Info/MAP platform and platform for the implementation of IMAP fully operative and further developed, connected to MAP components' information systems and other relevant regional knowledge platforms, to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public.	EU, Bilateral Donors, Private sector entities engaged in Informatics, IT companies (potentially)
	1.5.2 Barcelona Convention online Reporting System (BCRS) updated and operational, improved and maintained, and complemented and streamlined with other reporting requirements.	Bilateral donors, EU
1.6 Raised awareness and outreach.	1.6.1 The UNEP/MAP communication strategy updated and implemented.	Foundations, Communication and public relation networks (pro-bono services)

TABLE 2. Strategic Outcomes and Indicative Key Outputs for *Land and Sea-Based Pollution*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
2.1 Strengthening regional implementation of the obligations under the Barcelona Convention and 4 pollution-related Protocols, and of programmes of measures in existing relevant Regional Strategies and Action Plans.	2.1.1 Targeted measures of the regional plans/strategies facilitated and implemented.	Bilateral donors, EU, IGOs, Regional organizations, GEF
2.2 Development or update of new/existing action plans, programmes and measures, common standards and criteria, guidelines.	2.2.1 Guidelines, decision-support tools, common standards and criteria provided for in the Protocols and the Regional Plans, developed and/or updated for key priority substances or sectors.	Private sector Foundations, Regional organizations, GEF
	2.2.2 Regional programmes of measures identified and negotiated for pollutants/ categories (sectors) showing increasing trends, including the revision of existing regional plans and areas of consumption and production.	Green Climate Fund, GEF, EU, Regional Organizations, Bilateral donors, Private sector partners
2.3 Strengthening and implementation of marine pollution prevention and control legislation and policies at national level, including through	2.3.1 Adopted NAPs (Art. 15, LBS Protocol) implemented and targeted outputs timely delivered	National entities, Bilateral donors, EU, European Investment Bank, European Bank for Reconstruction, and Development, World Bank, IFA, GEF

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
enforcement and integration into sectorial processes.	2.3.2 NAPs developed to implement the Regional Strategy for Prevention and Response to Marine Pollution from Ships.	National Entities, IGOs, EU, IMO
	2.3.3 SCP Regional Action Plan (pollution- related activities) mainstreamed into and implemented through NAPs and national processes, such as SCP National Action Plans and NSSDs.	Private sector, Foundations, Bilateral Donors, IGOs, EU, GEF
2.4 Marine Pollution Monitoring and assessment.	2.4.1 National pollution and litter monitoring programs updated to include the relevant pollution and litter Imap indicators, implemented and supported by data quality assurance and control.	Bilateral Donors, EU, GPA
	2.4.2 Inventories of pollutant loads (NBB, PRTR from land-based sources, and from offshore and shipping) regularly updated, reported and assessed.	EU, European Investment Bank, European Bank for Reconstruction, and Development, Technical cooperation with Shipping Companies, GPA
	2.4.3 Marine pollution assessment tools (in depth thematic assessment, maps and indicator factsheets) developed and updated for key pollutants and sectors within EcAp.	Bilateral donors, EU, GEF
2.5 Enhanced capacity at regional, sub- regional and national levels including	2.5.1 Training programmes and workshops in areas such as pollution monitoring, pollutant inventories, policy implementation, common technical	National Entities, relevant IGOs

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
technical assistance and capacity building.	guidelines, authorization and inspections bodies, compliance with national legislation.	
	2.5.2 Pilot projects implemented on marine litter, POPs, mercury, and illicit discharges reduced, including through SCP solutions for alternatives to POPs and toxic chemicals and the reduction of upstream sources of marine litter for businesses, entrepreneurs, financial institutions and civil society.	WB, UNDP, GEF, EU, Private sector entities
	2.5.3 Marine pollution prevention and control measures and assessments integrated in ICZM Protocol implementation projects, CAMPs and related Strategic Environment Impact Assessments.	Bilateral Donors, GEF
2.6 Enhanced cooperation at regional, sub- regional and national levels to prevent and control marine pollution.	2.6.1 Agreements, synergies and exchange of best practices with key relevant global and regional partners and stakeholders with a particular focus on marine litter.	Regional Organizations, UfMS, International Environmental Organizations, EU
	2.6.2 Networks and initiatives of businesses, entrepreneurs and civil society providing SCP solutions contributing to alternatives to POPs and toxic chemicals and to reduce upstream sources of marine litter supported and coordinated.	EU, Environmental Organizations, GEF, Private sector partners
2.7 Identifying and tackling new and emerging issues, as appropriate.	2.7.1 Reviews/policy briefs developed and submitted to Contracting Parties on emerging pollutants, ocean acidification, climate change and linkages with relevant global processes.	Foundations, UNFCCC, UN/DESA, EU, Bilateral donors

TABLE 3. Strategic Outcomes and Indicative Key Outputs for *Biodiversity and Ecosystems*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
3.1 Strengthening regional implementation of the obligations under the Barcelona Convention, and its relevant Protocols and other instruments.	3.1.1 A comprehensive coherent network of well managed MPAs, including SPAMIs, to achieve Aichi Target 11 in the Mediterranean set up and implemented.	Bilateral Donors, EU, GEF, FAO
	3.1.2 Most relevant area-based management measures are identified and implemented in cooperation with relevant global and regional organizations, through global and regional tools (SPAMIs, FRAs, PSSAs, etc.), including for the conservation of ABNJ, taking into consideration the information on Mediterranean EBSAs.	WB, GEF, UNDP, other relevant IGOs
3.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines for the conservation of Coastal and Marine biodiversity and ecosystems.	3.2.1 Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats, on species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management are updated to achieve GES.	CBD, FAO, CMS, CITES
	3.2.2 Guidelines and other tools for the conservation of endangered and threatened Mediterranean coastal and marine species, key habitats, for non-indigenous species control and prevention as well as the management of marine and coastal protected areas developed/updated and disseminated.	GFCM, EU, GEF
	3.2.3 Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM) applied in selected areas at a pilot level linking coastal and open sea areas subject to major pressures. To this end the information on EBSA areas could be used.	EBRD, WB, GEF, EU, Bilateral donors
3.3 Strengthening national implementation of biodiversity conservation	3.3.1 NAPs for the conservation of Mediterranean endangered and threatened species and key habitats and on species introductions and invasive species developed/updated.	IPBES, TEEB, Foundations, IGOs, CBD, GEF

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
policies, strategies and legislation measures.	3.3.2 National measures developed and implemented to strengthen the protection and the management of relevant marine and coastal sites, especially those containing threatened habitats and species (including deep-sea habitats).	EU, National Entities, UNESCO, GFCM
	3.3.3 Biodiversity and ecosystem protection actions integrated in CAMPs, other ICZM Protocol implementation projects and Strategic Environment Impact Assessments.	Partnering with Environmental Organisations/NGOs, IUCN, WWF
3.4 Monitoring, inventory and assessment of biodiversity with focus on endangered and threatened species, non-indigenous species and key habitats.	3.4.1 Monitoring programmes for key species and habitats as well as invasive species, as provided for in the IMAP are developed and implemented, including on the effectiveness of marine and coastal protected areas, and on climate change impacts.	EU, GEF, Foundations, Research institutes
	3.4.2 Biodiversity conservation assessment tools (in-depth thematic assessment, maps and indicator fact sheets) developed and updated to show trends at national, sub-regional and regional levels, and measure the effectiveness of the SAP BIO NAPs and Regional Action Plans implementation.	CBD, GEF, UNDP, EU, National Entities
	3.4.3 EcAp common indicators on biodiversity and non-indigenous species monitored through IMAP in MPAs and SPAMIs, and relevant data sets established.	CBD, EU, Foundations
	3.4.4 Inventory of vulnerable and fragile coastal and marine ecosystems and assessment of sensitivity and adaptive capacities of coastal and marine ecosystems to changes in sea conditions as well as of the role of services they provide developed.	IMO, UNESCO, EU
3.5 Technical assistance and capacity building at regional, sub-regional and national levels to strengthen policy	3.5.1 Capacity-building programmes related to the development and management of marine and coastal protected areas, to the conservation and monitoring of endangered and threatened coastal and marine species and key habitats, and to monitoring issues dealing with climate change and biodiversity	Foundations, Private sector, EU, Bilateral donors

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
implementation and compliance with biodiversity-related national legislation.	developed and implemented, including pilots to support efforts aimed at MPA/SPAMI establishment and implementation.	
	3.5.2 Training and awareness-raising programmes on SCP solutions contributing to the conservation of the ecosystems and biodiversity delivered to businesses, entrepreneurs, financial institutions and civil society.	ACCOBAMS, Private Foundations, Businesses, Private sector Foundations, EU
3.6 Enhanced cooperation at regional, sub-regional and national levels to protect and conserve biodiversity and ecosystems.	3.6.1 Joint strategies and programmes on biodiversity and ecosystem conservation developed, by taking into account NAPs in cooperation with relevant partner organizations at global and regional levels.	Bilateral donors, GEF, EU
	3.6.2 Businesses, entrepreneurs and civil society encouraged to use networks to disseminate SCP solutions contributing to biodiversity and ecosystems conservation coordinated through adequate mechanisms.	Private-public partnerships and Foundations, World Business Development Council
3.7 Identifying and tackling with new and emerging issues, as appropriate.	3.7.1. Coordination with the ongoing process towards the adoption of an Implementing Agreement on BBNJ (namely concerning marine genetic resources, marine protected areas BBNJ, and SIA).	EU, Bilateral donors, GEF

TABLE 4. Strategic Outcomes and Indicative Key Outputs for *Land and Sea Interaction and Processes*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
4.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.	4.1.1 Contracting Parties assisted in identifying, implementing and evaluating specific measures and tools to reduce pressures on coastal and marine areas (e.g. coastal setback, land policy measures, zoning).	Bilateral donors, EU, GEF, UNESCO
4.2 Development of new action plans, programmes of measures, common standards and criteria, guidelines.	4.2.1 Tools and guidelines for environmental assessments developed and applied (e.g. EIA, cumulative assessments, SEA).	Bilateral donors, IUCN, UNEP/GEF, EBRD
	4.2.2 Marine Spatial Planning defined in the context of the Barcelona Convention and applied, as appropriate.	National Authorities and Institutions, GEF EU
4.3 Strengthening national implementation.	4.3.1 New generation of CAMPs prepared to promote land-sea interactions, also addressing trans-boundary aspects, as appropriate.	National institutions, EU, EBRD
4.4 Monitoring and assessment.	4.4.1 Mapping of interaction mechanisms on coastal and marine environment at regional and local levels developed, including assessment of the risks of sea level rise and coastal erosion, and their impacts on coastal environment and communities.	UNFCCC, FAO, UNESCO, UNEP/GEF
	4.4.2 National coast and hydrography monitoring programmes developed and updated to include the relevant IMAP common indicators, interactions and processes.	National Entities, EU, GEF
4.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.	4.5.1 Capacity building for the application of tools for assessing interactions and integrating them in planning/management of coastal and marine environment implemented.	FAO, UNESCO, EBRD, AfDB

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
4.6 Enhanced cooperation at regional, sub- regional and national levels.	4.6.1 Networks of CAMPs and other ICZM Protocol implementation activities established and cooperation undertaken with other partners to promote the exchange of data, experience and good practices established.	Bilateral donors
4.7 Identifying and tackling with new and emerging issues, as appropriate.	4.7.1 Additional stresses relevant to the Convention on water resources due to climate change assessed in cooperation with other regional interested stakeholders	UNFCCC, World Water Council, UNESCO, FAO, EBRD, UNDP
	4.7.2 Reviews/policy briefs developed and submitted to Contracting Parties, inter alia impacts from possible tsunami cases explored.	

TABLE 5. Strategic Outcomes and Indicative Key Outputs for *Integrated Coastal Zone Management*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
5.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.	5.1.1 The Mediterranean regional framework for Integrated Coastal Zone Management is defined and put in effect.	Bilateral donors
	5.1.2 SAP BIO, SAP MED, Offshore Action Plan and Strategy to combat pollution from ships implemented in an integrated manner, including through the Mediterranean regional framework, as set out in ICZM Protocol to enhance the sustainable use of marine and coastal resources.	Innovative Financing Mechanism, Private sector partners, EU
	5.1.3 Action Plan for the implementation of the ICZM Protocol further implemented; Status of Implementation reported.	Private sector partners, National Authorities
5.2 Development of new action plans, programmes of measures, common standards and criteria, guidelines.	5.2.1 Action Plan for the implementation of the ICZM Protocol updated.	National Authorities
	5.2.2 Methodological framework for land and sea interactions, considering in particular MSP and ICZM, developed and applied.	National Entities, EU, Bilateral donors
5.3 Strengthening national implementation.	5.3.1 National ICZM Strategies including streamlining pollution, biodiversity, adaptation to climate change and SCP, land and sea interaction as well as sustainable cities prepared and applied.	EBRD, UNFCCC, CBD, UNDP
	5.3.2 Countries assisted in carrying out gap analysis on national legal and institutional frameworks for ICZM in order to streamline as need be the ICZM Protocol provisions into national legislations.	National Authorities, EU
	5.3.3 SCP Regional Action Plan activities and climate change adaptation issues mainstreamed into and implemented through ICZM national strategies, as well as CAMPs and other ICZM	EU, UNFCCC, Bilateral donors

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
	Protocol implementation projects.	
5.4 Monitoring and assessment.	5.4.1 Fact sheets for ICZM indicators developed to evaluate the effectiveness of coastal and marine resources management measures.	Bilateral donors, IUCN
5.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.	5.5.1 MedOpen Training Programme on ICZM regularly updated and implemented, in coordination with the relevant NFPs.	EU, EBRD, UNESCO, UNDP
5.6 Enhanced cooperation at regional, sub-regional and national levels.	5.6.1 ICZM coordination enhanced through: (i) Mediterranean ICZM Platform; (ii) National ICZM coordination bodies.	National Institutions, Regional Entities, EU, Bilateral donors

TABLE 6. Strategic Outcomes and Indicative Key Outputs for *Sustainable Consumption and Production*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
6.1 Development of new action plans, programmes of measures, common standards and criteria, guidelines and implementation of current ones.	6.1.1 Selected actions of the SCP Action Plan directly contributing to prevent, reduce and eliminate marine pollution and protect/enhance biodiversity and ecosystems as well as address climate change in the marine and coastal areas of the Mediterranean identified and implemented.	EU, Private sector partners, CBD, UNFCCC, Foundations, Innovative Financing Mechanisms
	6.1.2 Methodological tools for SCP mainstreaming in CC adaptation and mitigation regional strategies and frameworks developed.	EU, Bilateral donors, UNFCCC, Green Climate Fund
	6.1.3 Methodological tools for SCP mainstreaming in the priority areas of consumption and production of the Regional Action Plan on SCP - tourism, food, housing and goods manufacturing implemented and new ones developed for other sectors.	EU, National Entities, Private sector partners, Academia, Business, Schools
6.2 Monitoring and assessment.	6.2.1 SCP Action Plan indicators aligned with MSSD relevant work, identified, selected and factsheets developed.	Bilateral donors, EU
6.3 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building.	6.3.1 Training and support programme for green entrepreneurs and civil society as SCP drivers.	Private sector partners, Innovative Financing Mechanisms

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
6.4 Enhanced cooperation at regional, sub-regional and national levels to prevent and control marine pollution	6.4.1 Establishment of networks and initiatives of businesses, entrepreneurs, civil society, providing SCP solutions promoted.	EU, Private sector partners, Foundations
	6.4.2 A Mediterranean SCP Hub for knowledge exchange and networking fully operative and performing as connector and lever for new partnerships and initiatives providing SCP solutions.	EU, UNESCO, UNEP, GEF

TABLE 7. Strategic Outcomes and Indicative Key Outputs for *Climate Change Adaptation*

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
7.1. Strengthening the regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.	7.1.1 Climate Change Adaptation main activities identified and mainstreamed into the implementation of existing regional strategies, regional action plans and measures.	EU, Bilateral donors, UNFCCC, Green Climate Fund, SCCF
	7.1.2 Selected actions of the SCP Regional Action Plan directly contributing to address climate change in the marine and coastal areas of the Mediterranean implemented.	Business Council On Climate Change, EU, National Entities
7.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines.	7.2.1 Climate Change Adaptation, including related vulnerabilities and risks, key activities mainstreamed into the development of new updated regional strategies, regional action plans and measures addressing biodiversity, pollution and land and sea interaction.	Adaptation Fund, CBD, UNFCCC, EU, SCCF
	7.2.2 Climate Change-related vulnerabilities and risks considered in the development and implementation of biodiversity, pollution and land and sea interaction related regional strategies, action plans and measures through the EcAp.	CBD, UNFCCC, EU, UNEP/ GEF
	7.2.3 Promote integration of ecosystem-based responses in National Climate Change Adaptation Strategies.	EU, UNFCCC, Adaptation Fund
7.3 Strengthening national implementation.	7.3.1 Climate change adaptation priority fields identified and mainstreamed into the relevant MAP policies, as appropriate.	National Entities, EU, UNFCCC, SCCF

Strategic Outcomes	Indicative Key Outputs	Main Possible Donors and Partners
7.4 Monitoring and assessment.	7.4.1 Climate Change vulnerability issues considered in existing monitoring programmes.	UNFCCC, Adaptation Fund, Green Climate Fund, SCCF

Decision IG.23/6

2017 Mediterranean Quality Status Report

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, and its Protocols at their twentieth meeting,

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, in particular article 12 of the Barcelona Convention and relevant articles of its Protocols addressing monitoring and assessment,

Recalling decision IG.17/6 on the ecosystem approach road map adopted by the Contracting Parties at their fifteenth meeting (COP 15) (Almeria, Spain, 15-18 January 2008),

Recalling also decision IG.20/4, adopted by the Contracting Parties at their seventeenth meeting (COP 17) (Paris, France, 8-10 February 2012) and decision IG. 21/3, adopted by the Contracting Parties at their eighteenth meeting (COP 18) (Istanbul, Turkey, 3-6 December 2013) on the ecosystem approach, with particular focus on monitoring and assessment,

Recalling further decision IG.22/7 on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria and IG.22/20 on the Programme of Work and Budget for 2016–2017, mandating the preparation of the 2017 Quality Status Report, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016),

Expressing appreciation for the work of the correspondence groups on monitoring, the Ecosystem Approach Coordination Group, Contracting Parties, Mediterranean Action Plan partners, Mediterranean Action Plan components and the Secretariat,

Having considered the reports of the meetings of the correspondence groups on monitoring, component focal points and the Ecosystem Approach Coordination Group,

Noting the recent adoption of a Mid-Term Strategy towards the sustainability of Mediterranean and Black Sea Fisheries, within the context of the General Fisheries Commission for the Mediterranean as the Regional Fisheries Management Organization acting in the Mediterranean and Black Sea areas,

1. *Endorse* the Key findings of the 2017 Mediterranean Quality Status Report and welcome the Recommendations for the Further Implementation of the Ecosystem Approach Roadmap, as set out in Annex I to the present decision;
2. *Request* the Secretariat and the EcAp Coordination Group to consider the recommendations included in Annex I to the present Decision and the way to follow them up;
3. *Request* the Contracting Parties to continue their work towards finalizing their updated national monitoring and assessment programmes in line with the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria as soon as possible;
4. *Urge* the Contracting Parties, with the support of the Secretariat and taking into consideration the need to fill existing data gaps as highlighted in the 2017 Mediterranean Quality Status Report, to regularly report quality-assured data deriving from the implementation of the updated integrated national monitoring and assessment programmes, as doing so will support the development of future regional assessment products, as well as the design, implementation and monitoring of

coherent and consistent national and regional measures based on a sound science-policy interface and aimed at achieving Good Environmental Status;

5. *Request* the Secretariat to make all possible efforts to overcome the knowledge gaps that are recognized in the 2017 Mediterranean Quality Status Report, contributing to the success of the initial phase of Integrated Monitoring Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria implementation (for the period 2016–2019) and enhancing the capacity of Contracting Parties to deliver the second Mediterranean Quality Status Report in 2023 to demonstrate the progress made towards Good Environmental Status and its related targets;

6. *Request* the Secretariat to prepare in cooperation with the Contracting Parties through the Ecosystem Approach governance structure, in the first year of the biennium 2018-2019, a roadmap accompanied with a Needs Assessment on how to improve data collection to address knowledge gaps and strengthen the capacities of the system. To this aim, priority activities needed to successfully deliver the 2023 Mediterranean Quality Status Report shall be identified for inclusion in the Programme of Work;

7. *Urge* the Mediterranean Action Plan system and the Contracting Parties in the context of the work of the EcAp governance structure to undertake priority activities needed to ensure successful delivery of the 2023 Mediterranean Quality Status Report;

8. *Request* the Secretariat to develop synergies between the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria and related common indicators, and the ongoing work by the United Nations and Regional Seas Programmes and Regional Fisheries Management Organizations on indicators monitoring progress towards the Sustainable Development Goals and in particular Goal 14, and to share the Mediterranean experience at the global level;

9. *Take note* of the proposed update of the pollution assessment criteria and thresholds as presented in Annex II to the present Decision and encourage the Contracting Parties and the Secretariat to test them for indicative purposes in the different contexts that exist in the Mediterranean.

Annex I
**Key Findings of the 2017 Mediterranean Quality Status Report and Recommendations for the
Further Implementation of the Ecosystem Approach Roadmap**

A) Key Findings of the 2017 Mediterranean Quality Status Report

1. This document presents key findings of the 2017 Mediterranean Quality Status Report (2017 MED QSR) as current status of the Mediterranean marine and coastal environment. The key findings are summarized below per each Ecological Objective.

2. The **Ecological Objective (EO 1) on Biodiversity** is to ensure that 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. It includes five common indicators:

Common Indicator 1: Habitat distributional range and Common Indicator 2: Condition of the habitat's typical species and communities

Conclusions

3. Regional expertise, research and monitoring programmes over the last few decades have tended to concentrate their attention on only a few specific Mediterranean habitats. The exploration of other habitats, such as bioconstructions, from very shallow to the deep-sea should be further supported, with a focus on threats and pressures in order to improve the conservation status as well as the policy assessments.

4. Despite the scientific importance of time series studies, the funding for many monitoring programmes is in jeopardy and much of the Mediterranean Sea remains not only just under-sampled, but also unsampled in many areas. Risk based monitoring should be coordinated and standardized so that results can be easily comparable at least for some, decided *a priori*, variables. Coordination and planning of works, notably by UNEP/MAP, is crucial to ensure coherence and synergies at regional or sub-regional scale.

5. Beside criteria such as reduction in quantity and in quality and the geographical distribution, more research should focus on processes leading to low diversity of habitats. Regime shifts are ubiquitous in marine ecosystems, ranging from the collapse of individual populations, such as commercial fish, to the disappearance of entire habitats, such as macroalgal forests and seagrass meadows. Lack of a clear understanding of the feedbacks involved in these processes often limits the possibility of implementing effective restoration practices. Moreover, these habitats are selected in the IMAP reference list and they will be monitored in this cycle of IMAP implementation.

6. There is a need to increase the geographical coverage of protection, establishing new arrays of MPAs (and then networks of MPAs) in the southern and eastern parts of the Mediterranean Sea, with the aim among others to achieve Aichi Target 11 (most MPAs are concentrated in the north-central Mediterranean Sea) since the IMAP Ecological Objectives 1, 3, 4 and 6 have been shown to evolve favorably in Mediterranean MPAs. The use of MPA networks as a reference where to assess the attainment of GES should be taken into account, but the need to reach GES (sustainable use), for the whole Mediterranean Sea area, should be kept in mind. This Regional scale objective is important to avoid moving, and thus increasing, pressure (by activities) outside MPAs, where sensitive habitats could be then more exposed. The GES should be achieved in all Mediterranean waters by 2020, but this current assessment clearly indicates that much more progress and management of pressures should be undertaken to progress towards this objective.

7. In addition, there is a need to establish MPAs in area beyond national jurisdiction to protect deep-sea habitats. The procedures for the listing of SPAMIs are specified in detail in the SPA/BD Protocol (Art. 9). For instance, as regards the areas located partly or wholly in the high

seas, the proposal must be made “by two or more neighboring parties concerned” and the decision to include the area in the SPAMI List is taken by consensus by the Contracting Parties during their periodical meetings. Once the areas beyond national jurisdiction are included to SPAMI List, all contracting Parties agree “to recognize the particular importance of these areas for the Mediterranean”, and consequently “to comply with the measures applicable to the SPAMIs and not authorize nor undertake any activities that might be contrary to the objectives for which the SPAMIs were established”. This gives to the SPAMIs and the measures adopted for their protection an *erga omnes* effect, at least as far the parties to the protocol are concerned.

8. The coastal states are currently formulating their criteria and the associated monitoring protocols for determining GES. The monitoring guidance factsheets that have been developed for all the IMAP Common Indicators significantly support these national endeavors, allowing for a reduction of the inconsistencies in interpretations of the Ecological Objectives and Indicators (not least in the ecological terminology used), as well as in their related national monitoring programmes which suffer of the same. The harmonization of criteria for implanting GES has been clarified with the adoption of a new EU legal act in 2017 (Decision 2017/848/EU) for most European countries. It should be noted that a significant work has been also carried out for the MSFD at the European level, through the OSPAR and HELCOM conventions notably, where monitoring guidelines have been produced.

9. Current assessment is mainly qualitative and based on compilation of published studies and assessments. Large-scale analyses have been critical to expand our knowledge about the *extent* of habitats and threats but are often biased by the extrapolation of either a few small-scale studies or low-resolution large-scale assessments. The massive lack of ground-truth data and standardized monitoring for most of offshore habitats compromise quantitative assessment of their condition. This limits the potential to assess the condition and the trajectories of change in Mediterranean habitats. Additional inputs (methods and case studies) from ongoing and recent projects like ActionMED project (<http://actionmed.eu/>) should also be considered for the 2019 State of Environment and Development Report.

10. Baseline data (‘reference’ with low or least disturbance) are lacking at the Mediterranean scale for many habitats exposed to abrasion by bottom-trawling fisheries. This compromises our ability to identify a sustainable condition for those habitats, which are under continuously high-pressure levels. ‘Pristine’ baselines (no disturbance) are lacking for most of the habitats; this compromises our knowledge of the potential best condition of natural habitat communities. It is not practical or feasible to use this pristine state as an environmental target everywhere, but it is useful for understanding the natural dynamic and recovery potential of a given habitat. Increasing the establishment and management of Marine Protected Areas (MPAs), notably including ‘no take or low-pressure areas’ could help provide data in the future, for the relevant habitat types.

11. Many potentially relevant data exist but are not all available (e.g. fishing pressure data at fine spatial resolution, or biological data from marine research and marine industry).

12. Many biological datasets exist, but few have associated data on pressure at a compatible spatial and temporal scale.

13. Each country currently stores its own monitoring data, so common methodology (and tools) still needs to be developed/ further harmonized. The need for this should be anticipated and relevant work should be coordinated to ensure coherence and facilitate the computation of data for indicator assessment.

14. Ocean warming, acidification, extreme climate events and biological invasions are expected to increase in the next years. These are difficult to be assessed and managed. More attention should be directed to those threats that can be more easily mitigated such as trawling,

maritime traffic and nutrient loading from some land-based activities. In this framework, improve knowledge of the distribution and intensity of threats (e.g. fishery, bioinvasions, marine litter, seabed mining, coastal and non-coastal infrastructures) to reduce uncertainties on their effects should be also increased.

15. Promote open access to data is very critical, especially those deriving from EU projects, through institutional databases sustained under rules and protocols endorsed by EU. The data ensuing from EU projects are still much fragmented and are not stored in a single repository where data are available in a standard format with a stated access protocol. As regards the European Countries, the European Marine Observation and Data Network (EMODnet) is assembling marine data, products and metadata to make fragmented resources more available to public and private users relying on quality-assured, standardized and harmonized marine data which are interoperable and free of restrictions on use. At regional scale, a new platform on biodiversity has been developed by SPA/RAC (<http://data.medchm.net>) in order to integrate data on biodiversity cluster. This Mediterranean biodiversity platform is interoperable with EMODnet or any regional and national spatial data infrastructure (SDI).

16. The process of Maritime Spatial Planning (MSP) across the Mediterranean should be largely supported, considering activities that are expected to increase in the future (e.g. aquaculture, maritime traffic, seabed mining).

Key messages

17. For habitats:

- The shift from Habitat conservation approaches to Biodiversity and Ecosystem Functioning approaches reflects much better the rationale which sustains the management and conservation of marine ecosystems.
- This shift calls for holistic, integrative and ecosystem based approaches, which are still under development and will require a reappraisal of the way we tackle ocean monitoring, assessment and management.

Knowledge gaps

18. The analysis of marine systems is mostly compartmentalized, with a series of approaches that should be complementary but that, instead, are developed with little connections with each other. The distinction between benthic systems and pelagic ones, for instance, is based on the patterns of distribution of biodiversity but does not consider processes much. Some of the main gaps that require further research include the following:

- Role of resting stage banks for plankton dynamics.
- Impact of gelatinous macrozooplankton on the functioning of ecosystems.
- Links between deep sea systems and coastal ones.
- Habitat identification for the pelagic habitats and mapping processes.
- Knowledge of connectivity processes.
- Development of innovative techniques such as remote sensing and acoustic for the study of seabed to cover large areas at high resolution.

Common Indicator 3: Species distributional range (EOI related to marine mammals, seabirds, marine reptiles)

Conclusions

19. Current knowledge about the presence, distribution, habitat use and preferences of Mediterranean marine mammals is limited and regionally biased, due to an unbalanced distribution of research effort during the last decades, mainly focused on specific areas of the Basin. Throughout the Mediterranean Sea, the areas with less information and data on presence, distribution and occurrence of marine mammals, are the south-eastern portion of the basin, including the Levantine basin and the North Africa coasts. In addition, the summer months are the most representative and very few information have been provided for the winter months in the data pool, when conditions to conduct off-shore research campaigns are particularly hard due to meteorological adversity.

20. Marine mammals' presence and distribution are mainly related to suitable habitats and availability of food resources; anthropogenic pressures, as well as climate change, may cause changes and shifts in the occurrence of marine mammals, with potential detrimental effects at the population levels. Accordingly, in order to enhance conservation effort and inform management purposes, it is crucial to obtain detailed and robust descriptions of species' range, movements and extent of geographical distribution, together with detailed information on the location of breeding and feeding areas.

21. Ongoing effort by ACCOBAMS to start a synoptic region-wide survey referred to as the ACCOBAMS Survey Initiative (ASI), to assess the presence distribution and to estimate density and abundance of cetaceans in the summer of 2018. Concurrently, local scientists are working on the identification of Cetacean Critical Habitats (CCHs) and Important Marine Mammal Areas (IMMAs) in the entire Mediterranean Sea. A gap analysis has also been conducted within the Mediterranean Sea, to provide an inventory of available data and to select areas where more information should be collected.

22. This general overview stresses the importance of assimilating all available information on the distribution of sea turtles at breeding, foraging, developmental sites and how these areas are connected to understand the distribution patterns of sea turtles at the size class, population and species level to select key areas for protection. Parallel mitigation strategies are required to build the resilience of existing populations.

23. Nesting sites - In general, knowledge about currently used nesting sites of both loggerhead and green turtles in the Mediterranean is good. However, all potential nesting beaches need to be surveyed throughout the Mediterranean to fill gaps in current knowledge (e.g. nesting in North Africa, particularly Libya). This could be done via traditional survey methods, but also by aerial surveys (plane or drone) at the peak period of nesting (July), or even by high resolution satellite imagery, which is becoming commercially available.

24. Existing stable nesting beaches should be afforded full protection, in parallel to collecting key information on why turtles use them, including geographic location, beach structure, sand composition, sand temperature ranges, coastal sea temperatures etc. In parallel, sporadically used beaches should be monitored at regular intervals (i.e. every 5 years or so), to identify changes in use over time, and pinpoint sites where use changes from sporadic to stable. Again, all these sites should be assessed with respect to geographic location, beach structure, sand composition, sand temperature ranges, coastal sea temperatures etc. on the ground, which will help with identifying future viable beaches for nesting. Ideally, all sandy beaches, whether used or not should be subject to the same analyses, to identify any beaches that might be used in the future by turtles, due to range shifts under climate change, which will alter sand temperatures on beaches and in the water,

as well as causing sea level rise, which will alter the viability of current beaches, forcing turtles to shift to alternative sites. In this way, future beaches of importance can be detected and protected from certain human activities.

25. Foraging (adult and developmental) and wintering sites - It is necessary to determine how to focus protection effort of foraging (adult and developmental) habitats, i.e. protect easy-to-define areas where high numbers of turtles aggregate from different populations and size classes, protect protracted areas of coastline where 10-20 individuals may aggregate at intervals from different populations and size classes, but amounting to representative numbers over a large expanse.

26. The former is easier to design and protect, but the latter may be more representative of sea turtle habitat use in the Mediterranean. The latter is more at risk of loss too, as management studies for the development of e.g. marinas and hotels would assume that the presence of just 10-20 turtles was insignificant; however, if this action was repeated independently across multiple sites, one or more turtle populations could become impacted.

27. Thus, it is essential to determine how developmental, foraging and wintering grounds are distributed throughout the Mediterranean, as well as the numbers of turtles of different size classes and from different populations that frequent these sites, including the seasonality of use and connectivity across sites. Only with this information can we make informed decisions about which sites/coastal tracts to protect that incorporate the greatest size class and genetic diversity.

28. The aerial (plane or drone) surveys are recommended to delineate areas used by sea turtles in marine coastal areas, along with seasonal changes in use, by monitoring these sites at 2-4 month intervals. Following this initial assessment, representative sites should be selected and sampled on the ground (i.e. boat based surveys) to delineate species, size classes and collect genetic samples to determine the extent of population mixing. Where possible, stable isotope and tracking studies should be conducted (including PIT tagging) to establish the connectivity among sites.

29. The southeast to northwest increasing diversity gradient might be partly influenced by prospection/monitoring effort. For many eastern and southern countries, as well as some Adriatic countries, the information on seabird breeding populations or occurrence at sea is patchy or completely lacking. This might be partly because the birds are actually rare or absent there, but could also be related to lack of data. Particularly little information is available for Algeria, Egypt, Israel, Lebanon, Syria, Cyprus and Turkey, as well as Albania. There is no information from Bosnia-Herzegovina, but this country has extremely limited coastal area, and most likely has no relevant seabird breeding populations. Information from Libya is also patchy, and focuses on terns.

30. The lack of information is not limited to the above countries, however. Most of the remaining countries have some important gaps, particularly at assessing population sizes, but also at properly inventorying all breeding colonies present in their territories, particularly in the case of the shearwaters. For instance, a colony of over 1,500 Yelkouan shearwaters was recently found in Greece, near Athens, although this area is reasonably well prospected. Likewise, the breeding of the storm-petrel in the Aegean Sea was not confirmed until a few years ago.

31. The waters off the Tunisian and Libyan coasts serve as a major foraging ground for Procellariiforms (shearwaters, storm-petrels) nesting in the Cap Bon – Strait of Sicily – Malta Important Area.

32. The world population of Audouin's gull is estimated at <60,000 individuals; 90% of the breeding population is found in only 4 sites, and 70% concentrate in a single site (Ebro delta). The species scavenges around fishing vessels, and uses discards extensively and very efficiently. The species' association with fisheries is more pronounced in the western than in the central and

eastern Mediterranean. The Sicily Channel / Tunisian Plateau area is a minor breeding area for *Larus audouinii*, with a small colony on the Galite archipelago, Tunisia (40 breeding pairs; BirdLife International 2013) and also on Zembra (10 pairs; BirdLife International 2013). Another colony is present on the Ionian island of Vendicari, Sicily. However, tracking has revealed that, although breeding only in small numbers, the waters off NW Tunisia are important foraging grounds for Audouin's Gulls from colonies in southern Sardinia (Baccetti et al. 2014).

33. Information regarding seabirds in the Alboran Sea is patchy and requires of further research, particularly on the African side. This includes information on seabird breeding populations, as well as on distribution patterns at sea. But it is also necessary to improve the knowledge on human activities and their potential impact on seabirds. Information (and conservation action) regarding predation by introduced mammals in the colonies, and fisheries bycatch at sea, deserve particular attention.

Key messages

34. For marine mammals:

- A risk based approach for monitoring-should be carried out to assess the marine mammal distribution throughout the whole Mediterranean Sea.
- More effort should be devoted in poorly monitored areas.
- Those species which are listed as Data Deficient under the Red List criteria should be considered as a priority.

35. For marine reptiles:

- This general overview stresses the importance of assimilating all information on the distribution of green and loggerhead sea turtles in the Mediterranean at breeding, foraging, developmental and wintering grounds to understand how these areas are connected when considering different size classes, populations and species for effective conservation management.
- Parallel mitigation strategies are required to build the resilience of existing populations.

36. For sea birds:

- Despite breeding distribution patterns are relatively easy to assess, information is patchy and often lacking.
- A southeast to northwest increasing diversity gradient has been observed, in agreement with productivity patterns in the region, but this might be confounded by larger data gaps in the southernmost and easternmost countries.

Knowledge gaps

37. For marine mammals:

- Most of the Mediterranean Sea has been surveyed to some extent to evaluate cetaceans' occurrence, distribution and ranges.
- Nonetheless, there is a great disparity in the overall distribution of research effort, with most research been done and still carried out in the north-western portion of the basin, where long time series of data, covering up to three decades, exist. In southern

Mediterranean countries information on species occurrence and distribution mostly arises from anecdotal information and localized research projects. Systematic surveys in these areas are still scarce. Effort should be done to allocate research in those areas to consolidate baseline information and to eventually obtain long time series of data.

- The current gap in the availability of data, and by consequence of knowledge, is hampering the identification of protection measures towards the conservation of species at the regional level.

38. For marine reptiles:

- Location of all breeding/nesting sites;
- Location of all wintering, feeding, developmental sites of adult males, females, juveniles;
- Connectivity among the various sites in the Mediterranean;
- Vulnerability/resilience of these sites in relation to physical pressures;
- Analysis of pressure/impact relationships for these sites and definition of qualitative GES;
- Identification of extent (area) baselines for each site and the habitats they encompass;
- Appropriate assessment scales;
- Monitor and assess the impacts of climate change;
- Assimilation of all research material on sea turtles (e.g. satellite tracking, stable isotope, genetic, stranding aerial surveys) in a single database.

39. For sea birds:

- Information on gulls and terns seems reasonable good, although some southern and eastern countries might need updating their surveys. For the shearwaters, it is more difficult to find information for these same countries, which might be a combination of both small/inexistent breeding populations and lack of prospection.
- The priority actions needed involve: a) formal and effective site protection, especially for Important Bird Area (IBA) breeding sites and for marine IBA feeding and aggregation sites; b) removal of invasive, especially predatory, alien species as part of habitat and species recovery initiatives; and c) reduction of bycatch to negligible levels, as part of comprehensive implementation of ecosystem approaches to fisheries.

Common Indicator 4: Population abundance of selected species (EOI related to marine mammals, seabirds, marine reptiles)

Conclusions

40. Some of the cetaceans species present in the Mediterranean Sea are migratory species, with habitat ranges extending over wide areas; it is therefore highly recommended to monitor these species at regional or sub-regional scales for the assessment of their population abundance. Priority should be given to the less known areas, using online data sources, such as Obis Sea Map and published data and reports as sources of information.

41. There is general consensus among the scientific community that long-term systematic monitoring programmes, using techniques such as the photo-identification, provide robust and

crucial data that can be used in assessing abundance at sub-regional levels and inform local conservation and mitigation measures. Establishing international collaborations between different research groups, merging existing data-sets allows performing robust analysis and estimating population parameters at larger scales.

42. The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS) has been working for several years on defining an exhaustive program for estimating abundance of cetaceans and assessing their distribution and habitat preferences in the Black Sea, Mediterranean Sea and the adjacent waters of the Atlantic (the "ACCOBAMS Survey Initiative"). This initiative consists in a synoptic survey to be carried out in a short period of time across the whole Agreement area and it will combine visual survey methods (boat- and ship-based surveys) and passive acoustic monitoring (PAM).

43. This general overview indicates that overall, programs at nesting sites need to place a strong focus on ensuring long-term recognition of unique female individuals and incorporate counts of males. The monitoring based on Common Indicator 1 will help with delineating developmental, foraging and wintering sites to make counts of adult vs. juvenile turtles and fluctuations in numbers over time. Information obtained through Common Indicator 2: Condition of the habitat's typical species and communities will be intrinsically linked with Common Indicator 3: Species distributional range.

44. Major gaps exist in estimating the population abundance of sea turtles. First, the use of nest counts as a proxy for female numbers must be treated with caution, and variation in climatic factors at the nesting site and trophic factors at foraging sites taken into account. Counts of males at breeding grounds must be incorporated into programs at nesting sites. If just a total of 100 males frequent Zakynthos, which has around 1000 nests/season, then most sites throughout the Mediterranean (of which most have <100 nests) are likely to support very low numbers of males, making the protection of these individuals essential. Finally, with the delineation of developmental, foraging and wintering habitats (Indicator 1), it will be necessary to obtain counts of the number of individuals, particularly juveniles, that frequent these various habitats seasonally and across years. While information on the number of juveniles alone at given habitats does not reflect on any given nesting population, the relative numbers of immature to mature animals will provide baseline information about key juvenile developmental habitats and actual numbers relative to those obtained to adults.

45. Overall, programs at nesting sites need to place a strong focus on ensuring long-term recognition of female individuals and incorporate counts of males. The monitoring of the Common Indicator 1, will help with delineating developmental, foraging and wintering sites to make counts of adult vs. juvenile turtles and fluctuations in numbers over time. Information obtained through monitoring of Common Indicator 2 will be intrinsically linked with Indicator 3 (see this section).

46. The overall pattern of seabird abundance in the Mediterranean region is consistent with the results of common indicator 3 (distribution): seabirds tend to be more abundant in the north and west of the Mediterranean basin. This is particularly so in the case of the most marine species (shearwaters, Mediterranean shag and Audouin's gull). As in the case of the distribution patterns, it remains to elucidate to which extent this pattern, that makes sense in terms of productivity and maybe also of suitable breeding habitat availability, is not confounded by prospection effort/data quality.

47. Obtaining reliable estimates of population size is harder than just confirming presence/absence (which is the basis for assessing distribution patterns), so there are more gaps regarding this common indicator. Information for some countries and species is old and just repeated from one publication to another, so it is important to break with this tradition and ensure

that the different countries start implementing proper monitoring programmes. Information will be easier to collect and more reliable for the diurnal species breeding in open habitats, such as Audouin's gull and the terns, whereas for the most "secretive" species (shearwaters) it might be important to rely on demographic studies of representative colonies to properly assess population trends (see common indicator 5).

Key messages

48. For marine mammals:

- Effort should be dedicated to providing density and abundance estimates at the Mediterranean level, with synoptic surveys, such as that currently ongoing with the ACCOBAMS Survey Initiative.
- The conservation priorities listed by the European Directives and the Ecosystem Approach should be implemented.

49. For marine reptiles:

- This general overview indicates that major gaps exist in estimating the population abundance of sea turtles.
- Programs at nesting sites need to place a strong focus on ensuring long-term recognition of female individuals and incorporate counts of males.
- Programs need to be developed at foraging, wintering and developmental grounds, providing counts of individuals and linking them to their source breeding populations.

50. For sea birds:

- Patterns of abundance roughly match those of distribution for seabirds, with a southeast to northwest increase.
- Information is patchy, often old and subject to potentially high biases, particularly in the case of the shearwaters. Establishing population trends for the latter is complicated without censuses.

Knowledge gaps

51. For marine mammals:

- Gaps still exist on baseline information such as abundance and density for many species of cetaceans occurring in the Mediterranean Sea, especially in those sectors where research is carried out on limited resources and not systematically.
- Even though for some species such as the striped dolphin and the fin whale estimates have been obtained for a large portion of the Basin, for none of the species there are available estimates at the regional scale.
- The lack of these baseline critical information is therefore detrimental for conservation, slowing down the identification of potential and actual threats, the assessment of their effect on populations and eventually the evaluation of trends and the triggering of mitigation and conservation measures.

52. For marine turtles:

- Seasonal and total numbers of adult males frequenting breeding sites;
- Numbers of adult males and females frequenting foraging and wintering sites, including seasonal variation in numbers;
- Vulnerability/resilience of documented populations and subpopulations in relation to physical and anthropogenic pressures;
- Analysis of pressure/impact relationships for these populations and subpopulations, and definition of qualitative GES;
- Identification of extent (area) baselines for each population and subpopulation with respect to adult females, adult males and juveniles to maintain the viability and health of these populations;
- Appropriate assessment scales;
- Monitor and assess the impacts of climate change on nest numbers (clutch frequency) and breeding periodicity (remigration intervals) of females, as these parameters are used as proxies for inferring female numbers;
- Monitor and assess the impacts of climate change on the breeding periodicity (remigration intervals) of males, as this provides an indication of total male numbers;
- Assimilation of all research material on sea turtles (e.g. satellite tracking, stable isotope, genetic, stranding aerial surveys) in a single database.

53. For sea birds:

- The geographic gaps are similar to those described for Common Indicator 3.
- For many eastern and southern countries, as well as some Adriatic countries, the information on seabird breeding populations is patchy or completely lacking. Particularly little information is available for Algeria, Libya, Egypt, Israel, Lebanon, Syria, Cyprus and Turkey, as well as Montenegro, Bosnia-Herzegovina and Albania.

Common indicator 5: Population demographic characteristics (EOI, e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)

Conclusions

54. Available data on demography for Mediterranean marine mammals are rather scarce and fragmented and at present it is rather difficult to provide strong and robust evidence on baselines and changes over time in demographic parameters.

55. Data are available for localized regions only, where more effort has been devoted over the years allowing to estimate survival rates for specific species and time intervals.

56. Demographic studies can supply useful tools to the management and the conservation of threatened and overexploited species. Population models, based on life-history tables and transition matrices, allow to assess population performance, to project population trends overtime and thus to foster the conservation of the studied populations, suggesting specific measures for their protection.

57. At present our knowledge on sea turtle demography is patchy at best for each component, with certain information being more widely available than other information. To understand the demography of loggerhead and green turtle populations in the Mediterranean, greater effort needs to be placed on filling existing gaps. Only then can we predict with any certainty the future viability of sea turtle populations in the Mediterranean.

58. Information for this common indicator is far scarcer than that for common indicators 3 (distribution) and 4 (population size). However, for some species this type of information is essential to properly understand population trends, as well as to assess the relevance of different threats in context. This is particularly so for the Procellariiformes, represented here by the Balearic and Yelkouan shearwaters. The good news is that collecting this type of information might be quite simple and less resource-consuming than conducting exhaustive population counts. It only requires the selection of a few, representative colonies where breeding monitoring schemes could be conducted on a year-basis. These schemes would require the follow-up of standard protocols that might be simple enough, with 2-3 visits per year to ensure the assessment of breeding success, the ringing of chicks and the ringing/control of adults. The very limited schemes in place suggest that Balearic and Yelkouan shearwaters are undergoing a severe decline.

59. For the remaining species, although population counts already provide relevant information, it is important to systematically collect demographic data as to better understand their population dynamics, and to put the different threats that they face in context. Colour-ringing schemes such as that of Audouin's gull, coupled with the detailed monitoring of a few, representative breeding colonies might provide high quality data on this regard. In addition, a systematic compilation of information from dead birds, particularly from wildlife recovery centers, might greatly help to understand the impact of different threats.

Key messages

60. For marine mammals:

- Systematic and long-term photo-identification programs, jointly to the use of appropriate instruments to measure observed animals, would be essential tools to supply basic knowledge on population structure needed for conservation plans.

61. For marine reptiles:

- This general overview, indicates that at present our knowledge on sea turtle demography is patchy at best for each component and that effort needs to be placed on filling existing gaps in order to predict with any certainty the future viability of sea turtle populations in the Mediterranean.

62. For sea birds:

- Demographic information is essential to properly assess the trends of certain seabirds, particularly shearwaters.
- The limited information available for Balearic and Yelkouan shearwaters suggests that both species are undergoing a severe decline, which threatens them with extinction. Introduced predators and fishing bycatch deserve particular attention on this regard.

Knowledge gaps

63. For marine mammals:

- There is a strong need for systematic monitoring programmes over time, to collect time series and allow the assessment of trends over time and space.
- Monitoring programmes should be repeated at regular intervals, ideally every year for photo-identification using a risk-based approach and following international regulations (e.g.: Habitat and Marine Strategy Directives, Ecosystem Approach).

64. For marine turtles:

- Knowledge on the sex ratios within different components (breeding, foraging, wintering, developmental habitats), age classes and overall within and across populations.
- Knowledge about recruitment and mortality into different components of the population.
- Knowledge about the physical and genetic health status of these groups.
- Vulnerability/resilience of these populations/sub-populations in relation to physical pressures;
- Analysis of pressure/impact relationships for populations/sub-populations and definition of qualitative GES;
- Identification of extent (area) baselines for each population/subpopulation and the habitats they encompass;
- Monitor and assess the impacts of climate change on offspring sex ratios.

65. For sea birds:

- Information on seabird demographic parameters is extremely scarce in the Mediterranean region, except for Audouin's gull. It is essential to set in place breeding monitoring programmes, particularly for the Balearic and Yelkuan shearwaters, as well as ensure the continuity of the few already existing.
- Special attention must also be paid to their main threats, particularly predation by introduced mammals in the colonies and fishing bycatch at sea.

66. **EO 2 on Non-indigenous species** aims that non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem. It introduces one common indicator:

Common Indicator 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas

Conclusions

67. Important progress has been made the last decade in creating inventories of non-indigenous species (NIS), and on assessing pathways of introduction and the impacts of invasive alien species on a regional scale. The development and regular updating of MAMIAS (data partner of EASIN) substantially contributes to address Common Indicator 6. SPA/RAC is establishing formal exchange of information with relevant information system (such AquaNIS) as provided for in the Mediterranean Action Plan concerning Species introduction and invasive species.

68. Nevertheless, monitoring and research effort currently greatly varies among Mediterranean countries and thus on a regional basis current assessments and comparisons may be biased. Thus, the implementation of the IMAP at national level, following the IMAP recommendations, will enable obtaining much more consistent results.

69. The lack of dedicated and coordinated monitoring at national and regional scale implies a low confidence in this assessment, even if the continuous and regular occurring of new introductions are demonstrated. This lack of standardized monitoring and data currently compromises representability and comparability between assessment cycles, and thus complicate assessment of effects of management measures on these trends.

Key messages

70. For non -indigenous species:

- Progress has been made in creating national and regional inventories of alien species and assessing their pathways and impacts.
- There is an increasing trend in the rate of new alien species introductions in the Mediterranean Sea.
- Corridors are the most important pathways of new introductions in the Mediterranean, followed by shipping and aquaculture.
- There is a need for better coordination at National and sub-regional level on NIS monitoring.

Knowledge gaps

71. For non -indigenous species:

- Evidence for most of the reported impacts of alien species is weak, mostly based on expert judgement; a need for stronger inference is needed based on experiments or ecological modelling. The assessment of trends in abundance and spatial distribution is largely lacking.
- Regular dedicated monitoring and long time series will be needed so that estimation of such trends is possible in the future. NIS identification is of crucial importance, and the lack of taxonomical expertise has already resulted in several NIS having been overlooked for certain time periods. The use of molecular approaches including bar-coding are often useful besides traditional species identification.

72. **Ecological Objective 3 (EO3) on commercially exploited fish and shellfish** is to ensure their populations are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock and includes three common indicators:

Common Indicator 7. Spawning stock Biomass

Conclusions

73. Validated reference points for Spawning Stock Biomass are only available for a few stocks, and therefore the quality assessment included in this report is based on the empirical approach taken by the GFCM Working Groups on Stock Assessment that compares current biomass with the historical series of biomass as estimated from a validated stock assessment or directly from validated surveys at sea. The analysis of 60 different stocks, along the Mediterranean Sea, shows that around 42% show low biomass, 37% were considered to show an intermediate biomass and 22% showed high biomass.

74. With the aim to provide a spatio-temporal analysis of Mediterranean stock status, based not only on the most reliable recent data but also on indicators and reference points as most certain as possible, this analysis was conducted only on the endorsed assessments by either SAC of GFCM or STECF of European commission. Despite that many obstacles were fixed, some limitations, which can be a scope of improvement in the future, still persist. Amongst them, (i) the spatio-temporal coverage of stocks considered in the analysis, (ii) the shortness of indicator time series used, (iii) the absence of analytical biomass reference points and, (iv) the issue of standardized data and methodologies at regional level.

75. In terms of the relative biomass indicator, the analysis of 57 different stocks, along the Mediterranean Sea, shows that around 42% of the reviewed stocks were found to be in a situation of low biomass, 37% were considered to show an intermediate biomass and 22% showed high biomass.

76. Recently Froese et al., (2016) analyzed the status of European stocks and found that in the Mediterranean and the Black Sea region the average biomass is less than half (44%) of the sustainable level. Overall, this finding is in line with the present analysis with some slight difference that can be explained by the fact that the present analysis concerns all the Mediterranean stocks, taking into account the European and non European fisheries, whereas in Froese et al., (2016) only the European stocks were included. Furthermore, the proportion of stocks with biomass above or below the reference point was used to inform about the regional status, while the other study adopted the average biomass as a regional indicator of stock status.

77. Concerning the stock status by sub-region, most stocks in the Western and Central Mediterranean and the Adriatic Sea are at low or intermediate levels (i.e. below the precautionary reference point or B_{PA} proxy), while the Eastern Mediterranean is poorly covered with only two stocks having the necessary reference points for the analysis.

78. The low biomass levels observed in some of Mediterranean key stocks (specially on some important small pelagic stocks), together with the high fishing pressure (see Indicator EO3_CI08) has been repeatedly pointed out by the GFCM SAC, which has requested to initiate recovery plans for the stocks considered to be depleted, and to reduce fishing mortality to levels considered to be sustainable. Mediterranean countries are recently taking measures to correct these problems that jeopardize the sustainability of fisheries in the area, including through the implementation of the mid-term (2017-2020) strategy towards the sustainability of Mediterranean and Black Sea fisheries adopted in 2016, which includes as one of its targets to *reverse the declining trend of fish stocks through strengthened scientific advice in support of management*¹. Furthermore, the GFCM has recently adopted two dedicated sub-regional management plans and several riparian countries have reported a significant reduction of their fishing capacity, in line with the adopted GFCM resolution on the management of fishing capacity². These measures are expected to be complemented with additional fisheries management measures within the mid-term strategy, with the objective to reduce fishing mortality and to increase biomass levels for low biomass stocks, especially those of priority species, before 2020.

79. Notwithstanding the above, it should be considered that the level of overfishing as well as the current biomass levels depends on the productivity of the stocks, which is affected by variables other than fishing itself. The reference point used in the assessment (FMSY or its proxies) as well as the carrying capacity of the ecosystem, which relates to the maximum biomass that can be sustained, are affected by issues such as climate change or anthropogenic effects other than fisheries, including pollution and habitat destruction (Colloca et al., 2014). The combination of all these effects generates a strong biological stress and can be the cause of major ecological alterations, which in turn may affect the productivity of fisheries and therefore jeopardize Mediterranean fisheries and the production of local seafood for coastal communities.

Key messages

80. For Spawning Stock Biomass:

- Up to 42% of the stocks assessed in the Mediterranean show a low biomass in comparison with the existing time series, and only for 22% of the stocks the biomass is considered to be relatively high in relation to the time series
- Riparian states have recently explicitly recognized low biomass of key stocks in the Mediterranean as a key challenge in the context of blue growth and food security for coastal communities, and have included a specific target in the mid-term (2017-2020) strategy towards the sustainability of Mediterranean and Black Sea fisheries aimed at reversing the declining trend of fish stocks through strengthened scientific advice in support of management
- The increase of biomass for key stocks requires the adoption of sub-regional management plans in the context of the GFCM, to complement those already in place for the Adriatic small pelagics and the Strait of Sicily demersal fisheries, as well as the adoption of measures that ensure the efficient management of fishing capacity.

¹<http://www.fao.org/gfcm/activities/fisheries/mid-term-strategy>

² Resolution GFCM/37/2013/2 on Guidelines on the management of fishing capacity in the GFCM area

- Although examples of recovery/increase of spawning stock biomass exist elsewhere in the world, it is also known that stock recovery/rebuilding may depend on factors other than fishing, and that in some cases stocks may require some time to rebuild after management measures are taken.

Knowledge gaps

81. For Spawning stock Biomass:

- The advice on the status of Mediterranean commercially exploited stocks, as provided by the GFCM SAC have largely improved in recent years, as recognized by Mediterranean riparian states. However, the level of information differs between species and geographical areas, with information concentrating on a few stocks and lacking or being fragmented in other commercially exploited stocks.
- Even if stock assessments and advice are now available for an increasing number of stocks, the number of stocks for which MSY-based SSB reference points (or its proxy) exist is still very limited. Thus, it is not possible to establish reproductive potential levels relative to MSY, and the indication on current biomass levels is often based (as in this assessment) on an empirical analysis of often short time series.
- The update and adoption of new specific binding recommendations related to the mandatory requirements for data collection and submission, underpinned by the operationalization of the GFCM Data Collection Reference Framework (DCRF)³ is expected to improve the quality of the data in support of advice, in line with the need expressed by riparian states. The mid-term strategy (2017-2020) towards the sustainability of Mediterranean and Black Sea fisheries is also expected to contribute in this endeavour through specific actions such as, for example, the execution of harmonized scientific surveys-at-sea.

Common Indicator 8. Total landings

Conclusions

82. The temporal trend in annual production of demersal fish, crustaceans, cephalopods and small pelagic showed a rapid increase from the 70s to the beginning of the 90s, followed by a declining trend since then, obvious in all Mediterranean sub-regions with the exception of the Adriatic, where the decrease started in the mid-80s and the production has remained stable at low levels since the 90s. Small pelagics (composed of few species like anchovy, sardine and other clupeids) are by far the dominant group, representing almost the 38% of total landings in the GFCM area of application. On the contrary, the landings of demersal species show large differences among sub-regions, mainly due to different species and fishing activities. The western Mediterranean is the area with the highest annual production, amounting to around 270.000 tons, whereas the other three Mediterranean sub-regions show a similar yield (160.000 tons).

83. The maintenance of a sustainable and as large as possible yield of fish and shellfish is a priority for Mediterranean riparian countries in the context of food security and blue growth. In this respect, riparian countries recognize that it is important to maintain, and when necessary rebuild, the biomass of fish stocks in order to ensure Maximum Sustainable Yield. In this context, they are committed to implementing the mid-term (2017-2020) strategy towards the sustainability of Mediterranean and Black Sea fisheries adopted in 2016, which includes as one of its targets to reverse the declining trend of fish stocks through strengthened scientific advice in support of

³<http://www.fao.org/gfcm/data/dcrf/en/>

management⁴. Furthermore, the GFCM has recently adopted two dedicated sub-regional management plans and several riparian countries have reported a significant reduction of their fishing capacity, in line with the adopted GFCM resolution on the management of fishing capacity⁵. These measures are expected to be complemented with additional fisheries management measures within the mid-term strategy, with the objective to efficiently manage key fisheries by 2020.

84. Catch in numbers or weight represents the removal of biomass and individuals from the ecosystem. Data based on landings, when accurately reported, can be a fair indicator of the status of Mediterranean fisheries' stocks and, the trend analysis can provide evidence of how well target populations are performing in response to fishing pressure (i.e. the impact that fishing has on fish populations).

85. Currently, the Mediterranean Sea is exploited by about 80.000 vessels, most of which are small-scale boats using many different fishing gears. The small-scale fishing component of the fleet is still extremely important for its socio-economic implications on many coastal communities, in addition to being a source of food and representing an important cultural heritage with relevant repercussions on activities related to tourism, for example.

86. It is worth noting that official landings statistics selectively represent landings from the commercial fisheries sector and do not provide an indication of all that is being harvested from the sea. Furthermore, landing/catch data should be associated to stock assessment analysis, in order to provide detailed information regarding the biological characteristics of a species or stock under fisheries' management.

87. Based on scientific advice, fishing must be adjusted to bring exploitation to levels that maximize yields (or catch) within the boundaries of sustainability.

Key messages

88. For Total landings:

- The maintenance of a steady production of fish from Mediterranean fisheries is a priority in the context of blue growth and food security for coastal communities.
- Mediterranean catches are stagnant, with current yields at around 800.000 tons, below the maximum yield of around 1 million tons, obtained in the mid-90's.
- The current fishing pressure (see Indicator EO3CI9), the biomass levels of some key species (see Indicator EO3CI7) and other pressures on Mediterranean ecosystems jeopardize the sustainability of catches of fish and shellfish, and riparian states have agreed to undertake necessary management measures to revert the status of Mediterranean fisheries, including through the implementation of the *mid-term (2017 – 2020) strategy towards the sustainability of Mediterranean and Black Sea fisheries*.

Knowledge gaps

89. For Total landings:

- The correct estimation of total landings requires a precise knowledge of the fishing activities carried out by the active fishing fleet operating in the Mediterranean. The specificities of the Mediterranean fleet, composed by a large majority of small scale polyvalent vessels, as well

⁴<http://www.fao.org/gfcm/activities/fisheries/mid-term-strategy>

⁵ Resolution GFCM/37/2013/2 on Guidelines on the management of fishing capacity in the GFCM area

as the existing variety of landing sites, and the different capacity of Mediterranean riparian states to accurately monitor the landings in such sites, make difficult an accurate estimation of landings in the region. Furthermore, Illegal, Unregulated or Unreported (IUU) fishing activities in the area also affects the estimates.

- Ultimately, the ideal indicator for the production of fisheries as well as the removal of organisms due to fisheries should be total catch, but information on discards is fragmented.
- The GFCM has proposed a number of solutions to improve the quality of the estimation of total catch. On one hand, the GFCM DCRF⁶ is expected to provide the technical elements to improve and harmonize the collection of information on fisheries throughout the Mediterranean. Also, the mid-term strategy towards the sustainability of Mediterranean and Black Sea fisheries foresees specific activities such as a bycatch monitoring programme or a survey of small-scale fisheries, as well as the implementation of dedicated actions to assess and curb IUU fishing, which are expected to largely improve the quality of the estimates for this indicator.
- Care needs to be taken in interpreting trends in the indicator for total landings because variations in total catch/landing may be a result of various factors, including the state of the stock, changes over time in the selectivity of fishing gear, changes in the species targeted by fishing activities, as well as inconsistencies in the reporting.

Common Indicator 9. Fishing Mortality

Conclusions:

90. In the Mediterranean, the majority (around 85 percent) of stocks for which a validated assessment exists are subject to overfishing. Current fishing mortality rates can be up to 12 times higher than the target for some stocks. In general, demersal species suffer higher exploitation rates than small pelagic species, with the latter showing average fishing mortality rates that are lower than the target.

91. The level of overfishing in the Mediterranean has been repeatedly pointed out by the GFCM SAC, which has requested fishing mortality to be reduced through adequate management measures. Mediterranean countries are recently taking measures to correct this problem that jeopardize the sustainability of fisheries in the area, including through the implementation of the mid-term (2017-2020) strategy towards the sustainability of Mediterranean and Black Sea fisheries adopted in 2016, which includes as one of its targets to reverse the declining trend of fish stocks through strengthened scientific advice in support of management⁷. Furthermore, the GFCM has recently adopted two dedicated sub-regional management plans and several riparian countries have reported a significant reduction of their fishing capacity, in line with the adopted GFCM resolution on the management of fishing capacity⁸. These measures are expected to be complemented with additional fisheries management measures within the mid-term strategy, with the objective to reduce fishing mortality, especially for priority species, before 2020.

92. In the Mediterranean, the majority of stocks, for which a validated assessment exists, are fished outside biologically sustainable levels, either in terms of biomass (see also fishery indicator EO3C17), exploitation or both criteria, with the degree varying among stocks, functional groups and geographical sub-areas. The ratio F/FMSY illustrates that on average Mediterranean stocks are exploited three times greater than the target level and the biomass is lower than the reference point, which confirm a regional status of overexploitation. Current fishing mortality rates can be

⁶<http://www.fao.org/gfcm/data/dcrf/en/>

⁷<http://www.fao.org/gfcm/activities/fisheries/mid-term-strategy>

⁸ Resolution GFCM/37/2013/2 on Guidelines on the management of fishing capacity in the GFCM area

up to 12 times higher than the target for some stocks.

93. All Mediterranean sub-regions, without exceptions, are subject to high overfishing status, as the majority of their assessed stocks are not within biologically sustainable levels in terms of either stock size or fishing mortality. The Western Mediterranean stocks are in the worst shape compared to other sub-regions, with an average fishing mortality around three times higher than the target level, followed by the Central Mediterranean stocks with an average exploitation rate of about 2.9. Adriatic Sea and the Eastern Mediterranean stocks have shown an average exploitation rate of about 1.75 and 1.77, respectively.

94. Among the stocks listed in overexploitation status ($F > FMSY$), 33% are close to reach the target level. Those stocks could only need as little as 10% of fishing mortality reduction to shift their status from overfishing to a sustainable exploitation. In general, demersal species suffer higher exploitation rates than small pelagic species, with the latter showing average fishing mortality rates that are lower than the target. Most stocks fished within biologically sustainable levels are of small pelagic species (e.g. sardine and anchovy), while only a few stocks of demersal species, such as whiting, some shrimp species, picarel and red mullet, are estimated to be fished at or below the reference point for fishing mortality. In light of this review, it was concluded that around 85% of the examined stocks (for which FMSY or its proxy is available) are fished unsustainably (FAO, 2016).

95. Notwithstanding the above, it should be considered that the level of overfishing depends on the productivity of the stocks, which is affected by variables other than fishing itself. The reference point used in the assessment (FMSY or its proxies) are affected by issues such as climate change or anthropogenic effects other than fisheries, including pollution and habitat destruction (Colloca et al., 2014). The combination of all these effects generates a strong biological stress and can be the cause of major ecological alterations, which in turn may affect the productivity of fisheries and therefore jeopardize Mediterranean fisheries and the production of local seafood for coastal communities.

Key messages

96. For Fishing Mortality:

- The majority of Mediterranean stocks (~85%) are subject to overfishing.
- Riparian states have recently explicitly recognized overfishing in the Mediterranean as a key challenge in the context of blue growth and food security for coastal communities, and have included a specific target in the mid-term (2017-2020) strategy towards the sustainability of Mediterranean and Black Sea fisheries aimed at reversing the declining trend of fish stocks through strengthened scientific advice in support of management.
- The reduction of fishing mortality requires the adoption of sub-regional management plans in the context of the GFCM, to complement those already in place for the Adriatic small pelagics and the Strait of Sicily demersal fisheries, as well as the adoption of measures that ensure the efficient management of fishing capacity.

Knowledge gaps

97. For Fishing Mortality:

- The advice on the status of Mediterranean commercially exploited stocks, as provided by the GFCM SAC have largely improved in recent years, as recognized by Mediterranean riparian states. However, the level of information differs between species and geographical areas, with information concentrating on a few stocks and lacking or being fragmented in other commercially exploited stocks.
- The correct estimation of fishing mortality requires a precise understanding of riparian states' fishing capacity. Due to the specificities of the Mediterranean fleet, composed of a large majority of small scale polyvalent vessels, information on fishing capacity is sometimes incomplete or inaccurate. Furthermore, the estimation of robust reference points for fishing mortality requires the use of long time series and the incorporation of environmental and ecosystem variables, as well as the design of robust methods that can integrate information from different sources.
- The update and adoption of new specific binding recommendations related to the mandatory requirements for data collection and submission, underpinned by the operationalization of the GFCM Data Collection Reference Framework (DCRF)⁹ is expected to improve the quality of the data in support of advice, in line with the need expressed by riparian states. The mid-term strategy (2017-2020) towards the sustainability of Mediterranean and Black Sea fisheries is also expected to contribute in this endeavour through specific actions such as, for example, the execution of harmonized scientific surveys-at-sea.

98. **EO 5 on Eutrophication** aims that human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters. It includes two common indicators:

Common Indicator 13: Concentration of key nutrients in water column

Conclusions

99. The available data show that in areas where assessment is possible the key nutrient concentrations are in ranges characteristic for coastal areas and in line with the main processes undergoing in the interested area. The result also confirms the validity of this indicator as support in assessing eutrophication. Coastal Water type assessment criteria for reference condition and boundaries for key nutrients in the water column have to be built and harmonised through the Mediterranean region, which will greatly help the implementation of a clear sampling strategy with a simplified approach in monitoring design and data handling for the future implementation of IMAP.

100. Whilst data was available through the MEDPOL database, and substantial data is also available through EEA, EMODnet-Chemistry (<http://www.emodnet-chemistry.eu/>) and other sources, priority should be given to ensure Mediterranean countries regularly report quality assured data nutrient data to UNEP/MAP in line with IMAP, and ensure common reporting. Potential integration of data-sets in the future could be considered with EMODnet-Chemistry.

⁹<http://www.fao.org/gfcm/data/dcrf/en/>

Key messages

101. For key nutrients:

- The available data show that assessment is possible. Key nutrient concentrations are within characteristic ranges for coastal areas and in line with the main processes undergoing in concerned interested area.
- Criteria for reference condition and boundaries for key nutrients in the water column have to be built and harmonized through the Mediterranean region.

Knowledge gaps

102. For key nutrients:

- At the eutrophication hot spots in the Mediterranean Sea, a comprehensive trend analysis of key nutrient concentrations in the water column would be beneficial. Significant trends need to be detected from long time series that are able to capture nutrient concentrations changes in coastal waters as the analysis of short time series can erroneously lead to interpret some spatial patterns produced by random processes nutrients concentration trends. For that reason, data availability should be improved. A possible approach is to use data stored in other databases were some of the Mediterranean countries regularly contribute.
- Criteria for reference condition and thresholds/boundary values for key nutrients in the water column have to be built and harmonised through the Mediterranean region. Data availability have to be improved. A possible approach is to use data stored in other databases were some of the Mediterranean countries regularly contribute.

Common Indicator 14: Chlorophyll-a concentration in water column

Conclusions

103. The trophic status of the Mediterranean Sea is controlled by the highly populated coastal zone and the riverine input from a draining area. Offshore waters of the Mediterranean have been characterized as extremely oligotrophic with an increasing tendency for oligotrophy eastwards. The Eastern Mediterranean Sea (EMS) is still the most oligotrophic area of the whole Mediterranean basin, and the largest phosphorus-limited body of water in the global ocean.

104. The coastal area of the south-eastern part of the Mediterranean shows clearly eutrophic trends. Although the River Nile is the major water resource in the area, its freshwater fluxes are getting limited because of the Aswan Dam and increasing trends in anthropogenic water use in the lower Nile. Eutrophic conditions in the area are mainly induced by the sewage effluents of Cairo and Alexandria. The Northern Aegean shows mesotrophic to eutrophic trends explained by the river inputs from northern Greece and the water inflow from the nutrient rich Black Sea.

105. The nutrient regime and primary productivity in the Western Mediterranean Sea (WMS) are relatively higher compared to the EMS. However, the primary productivity of the main WMS, away from the coastal areas and influenced by rivers and urban agglomerations, is still higher than the primary productivity in the EMS.

106. The main coastal areas in the Mediterranean which are historically known to be influenced by natural and/or anthropogenic inputs of nutrients are the Alboran Sea, the Gulf of Lions, the Gulf of Gabès, the Adriatic, Northern Aegean and the SE Mediterranean (Nile–Levantine).

107. The available data show that in areas where assessment is possible the IMAP assessment criteria for eutrophication based on CI14 (Chlorophyll *a* concentration in the water column) are applicable and confirm the main status of eutrophication in the coastal area. In terms of GES achievement in these areas (Eastern Adriatic and Cyprus) it is maintained.

108. Coastal Water type reference condition and boundaries for CI14 (Chlorophyll *a* concentration in the water column) have to be harmonised through the south Mediterranean region which has not yet participated in the assessment effort. The assessment can also help to identify areas where the criteria have to be improved. Of great help will be the implementation of a sampling strategy with a simplified approach in monitoring design and data handling.

109. Satellite synoptic measurements for the estimation of chlorophyll *a* concentration trends have the potential to detect anomalous, local biogeochemical processes and to assess the different applications of environmental regulations.

Key messages

110. For Chlorophyll-*a*:

- Offshore waters of the Mediterranean have been characterized as extremely oligotrophic with an increasing tendency for oligotrophy eastwards.
- The main coastal areas in the Mediterranean which are historically known to be influenced by natural and/or anthropogenic inputs of nutrients are the Alboran Sea, the Gulf of Lions, the Gulf of Gabès, the Adriatic, Northern Aegean and the SE Mediterranean (Nile–Levantine).
- The available data show that in areas where assessment is possible the IMAP assessment criteria for eutrophication based on CI14 (Chlorophyll *a* concentration in the water column) are applicable and confirm the main status of eutrophication in the coastal area.

Knowledge gaps

111. For Chlorophyll-*a*:

- There are no main gaps identified in the Mediterranean Sea concerning the assessment of the Common Indicator 14.
- However, significant chlorophyll *a* trends need to be detected from long time series that are able to capture biomass changes in coastal waters, and for that purpose data availability have to be improved.
- A possible approach is to use data stored in other databases where some of the Mediterranean countries regularly contribute. Satellite synoptic measurements for the estimation of chlorophyll *a* concentration trends have the potential to detect anomalous, local biogeochemical processes and to assess the different applications of environmental regulations.

112. **EO7 on Hydrography** is to ensure that the alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems and includes one common indicator:

Common Indicator 15: Location and extent of the habitats impacted directly by hydrographic alterations

Conclusions

113. The EO7 Common Indicator 15 reflects location and extent of the habitats impacted directly by hydrographic alterations due to new developments. The major challenge on deriving concluding remarks for this indicator at the regional level is that the national monitoring programmes are currently being developed for most Mediterranean countries. Therefore, assessment results on this indicator (as proposed in indicator guidance fact sheet) were not available at the national, nor regional level.

114. The findings here were mostly based on literature review of technical assessments on EU countries' reports on hydrographic alterations. However, these reports mainly focus on measurement of trends for certain hydrographic parameters, which is not completely in line with requirement for common Indicator 15. However, the measurement of baseline hydrographic conditions can serve as a baseline for more detailed assessments in the future. Two local scale projects are presented as case studies namely, LNG terminal in Monfalcone Port, Italy; and container terminal Haifa Bay in Israel.

Key messages

115. For hydrography:

- The EO7 Common Indicator 15 considers marine habitats which may be affected or disturbed by changes in hydrographic conditions (currents, waves, suspended sediment loads) due to new developments.
- The national monitoring in Mediterranean countries regarding EO7 has not been initiated yet (except for the Contracting Parties that are EU member states, and their obligation of implementing Descriptor 7 of the Marine Strategy Framework Directive), or it is just being initiated.
- There is no sufficient data to derive conclusions/observe trends on Common Indicator 15 on regional, sub-regional or even national level.

Knowledge gaps

116. For hydrography:

- There are significant knowledge gaps on implementation of the Common Indicator 15. It is a complex multi-parameter indicator. The main knowledge gaps are related to insufficient surveys and monitoring of this indicator on all geographical levels, and lack of sound assessment methodologies. Assessments that estimate the extent of hydrographic alterations (knowing conditions before and after construction) and its intersection with marine habitats are currently rare in the Mediterranean, except for some local studies of Environmental Impact Assessment (EIA) /Strategic Environmental Assessment (SEA).
- There is certainly a lack of hydrographic data with detailed temporal and spatial scale in the Mediterranean Sea (bathymetric data, seafloor topography, current velocity, wave exposure, turbidity, salinity, temperature, etc.), which is one of the main challenges to implement this indicator, in particular to define the base-line conditions. To identify these gaps, a clear inventory of existing and available data in Mediterranean Sea should be done.
- Other difficulties come from the use of numerical model to assess hydrographic alterations

before the structure is built. These tools need substantial data (bathymetry, offshore hydrodynamics data, field data); which can be costly and time-consuming; and their use requires experience and knowledge about the processes and theories involved.

- The link to EO1 is so essential, as map of benthic habitats in the zone of interest (broad habitat types and/or particularly sensitive habitats) is required. Therefore, identifying the priority benthic habitats for consideration in EO7 together assessment of impacts, including cumulative impacts, is a cross-cutting issue of high priority for EO1 and EO7. In addition, effort needs to be given to detect the cause-consequence relationship between hydrographic alterations due to new structures and habitat deterioration.
- To conclude, such an integrated assessment of impacts calls for additional research efforts on habitat modelling, pressure mapping and cumulative impacts, along with monitoring of potentially affected areas.

117. **EO 8 on Coastal ecosystems and landscapes** is to ensure that the natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved and includes one common indicator:

Common Indicator 16: Length of coastline subject to physical disturbance due to the influence of man-made structures

Conclusions

118. The inclusion of the EO8 Common Indicator aims to address the need for a systematic monitoring in Mediterranean regarding the physical disturbance of coastline due to the influence of manmade structures. On the other hand, it offers very few examples to follow, especially since this indicator has no operational precedents in regional ecosystem approach initiatives, such as Helcom or OSPAR, neither in Marine Strategy Framework Directive.

119. Some countries, such as Italy, France and Montenegro, have developed the inventories of the share of their urbanized coastline, while some countries of South and East Mediterranean will begin to do so in frame of the EcAp MED II project.

Key messages

120. For Coastal Ecosystems and Landscapes:

- Mediterranean coastal areas are threatened by intensive construction of buildings and other infrastructure that can impact landscapes, habitats and biodiversity. The national reporting on state and evolution of coastal zones is required by the ICZM Protocol.
- There was no systematic monitoring in Mediterranean regarding coastal artificialization by now. The only country that has implemented the monitoring of the EO8 common indicator on a national level by this moment is Italy, with Montenegro and France performing similar inventories.
- Targets, GES thresholds, measures and interpretation of results regarding this indicator should be left to the countries due to strong nation-specific socio-economic, historic and cultural dimensions and geographical conditions.

Knowledge gaps

121. For Coastal Ecosystems and Landscapes:

- It is difficult to point out the knowledge gaps in this phase since there are so few examples of implementation of the EO8 Common Indicator. However, there are some “known” knowledge gaps that could hinder successful implementation of this indicator.
- First, it is a choice of a fixed reference coastline that each Contracting Party should select in order to assure comparability of results between successive reporting exercises. Unfortunately, it is not unusual to find out that more than one ‘official’ coastline exists for the same Contracting Party produced with different technological techniques. In addition, coastlines change due to coastal erosion, sea level rise and morphological modifications. If spatial resolution is too low or time period is too long, manmade structures could be poorly identified or completely missed with heavy consequences on the calculation of length of artificial coastline.

122. **EO 9 on Chemical Pollution** is to ensure that contaminants cause no significant impact on coastal and marine ecosystems and human health and includes five common indicators:

Common Indicator 17: Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)

Conclusions

123. A main conclusion of this first pollution assessment against assessment criteria performed for heavy metals in the Mediterranean Sea show that environmental conditions differ largely between biota and coastal sediments. This current situation, in terms of environmental protection from chemical pollution and GES achievement, may indicate that the LBS inputs in the coastal surface waters (and/or atmospheric inputs) from both urban or industrial activities exhibit a high proportion of values in biota around natural background levels and under the EC criteria. On the contrary, historical heavy metal pollution impacted, clearly, the coastal sediments close to known historical hotspots (both industrial and natural geological point sources) in the Mediterranean Sea.

124. In terms of GES (Good Environmental Status) assessment, the biota (mussel and fish) show a situation where the acceptable conditions exist for coastal surface marine waters with levels below the assessment criteria (i.e. ECs), except for Pb in some mussel monitoring areas. These areas correspond to known coastal sites (hotspots) where measures and actions should be further considered to improve the marine environmental quality. The sediment evaluation in terms of GES show an impacted situation for the coastal benthic ecosystem, especially for HgT, which should be further investigated and assessed against assessment criteria. Therefore, these assessments should consider sub-regional differences in the Mediterranean Sea basins, in terms of natural sources and geological backgrounds. Development of the assessment criteria for sub-regional assessments should be ensured and these initial results should be taken with caution. To this regard, there is a need to consider the relationships between different policy standards and assessment metrics (i.e. WFD, MSFD, etc.) as well.

Key messages

125. For concentration of key harmful contaminants:

- Levels of heavy metals in coastal water show a roughly acceptable environmental status assessed from bivalves and fish against BACs and ECs criteria.
- For Pb a 10% of the stations show levels above the set EC threshold for mussel samples.
- Heavy metal concerns are found in the coastal sediment compartment for Pb and HgT indicating an impact of these chemicals.
- For HgT, a 53% of the sediment stations assessed are above the ERL, set as regional assessment criteria for acceptable environmental conditions for the Mediterranean basin, although sub-regional differences have to be taken into account.
- Measures and actions should focus on known hotspots associated to urban and industrial areas along the coasts of the Mediterranean Sea, as well as to include sea-based sources, as these are also important inputs. Riverine inputs and coastal diffuse run-off play also an important role.
- Background and Environmental Assessment Criteria (BACs and EACs) should be continuously improved to take in consideration sub-regional specificities in the Mediterranean basins for heavy metals and trace elements.

Knowledge gaps

126. For concentration of key harmful contaminants:

- The improvements in the limited spatial coverage, temporal consistency and quality assurance for monitoring activities hinder to some extent the regional and sub-regional assessments, as previously observed (UNEP/MAP/MED POL, 2011a and 2011b). The availability of sufficient synchronized datasets for a state assessment should be improved. To this regard, the evaluation performed have further shown the necessity to explore the new criteria at sub-regional scale for the determination of background concentrations of those chemicals occurring naturally, such a Pb in sediments. However, there are important gaps in the selection and measure of emerging contaminants, an issue that may be addressed by monitoring programmes. There is also a need to know the level of contaminants in deep-sea environments, and the dynamic of inputs, streams and distribution of contaminants, to be able to link sources, input entrances and environmental status. Two recent reports (UNEP/MAP MED POL, 2016a and 2016b) have reviewed and proposed updated background assessment criteria (BACs) for the Mediterranean Sea. These reports were built in line with the 2011 reports (UNEP/MAP MED POL, 2011a and 2011b).
- The current spatial assessment covered different periods according the most recent data available, despite the number of datasets did not increased significantly the potential for the evaluation of temporal trends. At present, the major studies are performed in coastal populations of marine bivalves (such as *Mytilus galloprovincialis*), fish (such as *Mullus barbatus*) and sediments. Bioaccumulation on large predator fish stocks may represent a concern that still needs to be properly addressed by ad hoc monitoring activities. Sediment sieving and normalization factors also require proper standardization to improve the comparability of monitoring data in sediments.

Common Indicator 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established

Conclusions

127. The ongoing research developments and controversy with regard biological effects and toxicological methods (ca. confounding factors) is one of the main reasons for the slow implementation of these techniques in marine pollution monitoring programs in the Mediterranean Sea, although as mentioned, some are proposed within the framework of the MED POL Programme. At present, in many Mediterranean countries, different research programmes and projects leaded by universities, research centers and government agencies are undergoing and will be the providers of the future quality assured and reliable measurements, as well as new tools, to guarantee the correct implementation of a biological effects programme to assess the Common Indicator 18 in the Mediterranean Sea. Both biological effects parameters and contaminants concentration measurements need to take into consideration these biological factors, as they affect directly the responses and bioaccumulation of marine organisms, respectively. It is recommended to make the assessments in the same period each time, selecting the period of more physiologic stability of the species.

128. Assessing biological effects in a similar manner to contaminant concentrations, the ICES/OSPAR has proposed three categories (two threshold criteria), and it has been the framework to evaluate the Mediterranean Sea MED POL datasets. Assessing biomarker responses against BACs and EACs allows establishing if the responses measured are at levels that are not causing deleterious biological effects, at levels where deleterious biological effects are possible or

at levels where deleterious biological effects are likely to occur in the long-term. In the case of biomarkers of exposure, only BAC can be estimated, whereas for biomarkers of effects both BAC and EAC can be established. However, unlike contaminant concentrations in environmental matrices, biological responses cannot be assessed against guideline values without consideration of factors such as species, gender, maturation status, season and temperature.

129. It is important to point out that a few BACs for biomarkers of exposure and effects (Stress on Stress, Acetylcholinesterase activity-AChE and Micronuclei Frequency) have been determined for the Mediterranean Sea (mussel) and proposed to the Contracting Parties for use on indicative purpose in pilots. However, the biological responses cannot be assessed against guideline values without strong consideration of confounding factors. To this regard, ensuring systematic and accurate long-term monitoring of the bioaccumulation of chemical contaminants in biota has been addressed for many decades now. The monitoring strategy minimizes the environmental variability (e.g. sampling month (pre-spawning), pooling of samples, calculation of condition factors, etc.). For biological effects, however, these confounding factors are difficult to control in the field, as well as the combination of them, which affect the organisms' responses and their uncertainty in relation to the cause-effect pollution relationship, an issue which still need to be addressed.

Key messages

130. For pollution effects of key contaminants:

- Biological effects monitoring tools still in a research phase for biomarker techniques (i.e. method uncertainty assessments and confounding factors evaluations) which limits the implementation of these tools in the long-term marine monitoring networks.
- Lysosomal Membrane Stability (LMS) as a method for general status screening, Acetylcholinesterase (AChE) assay as a method for assessing neurotoxic effects and Micronucleus assay (MN) as a tool for assessing cytogenetic/DNA damage in marine organisms have been selected as primary biomarkers.

Knowledge gaps

131. For pollution effects of key contaminants:

- Important development areas in the Mediterranean Sea over the next few years should include: confirmation of the added value of these batteries of biomarkers in long-term marine monitoring as 'early warning' systems; test of new research-proved tools such as 'omics', analytical quality harmonization, development of suites of assessment criteria for the integrated chemical and biological assessment methods, and review of the scope of the biological effects monitoring programmes.
- Through these and other actions, it will be possible to develop targeted and effective monitoring programmes tailored to meet the needs of CI18 within the IMAP implementation and GES assessments.

Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution

Conclusions

132. The rates of accidents have gone down globally and regionally despite the increase in shipping transportation and it can be concluded that the impact of the international regulatory framework adopted through the IMO as well as technical cooperation activities undertaken at

regional level is very positive, especially as far as prevention of accidental pollution is concerned. However, risks associated with the transport by ships of oil and HNS with possible harmful consequences on biota and ecosystems cannot be completely eliminated, especially in vulnerable areas such as the Mediterranean Sea. In addition, efforts have to be made to strengthen monitoring and reporting of illicit discharges from ships.

133. Decrease of pollution occurrences globally: Accidents rates have gone down globally and regionally despite the increase in shipping transportation. Accidental pollution from both oil and HNS has decreased which can be related to the adoption and implementation of environmental maritime conventions addressing oil and HNS pollution prevention, preparedness and response. Indeed, statistical analysis indicates that there is a correlation between the period where the IMO regulatory framework was put in place (in the 70') and the years when this downward trend started to happen (in the 80'). It can therefore be concluded that the impact of the international regulatory framework adopted through the IMO as well as technical cooperation activities undertaken at regional level is very positive, especially as far as prevention of accidental pollution is concerned. However, the issue of illicit discharges from ships remains of concern, especially in semi-enclosed areas where the ability of the marine environment to regenerate is less likely to happen.

134. Oil pollution long-term effects: It is also important to keep in mind that recovery of habitats following an oil spill can take place from between a few seasonal cycles (plankton) to several years (within one to three years for sand beaches and exposed rocky shores; between 1 and 5 years for sheltered rocky shores; between 3 and 5 years for saltmarshes; and up to 10 years or greater for mangrove). According to ITOPF, while considerable debate exists over the definition of recovery and the point at which an ecosystem can be said to have recovered, there is broad acceptance that natural variability in ecosystems makes a return to the exact pre-spill conditions unlikely. Most definitions of recovery instead focus on the re-establishment of a community of flora and fauna that is characteristic of the habitat and functions normally in terms of biodiversity and productivity. Therefore, despite the progress achieved in mitigating oil spill incidents from ships, it is clear that continuous monitoring of illicit discharges occurrences as well as cumulative effects and impacts, and continuous monitoring of accidental post-spill consequences on biota and ecosystems are needed.

Key messages

135. For acute pollution events:

- Chronic sources (illicit discharges) of pollution into the marine environment from ships are the principal target for pollution reduction, as the trends for acute pollution (accidents) are controlled and decreasing.

Knowledge gaps

136. For acute pollution events:

- The information collected via pollution reports is related to specific pollution events and not always useful or compatible with the information needed to assess the status of the marine environment.
- Maintaining the Mediterranean Alerts and Accidents Database is a prerequisite and the condition for being able to measure Common Indicator CI19.
- There is no obligation for countries to carry out environmental surveys of sea and shorelines affected by a spill. Systematic environmental shorelines assessment post spill is today

recognised as a “must do” practice and can provide information on biota on a case by case basis.

- Very little data is available regarding illegal discharges from ships.
- Environmental monitoring and reporting: the focus of IMO conventions and guidelines relating to prevention of marine pollution is on ships’ compliance monitoring rather than on monitoring or measuring the state of the marine and coastal environment. The same can be noted with respect to reporting obligations. Reporting is required in the case of an accident causing pollution or in case of an illegal pollution is discovered (operational discharges). This perspective is reflected in the 2002 Prevention and Emergency Protocol. Therefore, the information collected is related to specific pollution events and not always useful or compatible with the information needed to assess the status of the marine environment.
- Accidents monitoring and reporting: there is an increase in the number of accidents reported to REMPEC, which is most likely due to a better compliance by the Contracting Parties to the Barcelona Convention to report casualties, as required by Article 9 of the 2002 Prevention and Emergency Protocol. It is of utmost importance that the Contracting Parties to the Barcelona Convention continue to report on accidents as accurately as possible, as it is paramount that REMPEC continues to maintain the Mediterranean Alerts and Accidents Database to keep track of pollution events. This is a prerequisite and the condition for being able to measure Common Indicator CI19.
- Impact on biota affected by pollution: for the reason explained above, there is little information on the impact of pollution events caused by shipping on biota. Ship generated pollution impact is usually considered from a response perspective (protection of sensitive areas and facilities). There is no obligation for countries to carry out environmental surveys of sea and shorelines affected by a spill. However, systematic environmental shorelines assessment post spill is today recognised as a “must do” practice in terms of assessing the level of cleanliness of the affected area, as well as from a remediation perspective.
- Illicit discharges from ships: There is very little data is available regarding discharges from ships. As these are illegal operations by nature (when not within the limits set by MARPOL), it is extremely difficult to get information on occurrences and extent of spills. Marine surveillance requires aerial means and equipment (planes, airborne radars and sampling sets) or special technology such as the use of satellite images. There is no regionally centralised system for surveying the Mediterranean waters as defined in the Barcelona Convention. The CleanSeaNet platform, the European satellite-based oil spill monitoring and vessel detection service, is a good resource, but only available in principle to countries that are Members States of the European Union.

Common Indicator 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood

Conclusions

137. At present, few research studies and EU policy driven reports (ca. MSFD) in some Mediterranean countries have investigated the occurrence of contaminants in seafood from an environmental perspective (ca. Ecosystem Approach), which are exceeding the maximum regulatory levels established within regulatory standards. Overall, from available studies, no major significant concerns or extreme high levels were observed within these recent research studies by different authors and no confirmation based on temporal trends have been performed yet.

138. For future assessments within this indicator, the GFCM-FAO defined areas in the

Mediterranean Sea (Area 37 and their subdivisions), could be selected and assessed under different national strategies, although harmonized at a regional scale, to evaluate contaminants in commercial species to assess CI20 under IMAP. A recent study with tuna (*Thunnus thynnus*) in Mediterranean FAO areas, shown that residues of PCBs and PBDEs are present. The study concludes that the Mediterranean area show the highest levels for these chemical compounds compared to other evaluations in FAO areas worldwide (Chiesa et al., 2016).

Key messages

139. For acute levels of contaminants:

- Regular datasets are unavailable to perform an assessment of the Common Indicator 20.
- Chemical contaminants occurrence in fish and shellfish and the possible intake scenarios for population have been studied in different locations, including some of the FAO delimited zones in the Mediterranean Sea for a number of legacy and emerging contaminants within research studies.
- Pelagic, demersal and benthic species have been targeted and investigated to assess GES in terms of potential seafood contamination and to reflect the health condition of the marine ecosystem.

Knowledge gaps

140. For acute levels of contaminants:

- The regular information required to assess this indicator is clearly lacking on a regional scale (ca. comparable and quality assured data), and at sub regional scale to some extent to be able to perform a complete assessment.
- Monitoring protocols, risk-based approaches, analytical testing and assessment methodologies would need to be further developed focusing on the harmonization between Contracting Parties. The liaison with national food safety authorities, research organizations and/or environmental agencies will be required.

Common Indicator 21: Percentage of intestinal enterococci concentration measurements within established standards

Conclusions

141. The implementation of measures (e.g. sewage treatment plants) to reduce, among others, the fecal pollution in coastal waters, has been a story-of-success in the Mediterranean Sea through the UN Mediterranean Action Plan. The generalization of the domestic waters depuration in a number of countries the latest decade has demonstrated the benefits of implementing the LBS protocol and environmental measures to reduce pollution, despite some few improvements still need to be taken.

Key messages

142. For intestinal enterococci concentration:

- An increasing trend in measurements is needed to be able to test that levels of intestinal enterococci comply with established standards for GES achievement under Common Indicator 21.

Knowledge gaps

143. For intestinal enterococci concentration:

- The lack of recent datasets on microbiological pollution in the Mediterranean Sea submitted to the MAP Secretariat is the main current gap and concern, and therefore, to be able to monitor the future progresses under the Common Indicator

144. **EO 10 on Marine litter** aims to assess that marine litter does not adversely affect the coastal and marine environment and includes two common indicators:

Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines

Conclusions

145. Knowing the amounts of marine litter found stranded on beaches can help us assess the potential harm to the environment and would also enhance our knowledge on sources (JRC, 2013). Currently there is limited data and great spatial variability on the amounts and composition of marine litter reflecting the different characteristics along the shorelines of the Mediterranean.

146. Existing studies however indicate that the main types of beach litter are of land-based origin, coming from poor waste management practices, recreational and tourism activities, household items and smoking related waste (Table 4). For the time being, it is difficult to draw conclusions regarding the overall increase or decrease of marine litter in the Mediterranean (UNEP/MAP, 2015). Assessments of the composition of beach litter in different regions of the Mediterranean Sea show that synthetic polymer items (bottles, bags, caps/lids, fishing nets, and small pieces of unidentifiable plastic and polystyrene) make up the largest proportion of overall marine litter pollution.

147. The amount of marine litter originating from recreational/tourism activities greatly increases during and after the tourism season. Smoking related wastes in general also seems to be a significant problem in the Mediterranean, as several surveys suggest (UNEP 2009). According to the analysis of data collected, shoreline and recreational activities were the main source every year during the last decade, until it was surpassed by smoking-related waste (UNEP, 2011). In addition, the fishing industry is a significant source, as well as the shipping industry, especially off the African coast (UNEP, 2013).

148. National case studies may provide more detailed information on local constraints and effective factors related to the distribution of marine litter. National data coming from national monitoring programmes on marine litter will also improve the picture for beach marine litter. It is important to note, that volunteer groups should be informed about the necessity to submit standardized research data for statistical purposes. Clean up actions by NGOs are usually organized to raise awareness and not so much for data collection, and cleanup programmes should increase public knowledge of the scientific relevance of information and information sharing.

149. There are certain limitations to the results on beach marine litter in the Mediterranean. As it has been already stated for the moment the Contracting Parties are not submitting official marine litter data to the Secretariat as a result of the national monitoring programmes. The smaller sized items are not included in most of the case among the cleanup campaigns items list and thus these results are not at all representative for the presence of smaller fragments i.e. micro-litter along the beaches in the Mediterranean.

150. However, interesting observations have been made on the proliferation of lighter marine litter items in the Mediterranean (plastics, aluminum and smoking-related litter), as opposed to heavier items from basic use (bottles, cans, see Figure 3) or marine litter originating from dumping activities (household appliances, construction materials, tires, etc.). This could be related to the efficiency of preventive actions (easier collection, recycling, adoption and/or implementation of stricter legislation with regards to dumping activities, etc.) for larger items and the difficulty to manage inputs from sources such as the general public.

Key messages

151. For trends in the amount of litter washed ashore and/or deposited on coastlines:

- Information on beach marine litter exists but the picture is still fragmented and is geographically restricted to the northern part of the Mediterranean.
- Plastics are the major components with cigarette butts, food wrappers and plastic bags being the top marine litter items.
- Land-based sources are predominant but they have to be further specified. Tourism is directly affecting marine litter generation on beaches.
- There is an urgent need to develop and implement the Integrated Monitoring and Assessment Programme for the Mediterranean Sea and Coast (IMAP) related to Common Indicator 22, and corresponding data are submitted to the Secretariat at national level.

Knowledge gaps

152. For trends in the amount of litter washed ashore and/or deposited on coastlines:

- Information on the distribution, quantities and identification of marine litter sources for beach marine litter needs to be further advanced. For the moment information and data are inconsistent for the Mediterranean.
- In that aspect, monitoring strategies should be encouraged at regional level based on harmonized and standardized monitoring and assessment methods.
- Mapping of the shorelines and coasts at basin scale, where marine litter accumulates, needs to be implemented.
- Accumulation and stranding fluxes needs to be evaluated coupled with information on corresponding loads and linkage with specific sources.
- Efforts should be enhanced towards engaging citizens, informing them about certain aspects and effects of marine litter found stranded on beaches, along with make responsible citizens (responsible consumption and littering behavior).
- Harmonized beach clean-up campaign at basin scale should be organized based on a science-based protocol which will enable the collection of relevant scientific information.

Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor

Conclusions

153. Plastic is the main component of floating marine litter and also for those lying on the Mediterranean seafloor, from shallow water, the continental shelf, till the deep abyssal plains. Regarding marine litter (floating and on seafloor) that are accumulating in the Mediterranean basin, no safe conclusion can be drawn for the moment. Probably hydrodynamics and geomorphology favor the constant circulation. More consistent, interconnected and interlinked studies need to be promoted in order to have a better picture at basin scale. The comparability of the existing and future studies seems to be a key point towards an integrated assessment at basin scale. The Mediterranean Sea is heavily impacted by floating marine litter items, giving concentrations comparable to those found in the 5 sub-tropical gyres. Moreover, the seafloor seems to be the final global sink for most marine litter items with densities ranging from 0 to over 7,700 items per km². The deep-sea canyons are of particular concern as they may act as a conduit for the transport of marine litter into the deep sea. As in any other marine litter cases, the human activities (fishing, urban development, and tourism) are primarily responsible for the increased abundance of marine litter items in the Mediterranean Sea.

154. Marine litter and mainly plastics are present in the Mediterranean basin from the shallow water, the continental shelf, till the abyssal plains, in all different sea compartments and basins and thus, posing an important problem for the marine environment. Unfortunately, so far, we do not have a clear picture regarding the areas in the Mediterranean where the accumulation of marine litter and plastics is significant although several ongoing studies try to give a clearer picture. The Eastern Mediterranean is certainly the least studied of the three compartments (western, central, eastern).

155. The Mediterranean Sea is very peculiar as there are no areas where marine litter permanently accumulate. Instead, the constant circulation is favored. The picture is fragmented as only through nonrecurring studies information becomes available and this is not enough to draw safe results or even to partially assess the situation. In addition, information on floating and seafloor marine litter is only available for the northern part of the Mediterranean Sea. The combination of the last two points makes the assessment of floating and seafloor marine litter in regional scale almost impossible.

156. Floating Marine Litter: Once floating litter has entered into the marine environment, the hydrographic characteristics of the basin may play an important role in its transport, accumulation, and distribution. Atlantic surface waters enter the Mediterranean Sea through the strait of Gibraltar and circulate anticlockwise in the whole Algero-Provencal Basin, forming the so-called Algerian Current, which flows until the Channel of Sardinia and most often leads to the generation of a series of anticyclonic eddies 50–100 km in diameter wandering in the middle basin (UNEP/MAP, 2015). Despite not being permanent, these mesoscale features could act as retention zones for floating litter and would help explain the high litter densities found in the central Algerian basin at around 80 nautical miles from the nearest shore. For the southern Adriatic Sea, it should be noticed that about one-third of the total mean annual river discharge into the whole Mediterranean basin flows into this basin, particularly from the Po River in the northern basin and the Albanian rivers (UNEP, 2012).

157. The highest densities found in the Adriatic Sea and along the North-western African coast are related to some of the heaviest densities in coastal population of the entire Mediterranean basin (UNEP/MAP 2015). The Adriatic Sea has more than 3.5 million people along its shores, which along with fisheries and tourism seems to be the most significant sources for floating marine litter in the region. In addition, the significant cyclonic gyres which are found in the central and

southern Adriatic Sea (Suaria and Aliani, 2014), are favoring the retention of floating marine litter in the middle of the basin. This is also the Case in the Northeastern part of the Aegean Sea, where densities of floating litter are higher due to circulating waters and Black sea/Mediterranean Sea water exchanges.

158. Coastal population is an important aspect also for the North African countries in particular also have the highest rates of growth in coastal population densities, including touristic densities. Algeria, for instance, has a coastal population that has increased by 112% in the last 30 years, and it currently represents one of the most densely populated coastlines in the whole basin (UNEP, 2009). In addition, it should be noted that in some countries appropriate recycling facilities have not been fully implemented yet, and the cost of proper solid waste disposal is still often beyond their financial capacity (UNEP, 2009). Suaria and Aliani (2014), demonstrated that 78% of all sighted objects were of anthropogenic origin, 95.6% of which were petrochemical derivatives (i.e. plastic and Styrofoam). The authors then evaluated the number of macro-litter items currently floating on the surface of the whole Mediterranean basin to be more than 62 million.

159. As for anthropogenic litter accumulating in oceans gyres and convergence zones, the existence of Floating Marine Litter accumulation zones is a stimulating hypothesis, as their presence was supported recently (Mansui et al., 2015). The existence of one or more ‘Mediterranean Garbage Patches’ should be investigated in more detail, as there are no permanent hydrodynamic structures in the Mediterranean Sea where local drivers may have a greater effect on litter distribution (CIESM, 2014).

160. Seafloor Marine Litter: The deep-sea floor is probably the final global sink for most marine litter and there are several areas in the Mediterranean for which marine litter have been recorded in densities exceeding 1000 items/km² (i.e. Gulf of Lions, Catalan Coast, Murcian Coast, Corsica, Saronikos Gulf, Antalya Coast). However, long-term data is scarce for the Mediterranean Sea. Density of litter collected on the sea floor between 1994 and 2014 in the Gulf of Lion (France), does not clearly show any significant trends with regards to variations in marine litter quantities (Galgani, 2015). In another example in Greece (Gulf of Patras, Echinades Gulf) albeit the increase of marine litter abundance plastic percentage seems to remain stable over the years. In much deeper marine environments, Galgani et al. (2000) observed decreasing trends in deep sea pollution over time off the European coast, with extremely variable distribution and litter aggregation in submarine canyons.

161. The abundance of plastic litter is very location-dependent, with mean values ranging from 0 to over 7,700 items per km². Mediterranean sites tend to show the highest densities, due to the combination of a populated coastline, coastal shipping, limited tidal flows, and a closed basin with exchanges limited to Gibraltar. In general, bottom litter tends to become trapped in areas with low circulation, where sediments accumulate.

162. Only a few studies have focused on litter located at depths of over 500 m in the Mediterranean (Galil, 1995; Galgani et al., 1996, 2000, 2004; Pham et al., 2014; Ramirez-Llodra et al., 2013). Submarine canyons may act as a conduit for the transport of marine litter into the deep sea. Higher bottom densities are also found in particular areas, such as around rocks and wrecks, and in depressions and channels. In some areas, local water movements carry litter away from the coast to accumulate in high sedimentation zones. The distal deltas of rivers may also fan out into deeper waters, creating high accumulation areas.

163. A wide variety of human activities, such as fishing, urban development, and tourism, contribute to these patterns of seabed litter distribution. Fishing litter, including ghost nets, prevails in commercial fishing zones and can constitute a considerable share of total litter. It has been estimated that 640,000 tons of ghost nets are scattered overall in the world oceans, representing 10% of all marine litter (UNEP, 2009). More generally, accumulation trends in the

deep sea are of particular concern, as plastic longevity increases in deep waters and most polymers degrade slowly in areas devoid of light and with lower oxygen content.

Key messages

164. For trends in the amount of litter in the water column:

- The abundance of floating litter in Mediterranean waters has been reported at quantities measuring over 2 cm range from 0 to over 600 items per square kilometer (Aliani et al., 2003; UNEP, 2009; Topcu et al., 2010, Gerigny et al., 2011, Suaria and Aliani, 2015).
- The 2015 UN Environment/MAP Marine Litter Assessment report states that approximately 0.5 billion litter items are currently lying on the Mediterranean Seafloor. Moreover, there is great variability in the abundance of seafloor marine litter items ranging from 0 to over 7,700 items per km² depending on the study area.
- However, the information on floating and seafloor marine litter in the Mediterranean is fragmented and is spatially restricted mainly to its northern part. To this extent, no basin-scale conclusions can be exerted and information is only available at local level.
- There are many areas with significant marine litter densities, ranging from 0 to over 7,700 items per km² depending on the study area. Plastic is the major marine litter component, found widespread in the continental shelf of the Mediterranean, ranging up to 80% and 90% of the recorded marine litter items.

Knowledge gaps

165. For trends in the amount of litter in water column:

- Research and monitoring have become critical for the Mediterranean Sea, where information is inconsistent. UN Environment/MAP-MED POL (2013), MSFD (Galgani et al., 2011), the European project STAGES (<http://www.stagesproject.eu>), and CIESM (2014) recently reviewed the gaps and research needs of knowledge, monitoring, and management of marine litter. This requires scientific cooperation among the parties involved prior to reduction measures due to complexity of issues.
- Accumulation rates vary widely in the Mediterranean Sea and are subject to factors such as adjacent urban activities, shore and coastal uses, winds, currents, and accumulation areas. Additional basic information is still required before an accurate global litter assessment can be provided. Moreover, the available data are geographically restricted in the northern part of the Mediterranean Sea.
- For this, more valuable and comparable data could be obtained by standardizing our approaches. In terms of distribution and quantities, identification (size, type, possible impact), evaluation of accumulation areas (closed bays, gyres, canyons, and specific deep-sea zones), and detection of litter sources (rivers, diffuse inputs), are the necessary steps that would enable the development of GIS and mapping systems to locate hotspots.
- An important aspect of litter research to be established is the evaluation of links between hydrodynamic factors. This will give a better understanding of transport dynamics and accumulation zones. Further development and improvement of modelling tools must be considered for the evaluation and identification of both the sources and fate of litter in the marine environment. Comprehensive models should define source regions of interest and accumulation zones, and backtrack simulations should be initiated at those locations where monitoring data are collected.

- For monitoring, there is often a lack of information needed to determine the optimum sampling strategy and required number of replicates in time and space. Moreover, the comparability of available data remains highly restricted, especially with respect to different size class categories, sampling procedures, and reference values.
- Data on floating and seafloor marine litter are inconsistent and geographically restricted in only few areas of the Mediterranean Sea. In addition to that, the lack on long-term assessment data makes the assessment of trends of the years extremely difficult. Sources needs also to be further specified and linked to macro- and micro-litter contribution. Moreover, monitoring and assessment of marine litter should be done in a consistent way, based on common protocols and standardized methods, leading to comparable results at basin scale. Effective management practices are also missing, requiring strong policy will and societal engagement. Further work should also be promoted towards identifying marine litter sources more precisely. Cooperation and collaboration between the major marine litter partners in the region with common priority actions is also considered important.

B) Recommendations for the Further Implementation of the Ecosystem Approach Road Map

Implementation of the IMAP at national and where applicable sub-regional level

1. Implementation of IMAP at national level needs to be strengthened through generation of specified data-deriving from implementation of the updated integrated national monitoring and assessment programme.
2. Contracting Parties need to improve their regular reporting to a fully-fledged and operational InfoMAP System of quality-assured and comparable national data in specified common formats, as a prerequisite for more complete future assessment products (2023 MED QSR).
3. Contracting Parties need to ensure their experts have sufficient resource (especially time) and mandate to contribute to the preparation of the 2023 Mediterranean QSR, including assessment and interpretation of the data to produce regional and sub-regional assessments for the Common Indicators.

Towards the Fully Data-Based 2023 MED QSR: Filling the Data Gap

4. Acknowledging findings, needs and gaps identified in 2017 MED QSR, the following directions are recommended:

General directions

- Harmonize and standardize monitoring and assessment methods.
- Improve availability and ensure long time series of quality assured data to monitor the trends in the status of the marine environment.
- Improve availability of the synchronized datasets for marine environment state assessment, including use of data stored in other databases were some of the Mediterranean countries regularly contribute.
- Improve data accessibility with the view to improve knowledge on the Mediterranean marine environment and ensure that Info-MAP System is operational and continuously upgraded, to accommodate data submissions for all the IMAP Common Indicators.

Biodiversity

- Improve knowledge on distributional range, extent and condition of habitats, as well as on the pressures affecting them, their spatial distribution and potential cumulative effects, leading to structured data-led assessments of environmental status of the Mediterranean's marine habitats.
- Define the reference state of habitats and species as well as a target threshold value to achieve at the national and sub-regional levels.
- Improve information on distribution, population abundance and demographic characteristics of key species (marine birds, mammals, reptiles, fish and cephalopods) and on the condition of their habitats, as well as on the pressures affecting them, leading to structured data-led assessments of environmental status of the Mediterranean's marine species.
- Work to further improve the assessment criteria, when feasible, for those habitats and species based on adequate data availability.
- Develop a specific roadmap, in line with Decision IG20/4, for the upcoming CORMONs to discuss, on how to further develop Ecological Objectives, which are currently not part of

IMAP, namely Ecological Objective 4 “Food webs” and Ecological objective 6 “Sea-floor integrity”.

- Better estimate the abundance and rates of introduction of new non-indigenous species and, where possible, the distribution or presence of invasive alien species, through elaboration of dedicated monitoring according to the possibilities and resources that exist.
- Provide for sound conclusions with regard to impacts of non-indigenous species, based on experiments or ecological modelling.

Coast and Hydrography

- Enhance human and technical capacities for monitoring and assessment of the coast and hydrography.
- Fill the knowledge and scientific gaps (e.g. impacts of hydrographic alterations to habitats).
- Further develop the indicator on land use change with the view to be included in the Common Indicators list.

Pollution and Litter

- Review the scope of the biological effects monitoring programmes and confirm the added value of biomarkers in long-term marine monitoring as ‘early warning’ systems.
- Further develop harmonized monitoring protocols, risk-based approaches, analytical testing and assessment methodologies for monitoring levels of the contaminants in commonly consumed sea food.
- Test new research-proved tools for monitoring toxic effects.
- Develop region-wide harmonized criteria for reference condition and threshold/boundaries values for key nutrients in water column, taking account of available standards for coastal waters.
- Develop assessment criteria for integrated chemical and biological assessment methods.
- Continue the work on underwater noise and its impact on marine fauna, in close collaboration with the relevant bodies, especially ACCOBAMS.
- Improve knowledge on Emerging Chemicals.
- Ensure testing of the Background Assessment Criteria (BACs) and Environmental Assessment Criteria (EACs) and thresholds application on a trial basis in interested countries and regional and sub-regional level.
- Application of the BACs and EACs as an evolving process to be updated on a continuous basis, their further update and refinement need to be ensured as to take into account new available data, as well as sub-regional specificities in the Mediterranean basins.
- Sea-based sources of litter should be further analyzed and specified, given the fact that Mediterranean is a global hotspot for maritime transport and sea-based tourism such as cruises.
- Follow up development of harmonized and standardized monitoring and assessment methods for marine litter and its impacts, including through active participation of MAP in relevant processes such as the ongoing work of MSFD Technical Group on Marine Litter. Such methods would facilitate and be used for monitoring the implementation of the Regional Action Plan against marine litter and of achievement of the 20% reduction target (by 2024) established by COP 19 Decision on marine litter, including enhancement of the identification and evaluation of marine litter accumulation (stranding fluxes, loads and linkage with specific sources) and hotspots using GIS and mapping systems and modelling tools, as well understanding of transport dynamics and accumulation zones.

Advancing the Implementation of the Ecosystem Approach Road Map

5. Ensure strengthened implementation of the existing measures under the legal framework of the Barcelona Convention and its Protocols, acknowledging its key importance for achieving/maintaining Good Environmental Status (GES) of the Mediterranean Sea and Coast.
6. Continue the work on the implementation of the Ecosystem Approach Roadmap, with a particular focus on full implementation of IMAP, including national level of implementation, data collection, reporting and assessment and further development of thresholds and assessment criteria.
7. Taking into consideration the key findings of the 2017 MED QSR and of the 2017 Regional Measures Analysis, the Secretariat to undertake, in consultation with the Contracting Parties, an initial reflection on the next steps of the Ecosystem Approach Roadmap implementation beyond 2021. This will address in particular the elaboration of new/updated measures required to achieve Good Environmental Status in the context of the SDGs, as well as synergies with other assessment processes such as the Assessment of Assessments process, the UNEP Global Environment Outlook, Regional Seas and, where appropriate, the EU MSFD.

Annex II
IMAP Updated Assessment Criteria for Contaminants and Biomarkers

I. Revised pollution assessment criteria

A) Mediterranean BAC Levels for Trace Metals in Sediments and Biota

Table 1(a): Mediterranean BAC Levels for Trace Metals in Sediments

Contaminant	Sediments ($\mu\text{g}/\text{kgd.w.}$)
Cd	127.5
Hg	79.5
Pb	25425

Note: Table 1(a) presents the new proposed Med BAC assessment criteria calculated for heavy metals in sediments (Cd, Hg, Pb) using the reference stations from the MED POL national monitoring networks submitted to the Secretariat until 2012, as well as the datasets submitted by Contracting Parties in 2015.

Table 1(b): Mediterranean BAC Levels for Trace Metals in Mussels and Fish

Contaminant	Mussels (<i>Mytilus galloprovincialis</i>) ($\mu\text{g}/\text{kg d.w.}$)	Fish (<i>Mullus barbatus</i>) ($\mu\text{g}/\text{kgf.w.}$)
Cd	1095.0	3.7*
Hg	173.2	101.2
Pb	2313	31*

*Cd and Hg values show mainly below detection limits in fish flesh tissue, liver tissue is recommended. d.w.: dry weight, f.w.: fresh weight

Note: Table 1(b) presents the new proposed Med BAC assessment criteria calculated for heavy metals in biota (mussel and fish) for Cd, Hg, Pb using the reference stations from the MED POL national monitoring networks submitted to the Secretariat until 2012, as well as the datasets submitted by Contracting Parties in 2015. The metrics have been changed to match standards (e.g. fresh weight for fish data) which allow comparison with other relevant lists.

B) Mediterranean EAC Levels for Trace Metals in Sediments and Biota

Table 2. Mediterranean EAC Levels for Trace Metals

Contaminant	^a Mussels (<i>Mytilus galloprovincialis</i>) ($\mu\text{g}/\text{kg d.w.}$)	^b Sediments ($\mu\text{g}/\text{kg d.w.}$)	^a Fish (<i>Mullus barbatus</i>) ($\mu\text{g}/\text{kgf.w.}$)
Cd	5000	1200	50
Hg	2500	150	1000
Pb	7500	46700	300

^aEC/EU 1881/2006 and 629/2008 Directives for maximum levels for certain contaminants in food stuffs

^bLong et al. 1995 (idem OSPAR adopted values)

Note: Table 2 provides the revised ECs and ERLs values for heavy metals in biota (mussels and fish) and sediments in line with the EC/EU 1881/2006 and 629/2008 Directives for maximum levels for certain contaminants in foodstuffs and Effects Range Low (US ERLs), respectively. These proposed values serve for indicative purposes to evaluate the environment and should be revised when toxicological data will be available.

C) Mediterranean BAC Levels for Organic Compounds in Sediments and Biota

Polycyclic Aromatic Hydrocarbons (PAHs) in Mussels

Table 3(a): Mediterranean BAC Levels for Polycyclic Aromatic Hydrocarbons

PAH compound	Mussels (µg/kgd.w.)
Fluorene	2.5
Phenanthrene	17.8
Anthracene	1.2
Fluorantene	7.4
Pyrene	5.0
Benz[a]anthracene	1.9
Chrysene	2.4
Benzo[k]fluoranthene	1.4
Benzo[a]pyrene	1.2
Benzo[ghi]perylene	2.3
Dibenz[a,h]anthracene	1.3
Indene[123-c,d]pyrene	2.9

Note: Table 3(a) presents the new calculated Mediterranean Background Assessment Criteria (BACs) for PAHs in biota using the reference stations datasets submitted by Contracting Parties in 2015.

Organochlorinated Compounds in Sediments

Table 3(b): Mediterranean EAC Levels for Organochlorinated Compounds based on the respective OSPAR values¹⁰

Contaminant	Sediments (µg/kg d.w.)
CB28	1.7
CB52	2.7
CB101	3.0
CB105	-
CB118	0.6
CB138	7.9
CB153	40
CB156	-
CB180	12

¹⁰Table 3(b) shows the ERLs for Polychlorinated Biphenyls (PCBs) to serve as the initial assessment criteria that are based on the respective OSPAR criteria. It complements Table 5 (b) of IMAF Decision IG. 22/28.

D) Mediterranean BAC and EAC Levels for Biomarkers

Table 4: Mediterranean BAC and EAC Levels for Biomarkers¹¹

Biomarkers/Bioassays	BAC levels in Mussels (<i>Mytilus galloprovincialis</i>) (µg/kg d.w.)	EAC levels in Mussels (<i>Mytilus galloprovincialis</i>) (µg/kgd.w.)
Stress on Stress (days)	11	5
Metallothioneins (µg/g digestive gland)	247	
Micronuclei frequency (0/00) in haemocytes)	1.0	

II. Assessment criteria maintained as in IMAP Decision IG.22/7 for indicative purposes, already approved by COP 19

1) Mediterranean EAC Levels for Organic Compounds

Polycyclic Aromatic Hydrocarbons (PAHs)

Table 5(a) of IMAP Decision IG. 22/7: Mediterranean EAC Levels for Polycyclic Aromatic Hydrocarbons based on respective OSPAR adopted values

PAH compound	Mussels – OSPAR ECs (µg/kg d.w.)	Sediments – OSPAR ERLs (µg/kg d.w.)
Fluorene	-	-
Phenanthrene	1700	240
Anthracene	290	85
Fluorantene	110	600
Pyrene	100	660
Benzo[a]anthracene	80	261
Chrysene	-	384
Benzo[k]fluoranthene	260	-
Benzo[a]pyrene	600	430
Benzo[ghi]perylene	110	85
Indene[123-c,d]pyrene	-	240

ECs: EC/EU 1881/2006 and 629/2008 Directives for maximum levels for certain contaminants in food stuffs;
ERLs: Effects Range Low.

¹¹Table 4 shows the the new calculated BACs and revised EACs for Stress on Stress (SOS) and Micronuclei Frequency (MN) to serve as the initial assessment criteria. It includes also Metallothioneins (MT), although the latter has not been included as a primary biomarker under IMAP. These proposed values were calculated using datasets from reference stations submitted by Contracting Parties in 2015. This table complements Table 6 of IMAP Decision IG. 22/7.

Organochlorinated Compounds (OCs)

Table 5(b) of IMAP Decision IG. 22/7: Mediterranean EAC Levels for Organochlorinated Compounds based on respective OSPAR adopted values

Contaminant	Mussels (µg/kg d.w.)	Sediments (µg/kg d.w.)	Fish (µg/kg lipid)
CB28	3.2	**	64
CB52	5.4	**	108
CB101	6.0	**	120
CB105	-	-	-
CB118	1.2	**	24
CB138	15.8	**	316
CB153	80	**	1600
CB156	-	-	-
CB180	24	**	480
∑7CBs ICES	-	11.5	-
Lindane	1.45	3.0 ^c	11 ^b
α-HCH	-	-	-
pp'DDE	5-50 ^a	2.2 ^c	-
HCB	-	20.0 ^c	-
Dieldrin	5-50 ^a	2.0 ^c	-

^aEarlier data from QSR2000 Report; ^bµg/kg wet weight (CEMP 2008/2009); ^cEffects Range Low (ERLs)
** This table is complemented with the values presented in above Table 3 (b) for here highlighted Polychlorinated Biphenyls (PCBs).

2) Mediterranean BACs and EACs Levels for Biomarkers

Table 6 of IMAP Decision IG. 22/7: Mediterranean EAC Levels for Biomarkers based on respective OSPAR adopted values¹²

Biomarkers/Bioassays	BAC levels in Mussels (<i>Mytilus galloprovincialis</i>)	EAC levels in Mussels (<i>Mytilus galloprovincialis</i>)
Lysosomal membrane stability Neutral Red Retention Assay (minutes)	120 ^{a*}	50 ^{a*}
Lysosomal membrane stability Cytochemical method (minutes)	20 ^{a*}	10 ^{a*}
AChE activity (nmol min-1 mg-1 protein) in gills (French Mediterranean waters)	29	20
AChE activity (nmol min-1 mg-1 protein) in gills (Spanish Mediterranean waters)	15	10

^aTechnical annex: assessment criteria for biological effects measurements. Integrated monitoring of chemicals and their effects. ICES Cooperative Research Report No. 315. Davies, I.M. and Vethaak, A.D.Eds.

*Moore et al., 2006 (Standard values adopted by ICES)

¹²This table is complemented with the biomarker values presented above in Table 4.

Decision IG.23/7

Implementation of the Integrated Coastal Zone Management Protocol: Annotated Structure of the Common Regional Framework for Integrated Coastal Zone Management and Conceptual Framework for Marine Spatial Planning

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the Protocol on Integrated Coastal Zone Management in the Mediterranean, and in particular articles 1, 17 and 18 thereof, on the Mediterranean Strategy for Integrated Coastal Zone Management,

Recalling decision IG.22/11, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), by which the Contracting Parties mandated to define a common regional framework for integrated coastal zone management, including climate change issues, as appropriate,

Committed to strengthening cooperation for the promotion of sustainable development and integrated management of coastal zones, by ensuring that activities on the marine and land parts of coastal zones are compatible and mutually supportive, thus respecting the ecosystem integrity and achieving or maintaining good environmental status,

Acknowledging the efforts made by the Contracting Parties to develop a common regional framework for integrated coastal zone management to facilitate the coordinated planning and management of the marine and land parts of coastal zones, as defined by the article 3 of the Protocol on Integrated Coastal Zone Management in the Mediterranean,

Bearing in mind that the purpose of the Common Regional Framework for Integrated Coastal Zone Management is to provide guidance to the Contracting Parties for the coordinated and enhanced implementation of the Integrated Coastal Zone Management in the Mediterranean without expanding the legal obligations under the Protocol on Integrated Coastal Zone Management in the Mediterranean, and as a tool for its implementation,

Having considered the reports of the meetings of the national focal points of the Priority Actions Programme Regional Activity Centre, held in May and June 2017,

1. *Urge* the Contracting Parties that have not yet done so to ratify the Protocol on Integrated Coastal Zone Management in the Mediterranean as early as possible with a view to ensuring its entry into force for the entire Mediterranean region;
2. *Decide* to establish an Open-ended Working Group of Experts with the mandate to finalize the Common Regional Framework for Integrated Coastal Zone Management, based on the Annotated Structure to integrate and complement it, if needed, in accordance with the timetable set out in Annex I to the present decision, for submission to the Contracting Parties at their twenty-first meeting;
3. *Take note* of the Conceptual Framework for Marine Spatial Planning contained in Annex II to the present decision, as a guiding document to facilitate the introduction of this management tool into the implementation of the Integrated Coastal Zone Management through the relevant regional framework and within the system of the Barcelona Convention and its Protocols;
4. *Urge* the Contracting Parties to continue their work in developing or updating their National Integrated Coastal Zone Management Strategies;
5. *Request* the Secretariat to further strengthen cooperation and synergies with other Regional Seas conventions, by exchanging experiences on examples of good coordination practices and achievements on Marine Spatial Planning and Integrated Coastal Zone Management.

Annex I

**General Structure and Elements of the Common Regional Framework for ICZM and
Timetable of its Preparation**

Annex I: General Structure and Elements of the Common Regional Framework for ICZM

Part I: Principles, legal frame, geographical scope and scale, links with other strategic Barcelona Convention instruments

Legal frame

The ICZM Protocol provides the CRF legal basis, in particular by the combined provision of **Art. 1** on General obligations, according to which the “Parties shall establish a common framework for the integrated management of the Mediterranean coastal zone and shall take the necessary measures to **strengthen regional cooperation** for this purpose”, and Art. 17 on Mediterranean strategy for integrated coastal zone management, stating that the Contracting Parties (CPs) “shall define, with the assistance of the Centre, **a common regional framework** for integrated coastal zone management in the Mediterranean **to be implemented by means of appropriate regional action plans and other operational instruments, as well as their national strategies**”. In a chronological and consequential order, the forecast of the national strategy is contained in the following **Art. 18**, which provides that “**each Party shall** further strengthen or formulate **a national strategy** for integrated coastal zone management and coastal implementation plans and programmes **consistent with the common regional framework**”.

The CRF shall operate without prejudice to the ICZM Protocol, so that the provisions of the Protocol will prevail.

Geographical scope and scale

The combined Art. 4 of the Barcelona Convention (BC) and Artt. 3 and 28 of the ICZM Protocol identify the geographical scope and scale of the CRF, inviting the CPs, individually or jointly, to take for the Mediterranean Sea area – as defined in Art. 1 of the BC within the geographical coverage as defined by ICZM Protocol – all appropriate measures to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and to protect and enhance the marine environment and the natural resources in that Area so as to contribute towards its sustainable development and, in particular, to promote the integrated management of coastal zones, taking into account the protection of areas of ecological and landscape interest and the rational use of natural resources, coordinating, where appropriate, bilaterally or multilaterally their national coastal strategies, plans and programmes related to contiguous coastal zones.

Guidance for the CRF

The ICZM Protocol provides the basic principles and obligations to be implemented by CPs, which can and should guide also the definition of the CRF. The recommendations of this latter, when adopted, are expected to provide strategic orientations on how the ICZM Protocol is jointly implemented using coordinated and harmonized approaches and, where appropriate, indicating time limits for completion. Therefore, the CRF is aimed to provide in particular guidelines and/or recommendations including measures to strengthen regional cooperation for:

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

Scope of the CRF (Recitals 3-6 and 8, Art. 1-3, 5-6, 17-18):

Within the geographical coverage between the external limit of the territorial sea of Parties and the limit of the competent coastal units as defined by the Parties, strengthen the cooperation among CPs for the coordinated implementation of the ICZM Protocol, requiring a specific integrated approach at the level of the Mediterranean Basin as a whole and within its coastal States, whose national ICZM strategies shall be consistent with the CRF using coordinated mechanisms.

Objectives and General Principles of the CRF

In order to promote ICZM through the CRF and achieve sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development, the following objectives with related general principles are to be envisaged:

- a) **Use the ecosystem-based management to ensure sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes, by:**
- taking into account in an integrated manner all coastal zone elements to respect carrying capacity, address cumulative impacts and prevent and/or reduce negative effects of natural disasters or risks and of development;
 - taking into account **land-sea interactions** as a natural dynamic phenomenon, as a criterion for defining areas to be managed and as a parameter in planning processes and procedures;
 - formulating appropriate **land/sea use strategies, plans and programmes**, for activities in the coastal zone, also through appropriate tools, in particular Marine Spatial Planning (MSP), Strategic Environmental Assessment (SEA) and Trans-boundary Environmental Impact Assessment (TEIA), to prevent and reduce negative impacts on coastal zone;
 - promoting cooperation between and among CPs in Environmental Impact Assessment (EIA) procedures related to activities under their jurisdiction or control which are likely to have a significant adverse effect on the marine and coastal environment of other CPs or areas beyond the limits of national jurisdiction, on the basis of notification, exchange of information and consultation (Art. 4, para 3, lett. d) of the BC).
- b) Address **natural hazards and the effects of natural disasters**, in particular **coastal erosion** and **climate change** by:
- preparing timely adaptation and management plans to prevent, reduce and minimize negative impacts to coastal zones.
- c) Achieve **good governance** among actors involved in and/or related to coastal zones by:
- ensuring appropriate governance schemes, in particular cross-sectorial and multi-level institutional coordination and proper participation of all stakeholders in a transparent decision-making process;
 - ensuring coherence of all strategies, policies, plans, initiatives, planning processes and funding at all levels affecting coastal zones: to this end, further strengthening cooperation among components of the BC system, ensuring synergies with other related strategic documents and promoting integration and harmony among coastal environment, relevant socio-economic activities and human communities living in the coastal zones;
 - promoting appropriate coordination between the various authorities competent for both the marine and the land parts of coastal zones in the different administrative services, at all relevant levels;

- organising the acquisition, exchange and use of the best available relevant information and data based in particular on Shared Environmental Information System (SEIS) principles;
- promoting consistency and coherence of ICZM across marine regions and, as identified by CPs and as appropriate, sub-regions, ensuring trans-boundary cooperation where appropriate, in particular between the CPs sharing a marine region;
- ensuring complementarity and consistency of all UNEP/MAP policies and actions through a coordinated effort of all Components in order to achieve effective results and rational use of funding;
- ensuring cooperation with all relevant/competent international and regional Organizations.

Part II: Synergies between the ICZM Protocol and the BC system aiming to achieve and maintain a Good Environmental Status (GES) of coastal and marine areas

Framework

Part II of the CRF is meant to facilitate:

1. the development and harmonisation of policies and measures needed to ensure the sustainable use and management of coastal zones, ensuring that the economic activities related to coastal zones minimise the use of natural resources and are adapted to the fragile nature of coastal zones – in order to protect from pollution and to preserve the coastal natural habitats, landscapes, natural resources and ecosystems and cultural heritage, raise awareness, enhance education, training and research, in compliance and synergy with international and regional legal instruments (ICZM Protocol-Part II, Art. 8-15); and
2. the development of policies and the adoption of measures for the prevention of natural hazards, prevention and mitigation of the negative impacts of coastal erosion, and response to natural disasters, based on international cooperation and scientific data exchange (ICZM Protocol-Part IV, Artt. 22-24).

Reaching Good Environmental Status through ICZM

The objective of reaching a Good Environmental Status (GES) of the Mediterranean Sea and Coast has been adopted by UNEP/MAP Barcelona Convention, and CPs have committed to apply the Ecosystem Approach (EcAp) as an overarching principle. A considerable number of sectorial policies and related tools have been developed within the BC system addressing pollution, biodiversity, socio-economic aspects, marine litter, key economic sectors, etc. whose implementation contribute to the protection of the coastal zone.

Achieving Ecological Objectives (EOs) and GES requires an integrated approach in order to address combined pressures and cumulative impacts in coastal and marine areas. The ICZM Protocol provides for reaching GES, in particular with regard to the targets such as: (i) negative impacts due to new structure with no influence on the larger scale coastal system; (ii) physical disturbance to sandy coastal areas induced by human activities should be minimized; (iii) natural dynamic nature of coastlines is respected, and coastal areas are in good condition; (iv) integrity and diversity of coastal ecosystem, landscapes, and their geomorphology are preserved.

Therefore, this Part II should explain how to reach the added value of a CRF for ICZM as an integrative process that provides a framework in which sectoral policies affecting the coastal zones can be brought together and harmonised, thus preventing overlaps or contradictions or filling the gaps among them and contributing to the rationalization of effort, resources and time. It should provide for better coherence to maximize synergies and increase coordinated implementation of sectoral policies (see Annex I.2 as an initial indicative methodological model for defining the most relevant issues for which guidance is to be provided in priority) with a view to ensuring the integrity of ecosystems, as well as adequately addressing land-sea interactions (LSI) and ensuring the compatibility of land and sea uses by implementing MSP and clarifying its links with ICZM.

Three main interactions should be considered when dealing with LSI processes: land-sea natural processes; land and sea uses and activities at operational level; and planning processes at strategic level (see Annex I.3 as a preliminary indication).

LSI need to be addressed at a variety of spatial scales: (i) local scale to deal with specific issues and implement related actions, (ii) sub-national and national scales where strategies and plans can orientate specific LSI-related efforts, (iii) sub-regional where transnational cooperation may produce a common strategy for guiding national LSI efforts and address transboundary issues.

ICZM tools that will be elaborated in detail in the Part III are of particular importance for defining the management and planning areas and promoting consensus among all Parties involved in the use of coastal and marine resources. Given their complexity, additional efforts will be required to improve methodologies and tools addressing LSI including the ecosystem services assessment tools, as well as the capacity building and operationalization of the research outcomes and tools, sharing of good practices, etc. as key approaches capable to correlate ICZM and MSP.

Finally, the CRF may consider the development of additional coastal indicators to complement the existing, predominantly marine-oriented EcAp indicators.

Part III: Tools and instruments to implement the CRF

Framework

Part III of the CRF is meant to facilitate:

(ICZM Protocol-Part II, Art. 8-15)

1. the definition of indicators of the development of economic activities to ensure sustainable use of coastal zones and reduce pressures that exceed their carrying capacity;
2. the promotion of codes of good practice among public authorities, economic actors and non-governmental organisations;
3. the development of educational programmes, training and public education on ICZM in the Mediterranean regional frame;
4. the provision for interdisciplinary scientific research on ICZM and on the interaction between activities and their impacts on coastal zones in the Mediterranean regional frame; and

(ICZM Protocol-Part III, art. 16-21, and Part V, Artt.25-29)

1. the use, strengthening and creation of appropriate mechanisms for regularly monitoring and observation of the state of evolution of coastal zones, of the resources and activities, institutions, legislation and planning that may influence coastal zones, taking all necessary means to ensure public access to these information;

2. the exchange of scientific and technical information and experience, data and good practices, cooperating for the provision of scientific and technical assistance, as well as in the training of scientific, technical and administrative personnel and in the coordination of their research programmes on themes of common interest, within a Mediterranean coastal zone network (Artt. 16, 25, 26, 27); and therefore:

- the definition of coastal management indicators, taking into account existing ones, and the cooperation in the use of such indicators;
- the establishment and maintenance of up-to-date assessments of the use and management of coastal zones;
- the carrying out of activities of common interest, such as demonstration projects of ICZM;

3. the implementation of environmental assessments (SEA; TEIA), taking into consideration the cumulative impacts on the coastal zones and their carrying capacities, adopting by means of cooperation guidelines for the determination of procedures for notification, exchange of information and consultation at all stages of the process (Art. 4 para 3 lett d) of BC and Artt. 19 and 29 of the ICZMP Protocol).

Tools and instruments

Some tools and instruments are of major importance for implementing the ICZM Protocol, but also for implementing other important policies and strategies in the Mediterranean coastal zones: BC in general, including its other Protocols and strategies, and for EU Member States (MS) several important pieces of legislation related to coastal zones e.g. Marine Strategy Framework Directive (MSFD), Water Framework Directive (WFD), MSP.

Among these instruments, the following ones are of particular importance and their relevance, use and particular features will be addressed in the CRF:

a) Monitoring of activities and environment (Art. 16)

There is a need to monitor in a consistent way the environment of the coastal zone *and* the human activities (terrestrial or marine, coastal or not) that are likely to have an impact on it (individually or cumulatively):

- monitoring of *environment* should include the Integrated Monitoring and Assessment Programme (IMAP) but also, as appropriate, binding monitoring based on EIA and SEA;
- monitoring of *activities* (land and maritime coastal activities) is needed, monitoring information should be accessible to all coastal stakeholders.

b) Environmental Assessment (Art. 19)

Environmental assessment (at strategic level: SEA for policies, plans and programmes; and at operational level: EIA for individual projects and activities) must support the achievement of GES:

- guidance is needed for developing the following issues to apply SEA and EIA for the purposes of ICZM with particular attention to transboundary implications:
 - Carrying capacity and cumulative impacts;
 - EcAp-based EOs and related targets;
 - LSI aspects;
 - Coastal erosion;
 - Climate change effects;
 - Life cycle analysis.

c) Coordination of planning processes and governance mechanisms (Artt.6 d-e, 7, 14, 20, 28 & 29)

To achieve the objectives of ICZM and facilitate integration through rational planning, there is a need for cross-sectorally organized institutional coordination of the various administrative authorities competent in coastal zones, covering both the marine and the land parts. There is also a need to put in place appropriate governance schemes allowing adequate and timely participation in transparent decision-making of local populations and stakeholders concerned. To this aim,

- exchange of effective good practices including on:
 - administrative schemes and processes, legal forms of promotion/setting out of such processes, participation and networking procedures, as appropriate;
 - connection of appropriate land policy to the process of planning;
 - coordination, where appropriate, of national coastal strategies, plans and programmes related to contiguous coastal zones; and
 - provide guidance for notification, exchange of information and consultation in cases of transboundary environmental assessment.

d) Marine Spatial Planning

There is a need to better address planning and management issues in the marine part of coastal zone: MSP should support implementation of ICZM in this area, in line with general framework of the BC and its Protocols:

- guidance needed for using MSP to support ICZM implementation, [based on the Conceptual Framework for MSP].

e) Land policy (Art. 20)

For the purpose of promoting ICZM land policy instruments and measures, including the process of planning, shall be adopted by the CPs. Exchange of experiences and good practices on land policy instruments and measures (acquisition, cession, donation, transfer of land to the public domain and easement of properties) should be encouraged at this end. Consideration of LSI and consistency with MSP need to be ensured.

f) Economic, financial and fiscal instruments (Art. 21)

Among the major issues: sustainable funding of ICZM (strategies, policies, plans and programmes), environmental fiscal instruments in coastal zones (application to land and maritime activities of e.g. polluter/payer principle and internalization of costs):

- exchange experiences and good practices on financial and fiscal instruments in support of ICZM, including voluntary funding from public and private sector;
- guidance needed for consideration of ecosystem services including through cost-efficiency analysis and payment for ecosystem services.

International cooperation

The success of ICZM largely relies on the cooperation among CPs supported by international organisations, institutions and fora. Many instruments and tools are already provided or foreseen within the BC system, for which guidance should be provided in particular to enhance synergies among them for the purpose of implementing the ICZM Protocol and the CRF:

- a) In the field of monitoring and observation (Art. 16)
 - IMAP with GES set as the ultimate environmental goal to be reached by managing anthropogenic pressures on coastal and marine environment in an attempt to ensure sustainability;
 - Standardised and harmonised national coastal inventories, as well as reporting on state and evolution of coastal zones;
 - Reporting processes on the implementation of the BC and its Protocols;
 - Mediterranean coastal zone network including an ICZM Platform as a hub for ICZM-labelled initiatives, CAMP and other projects, information, documentation, as well as a networking device for decision- and policy-makers, practitioners and other ICZM-prone actors at all levels.
- b) In the field of ICZM/coastal strategies preparation and implementation (Art. 28)
 - Mediterranean Strategy for Sustainable Development (MSSD), which relies on the BC system for its Objective 1 on Ensuring sustainable development in marine and coastal areas and its Strategic Direction 1.1. Strengthen implementation of and compliance with the Protocols of the BC and other regional policy instruments and initiatives supplemented by national approaches;
 - Regional strategies, plans and programmes for contiguous coastal zones, which will use SEA and EIA in transboundary context as one of the main tools (Art. 28).
- c) In the field of training and research, technical and scientific cooperation (Artt. 25-27)
 - MedOpen virtual training course as an excellent way of teaching on ICZM principles, objectives and ways of implementation;
 - Info/MAP platform for stocking and exchange of interoperable data and information;
 - Cooperation within research projects tailored for the need of multi-sectoral coastal zone management, focused on science-policy interface.

The establishment of a multi-level governance mechanism is fundamental for achieving these complex and ambitious goals as it sets the scene for efficient management and cooperation. Success will depend on mutual feeding between international- and national-level cooperation frames as well as forging partnerships and linking local-scale initiatives to higher-level policies. Achieving a balance between strategic and local concerns is perhaps one of the most difficult issues that we face in coastal zone management.

Part IV: CRF implementation and evaluation (processes and projects) at regional, bilateral/multilateral and national scale

Rationale

The Part IV is meant to provide specific support on which tools and processes are necessary to implement the guidance established by Parts I, II and III of the CRF to strengthen regional cooperation for the integrated management of the Mediterranean Coastal Zones, implementing the ICZM Protocol by means of appropriate Regional Action Plans, other operational instruments and national strategies (Art. 1 and 17).

It is to be noted that the present Part IV will be developed and finalized once the main elements and instruments of the Parts I, II and III of the CRF are defined. At this stage, it seems useful to list the elements that are to be kept in mind:

Tools and processes for CRF implementation and evaluation

1. Means of implementation

CPs, with the assistance of the Organization, should support the international and Mediterranean legal framework for the protection and management of the coastal-marine environment by acceding to, implementing, coordinating and enforcing the instruments that are already in force, as well as adapting them as necessary; further integrated actions are required even if some measures have been already adopted also at regional level.

1.a Strategic level

In the context of national and regional strategies take into account major commitments within the BC system, like:

- Regional or sub-regional Action Plans, such as the Regional Plan on Marine Litter Management in the Mediterranean; Regional Plans for priority contaminants;
- Strategies, such as the MSSD¹, the Strategy on ship's Ballast Water Management (BWM); the Regional Strategy for prevention of and response to marine pollution from ships;
- Strategic Action Programmes (SAPs), such as the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean SAP/BIO; the Strategic Action Programme to Address Pollution from Land-Based Activities in the Mediterranean Region SAP/MED.

¹Decision IG.22/2, the revised "Mediterranean Strategy for Sustainable Development (2016-2025)".

1.b Operational/coordination level

Other operational instruments, taking into account the specific nature and function of the different categories of tools:

- **Other Regional Frameworks**, such as the Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA²);
- **Thematic Action Plans (APs)**, such as the Offshore AP; the Invasive Alien Species (IAS) AP, the AP on introductions of Species and Invasive Species and related guidelines; the Sustainable Consumption and Production (SCP) AP; the SAP/BIO-related Action Plans adopted at regional level in order to ensure better protection of specific species and habitats, including the Mediterranean Monk Seal, Mediterranean Marine Turtle, Cetaceans, Marine vegetation, Bird species listed in Annex II of the SPA/BD Protocol, Cartilaginous fish, Coralligenous and other calcareous bio-concentrations, Dark habitats; the Action Plan for Marine Vegetation;
- Regional Plans (RPs) adopted in line with the provisions under the SAP MED and in the framework of the Article 15 of the LBS Protocol aiming at pollution prevention and reduction:
 - (2012) RP on the reduction of inputs of Mercury; RP on the reduction of BOD5 in the food sector; RP on the phasing out of Hexabromodiphenyl ether, Heptabromodiphenyl ether, Tetrabromodiphenyl ether, and Pentabromodiphenyl ether; RP on the phasing out of lindane and endosulfane; RP on the phasing out of perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride; RP on the elimination of Alpha hexachlorocyclohexane, Betahexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, and Pentachlorobenzene;
 - (2009) RP on the phasing out of DDT; RP on the reduction of BOD5 from urban waste water; RP on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene.
- **Roadmaps**, such as the MPAs Roadmap³, the EcAp Implementation Roadmap⁴;
- **Bilateral or multilateral agreements**. As set forth in Art. 3, para 2 BC, the CPs may enter into bilateral or multilateral agreements, including regional or sub-regional agreements, provided that such agreements are consistent with the BC and the Protocols and conform to international law. Copies of such agreements shall be communicated to the Coordinating Unit (e.g. the Memorandum of Understanding (MoU) on Port State Control (PSC) in the Mediterranean region (Mediterranean MoU)).

1.c National level

- ICZM National Strategies based on the Guidelines for National ICZM Strategy⁵, to consider and enhance their consistency with the CRF;
- National Action Plans (NAPs) to be developed in line with the provisions of the relevant Protocols, strategic APs and Regional APs.

² Decision IG.22/6 “Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas”.

³ Decision IG.22/13 “Roadmap for a Comprehensive Coherent Network of Well-Managed Marine Protected Areas (MPAs) to Achieve Aichi Target 11 in the Mediterranean”.

⁴ Decision IG.20/4 “The ecosystem approach Roadmap”.

⁵ UNEP/MAP: Guidelines for the preparation of National ICZM Strategies required by the Integrated Coastal Zone Management (ICZM) Protocol for the Mediterranean. Split, Priority Actions Programme. 2015. <http://pap-thecoastcentre.org/pdfs/National%20ICZM%20Guidelines.pdf> and <http://pap-thecoastcentre.org/pdfs/National%20ICZM%20Guidelines%20FR.pdf>

2. Coordination among means of implementation

- Description of the relations among the means of implementation.
Categorize the existing means of implementation:
 - Existing means of implementation adopted and implemented (part of International, BC system and national legislation and/or followed up by specific measures);
 - Existing means of implementation adopted but not yet implemented (not part of national legislation and/or not followed up by specific measures).
- Harmonised timeline among the means of implementation.

3. Projects and best practices

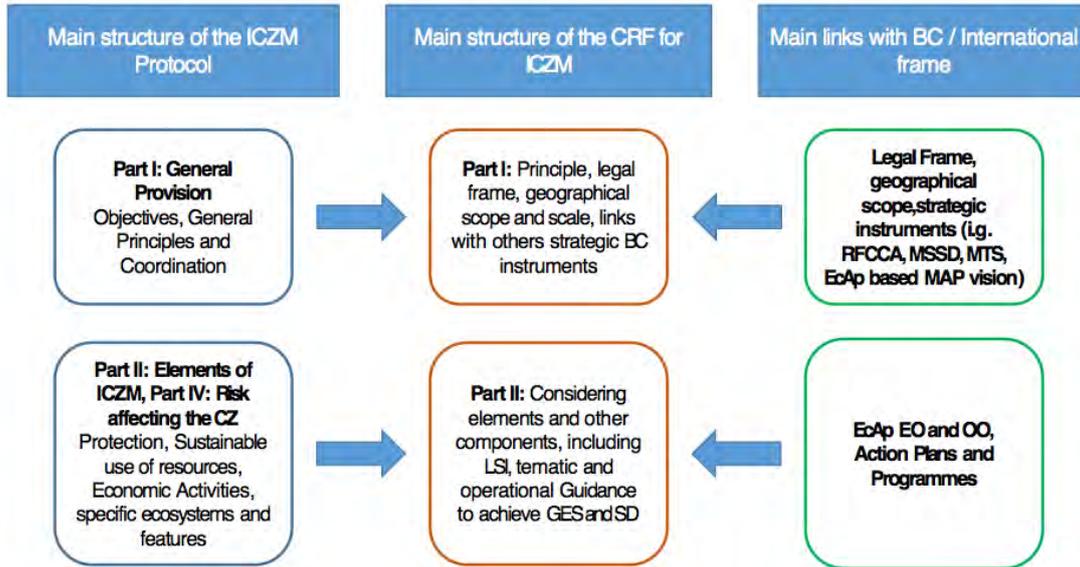
- CAMP and CAMP-alike projects;
- Network of CAMPs and CAMP-alike projects;
- Projects and best practices on relevant ICZM themes/aspects.

4. Evaluation and assessment of the implementation of the CRF

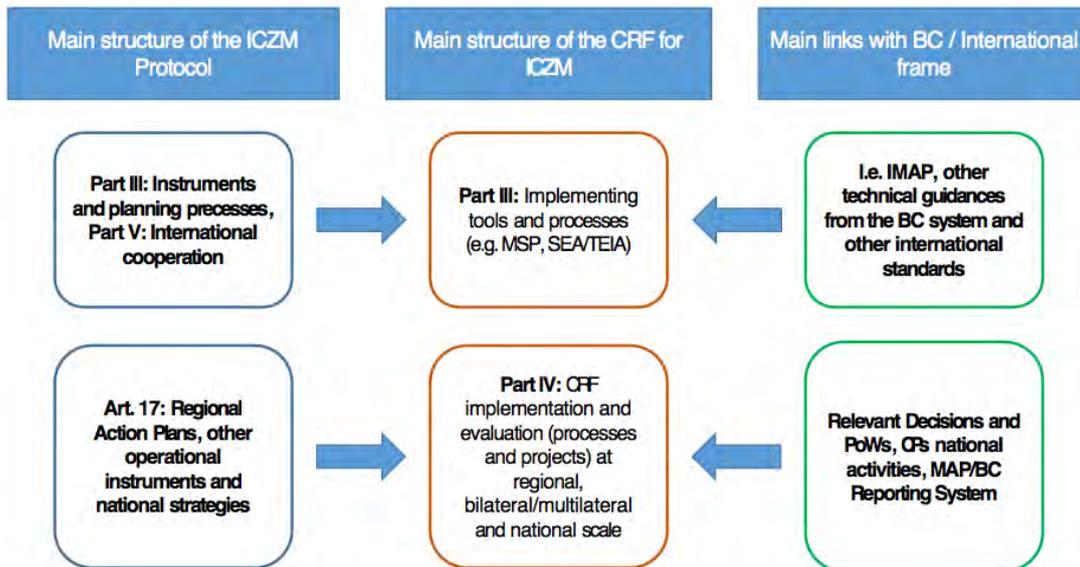
- Progress indicators: identification of indicators and/or assessment tools;
- Harmonised assessment of the implementation of the ICZM Protocol and the BC system (through IMAP)/international frame.

Annex I.1: General structure and elements of the CRF for ICZM

General structure and elements of the Common Regional Framework ICZM



General structure and elements of the Common Regional Framework ICZM



Annex I.2: Matrix of interactions between ICZM Protocol provisions of parts II and IV, Ecological Objectives and Main Regional Programmes and Plans

Provisions of ICZM Protocol	Ecological Objective (GES/EcAp) & Main Programmes and Action Plans																		
	EO1: Biodiversity is maintained or enhanced	EO2: Non-indigenous species do not adversely alter the ecosystem	EO3: Populations of commercially exploited fish and shellfish are within biologically safe limits	EO4: Alterations to components of marine food webs do not have long-term adverse effects	EO5: Human-induced eutrophication is prevented	EO6: Sea-floor integrity is maintained	EO7: Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems	EO8: The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved	EO9: Contaminants cause no significant impact on coastal and marine ecosystems and human health	EO10: Marine and coastal litter does not adversely affect coastal and marine ecosystems	EO11: Noise from human activities cause no significant on marine and coastal ecosystems	Ecosystem Approach Roadmap	Strategic Action Programme for the conservation of Biodiversity (SAP BIO) & SPAMI	Sustainable Consumption and Production Action Plan	Address land-based pollution (SAP BIO and Regional Plans)	Marine Litter Regional Plan	Offshore Action Plan	Regional Climate Change Adaptation Framework	Action Plans on Species and Roadmap on MPAs
Part II																			
Non construction zone																			
Economic activities																			
Agriculture																			
Industry																			
Fish																			
Aquaculture																			
Tourism, sporting, recreational activities																			
Utilization of specific natural resources																			
Infrastructures, energy facilities, ports																			
Maritime activities																			
Specific coastal ecosystems																			
Wetlands and estuaries																			
Marine habitats																			
Dunes																			
Coastal landscapes																			
Islands																			
Cultural heritage																			
Part IV																			
Risks affecting the coastal zone																			
Natural hazards																			
Coastal erosion																			
Response to natural disasters																			
Risks from marine pollution and marine noise																			
Climate change																			

- High relevance (level of interactions), need specific guidance
- Medium relevance, require sub-regional, national considerations (depend on the cases)
- Low relevance, no need for specific guidance

Annex I.3: Matrix Land-Sea Interaction (From CAMP Italy, with small modifications, to be tested and further developed within SIMWESTMED and SUPREME projects)

	SEA-LAND INTERACTION Sea-Land	LAND-SEA INTERACTION LandSea
SPECIFIC HUMAN ACTIVITIES	<ul style="list-style-type: none"> • Aquaculture in seawater • Fishing • Mining activities from seabed (including sand and marine aggregates mining) • Industry (systems, including off-shore desalination, CO₂ capture and storage) • Energy industry (offshore (oil and gas) energy, offshore renewable energy (wind, waves, surge)) • Infrastructures (ports, civil works of marine / coastal engineering [artificial reefs, breakwaters, etc.] • Submarine cables and pipelines • Maritime activities in general, including dredging and storage of materials • Maritime transport (maritime traffic, commercial, including ferries) • Tourism and cruise boat • Recreation and Sports • Biotechnology • Marine Protected Areas (MPAs) & Specially Protected Areas of Mediterranean Importance (SPAMIs), Ecologically or Biologically Significant Areas (EBSAs), Biological Protection Zones (BPZ) (and in general “<i>area based management tools, including marine protected areas</i>”) • Defence and security • Underwater cultural heritage 	<ul style="list-style-type: none"> • Coastal and lagoon Aquaculture • River and lagoon fishing • Natural resource use (water abstraction, removal of aggregates (quarries)) • Farming and livestock farming • Industry (food, manufacturing, on-shore plant, including desalination plant, CO₂ capture and storage) • Energy industry (onshore energy (oil and gas), onshore renewable energy (wind, sun, geothermal)) • Infrastructures (river ports, including dredging activities, engineering work, including dam, bridges, remediation activities, railways and roads) • Port activity • Transports (river transport, road and rail transportation) • Tourism, Sports and Recreation activities (i.e. bathing stations, touristic facilities) • Biotechnology • Natural Protected Areas (Nature reserves, National Parks, Regional Parks, etc., on-shore or with off-shore boundaries) • Defence and security
GENERAL HUMAN ACTIVITIES	<ul style="list-style-type: none"> • Waste (<i>marine litter</i>) 	<ul style="list-style-type: none"> • Urban plants (including pollution of water bodies that collect waste water) • Waste • Services network (i.e. sewage systems)
NATURAL	<ul style="list-style-type: none"> • Extreme events (storms, heavy tides, tsunami) • Sea Level Rise (global and local) • Risks to coastal areas (coastal erosion, marine flooding and saline intrusion) • Algae bloom • Volcanic and tectonic activities • Sea water acidification • Sea temperature rise 	<ul style="list-style-type: none"> • Soil erosion (leaching, wind action) • Natural subsidence • Hydrogeological instability (including landslides) • Transport of river sediments • Flooding • Volcanic and tectonic activities

**Annex I.4:
Timetable for the Working Group (WG)**

Mid-January 2018	Nomination of WG members and 1 st meeting of the WG to decide on the modalities of work and distribution of tasks
End April 2018	1 st draft of the CRF prepared by the WG
Mid-May 2018	2 nd meeting of the WG to discuss and amend the 1 st draft of the CRF
End June 2018	1 st draft of the CRF ready for translation
End July 2018	English and French versions of the CRF 1 st draft ready for dissemination to PAP/NFPs
End September 2018	Consultation Workshop with PAP/RAC NFPs
End January 2019	2 nd draft of the CRF prepared by the WG reflecting the conclusions and recommendations of the Consultation Workshop
End February 2019	English and French versions of the CRF 2 nd draft ready for dissemination to PAP/NFPs
Mid-April 2019	Discussion of the 2 nd draft of the CRF at the PAP/RAC NFPs meeting
End May 2019	Preparation of the final version of the CRF reflecting the outcome of the PAP/RAC NFPs meeting
End June 2019	English and French versions of the final version of CRF ready for dissemination to MAP NFPs
September 2019	Discussion and approval of the CRF by the MAP NFPs meeting
November 2019	Submission of the CRF to COP21 for adoption

Annex II

Conceptual Framework for MSP in the Mediterranean

**Annex II:
Conceptual Framework for MSP in the Mediterranean**

Acronyms

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

1. INTRODUCTION

As reported in the UNEP/MAP Mid-Term Strategy 2016-2021 (MTS), the Contracting Parties, at COP 18 recommended to strengthen MAP activities in the field of Marine Spatial Planning (MSP)⁶ in order to contribute to GES, investigate in more details connections between land and sea areas and propose coherent and sustainable land and sea-use planning frameworks relating with key economic sectors and activities that may affect the coastal and marine resources. The elaboration of a Conceptual Framework (CF) for MSP as an emerging issue in the entire Mediterranean Region is envisaged by the UNEP/MAP PoW approved for 2016-2017, with the main aim of introducing MSP within the Barcelona Convention.

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

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

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

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

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

Given the definition of the coastal zones in the ICZM Protocol, almost all other Protocols of the Barcelona Convention are related in one or the other way to it. ICZM can and should provide support to the implementation of several of these Protocols, and the relevant objectives and provisions of these Protocols should be taken into account in all ICZM projects, plans and strategies. Given these links, the application of MSP within the framework and the geographic scope of the ICZM Protocol can contribute to the goals defined by other protocols, as in the case of identification, planning and

⁶In this document, Marine Spatial Planning and Maritime Spatial Planning are used interchangeably. In fact, there is no different meaning of the two concepts. Marine Spatial Planning is used all around the world, while Maritime Spatial Planning is the term mainly used within the EU and for the relevant Directive, in particular. Both concepts deal with the sustainable management of marine ecosystems and maritime human activities and related socio-economic benefits.

management of protected areas according to the SPA/BD Protocol or the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (so called Offshore Protocol).

2. OBJECTIVES OF THE CONCEPTUAL FRAMEWORK

The Conceptual Framework on MSP has two main objectives:

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

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

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

3. ECAP AS A GUIDING PRINCIPLE FOR MSP

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

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

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

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

- Establish clear links between MSP objectives and ecological objectives, targets and indicators defined within EcAp.
- As far as possible, define the planning and management area considering the limits of ecosystem functioning.
- EcAp does not stop at sea, it involves land too. Taking EcAp in consideration in the MSP process also implies a strong focus on land-sea interactions (LSI) and in particular on interactions among terrestrial and marine ecosystems, habitats and species.
- Establish MSP (allocation of maritime activities) on best available scientific knowledge about the ecosystem and its dynamics, and assess major information gaps and related uncertainties.
- Identify the ecosystem services provided by the considered marine area and how they underpin human maritime activities and human well-being in general.
- Evaluate various effects of human activities on the ecosystem, as: direct and indirect, cumulative, short and long-term, permanent and temporary, positive and negative effects, also taking land-sea interaction in consideration.

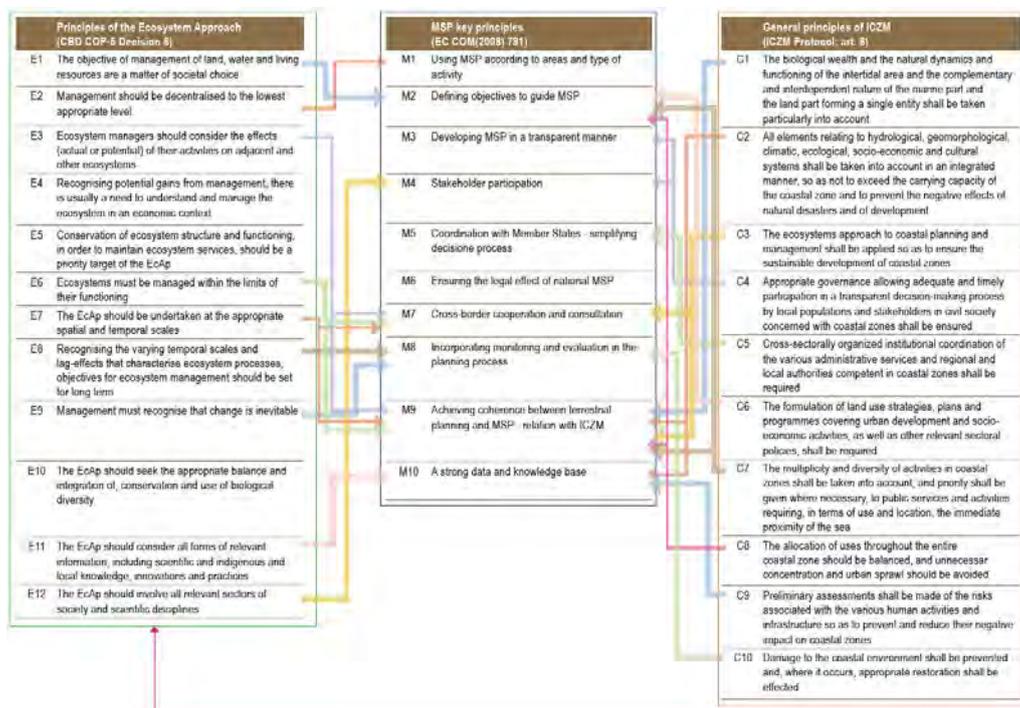


Figure 1 – Link between EcAp, MSP and ICZM principles

- Include in MSP the evaluation of cumulative impacts on the sea that may result from the combination of different (current and future) maritime and land-based activities.
- Capitalize and tailor existing methods and tools to operationalize the EcAp concepts within MSP, as: guidelines for implementation of EcAp, indicators, checklist, vulnerability assessment, evaluation of cumulative impacts, ecosystem service mapping and quantification, identification of blue corridors, EcAp based monitoring and evaluation program, etc.

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

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

4. COMMON PRINCIPLES AND CONTENTS

Available methodologies and scientific literature propose a wide range of MSP definitions. Ehler and Douvère (2009)⁷ includes one of the most quoted one, according to which MSP can be defined as “*a practical way to create and establish a more rational organization of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way*”. Another definition very often taken on board is the one given by art. 3 of Directive 2014/89/EU establishing a framework for MSP: “*a process by which the relevant Member State’s authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives*”. Expected benefits of MSP are:

- Increased horizontal and vertical coordination between administrations and among different sectors using a single process (MSP) to balance the development of a range of maritime activities;
- Reduction of conflicts and exploitation of synergies among different uses of the marine space;
- Contribution to the equitable access to marine resources;
- Increased stakeholder involvement, public participation and information sharing;
- Encouragement of investment, by instilling predictability, transparency and clearer rules;
- Improved protection of the environment, through early identification and reduction of impacts as well as promotion of opportunities for multiple use of the same marine space;

⁷Ehler C., and F. Douvère, 2009. Marine Spatial Planning: a step-by-step approach towards ecosystem-based management. IOC Manual and Guide n. 53, ICAM Dossier n. 6, Paris, UNESCO.

- Identification of (spatial) measures that can support the achievement of the Good Environmental Status (see section 3);
- Improve protection of cultural heritage and preservation of intangible values of the sea.

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

4.1 Adaptive approach

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

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

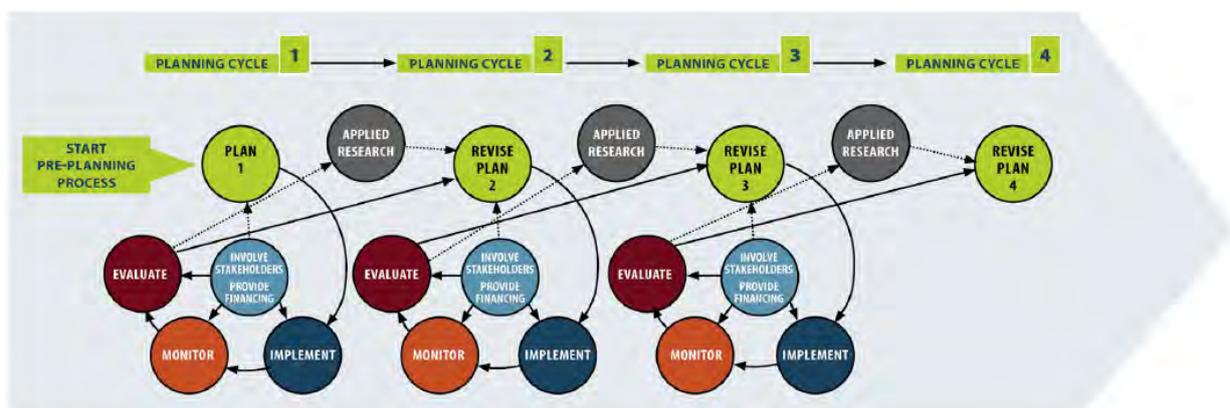


Figure 2 – The iterative MSP cycle (source: Ehler and Douvere, 2009)⁸

⁸ GESAMP – Joint Group of Experts on the Scientific Aspects of Environmental Protection, 1996. The contributions of sciences to integrated coastal zone management. Report and studies n. 61. Rome: Food and Agriculture Organisation (FAO) of the United Nations.

4.2 Multi-scale approach

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

- Mediterranean scale addressing the whole sea basin through cooperation among CPs in the frame of the Barcelona Convention to approach the strategic level of MSP, as for example: (i) definition of elements for a common vision and related objectives, (ii) identification of priority areas and issues to be approached at a transboundary level, (iii) identification of initiatives (e.g. projects) to address transboundary areas and issues;
- Sub-regional scale – where relevant and possible – approaching transboundary MSP issues (elements for a common vision, objectives, priorities and initiatives) in sub-Mediterranean regions, also linking to sub-regional strategies and plans (e.g. EUSAIR and the West Med maritime initiative) for coordinated implementation;
- National scale, fully implementing the MSP process – according to common principles and coherently with the Mediterranean and sub-regional approaches – in marine areas falling within national jurisdiction, with particular reference to the territorial sea according to the geographic scope of the ICZM Protocol;
- Sub-national and local scales, fostering MSP applications aiming to provide evidence of concrete and visible environmental, social and economic benefits of MSP. Pilot activities at the sub-national and/or local scale could focus on priority areas, such as: highly vulnerable areas, areas with major conflicts among uses, areas with high potential for synergies among uses and multi-use opportunities. Pilot activities could be also useful to develop and test new overarching or item-specific methodologies, including through next generation of CAMP projects better integrating marine areas through MSP.

4.3 Integration

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

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

4.4 Land-Sea Interactions

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

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

4.5 Four dimension of MSP

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

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

4.6 Knowledge based project

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

- Use best available knowledge to promote the definition of the most appropriate geographic scale and scope for MSP strategies and/or plans, also taking EcAp/IMAP into consideration (i.e. ecosystem limits) and considering LSI an essential element of MSP;
- Focus on the collection of data and information which are really essential for MSP;

- Identify the specific gaps that might hamper the MSP and that require specific actions;
- Take in consideration any form of “good quality” knowledge. This comes primarily from scientific sources and institutionalized monitoring activities and datasets, but should also capitalize private sources of information, including knowledge generated by people living and working at the sea;
- Improve transparent access to accurate and complete information;
- Go from data and knowledge to information really useful for the planning and decision-making process required by MSP. Spatial-based tools are particularly useful to this regard.

4.7 Suitability and spatial efficiency

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

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

4.8 Connectivity

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

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

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

4.9 Cross-border cooperation

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

possible common objectives) and implementation (e.g. planning of marine bordering areas, etc.) levels.

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

5. MSP STEPS

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

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

Step 1 – Starting the process and getting organised

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

Step 2 – Assessing the context and defining a vision

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

capacity of marine ecosystems to respond to human-induced changes is not compromised, while contributing to the sustainable use of marine goods and services by present and future generations;

- Linking the defined strategic vision with the upper scale (e.g. whole Mediterranean) and lower scale (i.e. input to sub-national and local MSP-related projects, including new CAMP projects).

Step 3 – Analysing existing conditions

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

Step 4 – Analysis of future conditions

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

Step 5 – Identification of key issues

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

Step 6a – Design phase: elaborating the MSP Plan

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

Step 6b – Strategic Environmental Assessment

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

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

- Actual availability of knowledge and methods of assessment, focusing on really needed information and highlighting critical gaps;
- Content and level of detail in the MSP, that should orientate the level of environmental assessment required;
- Stage in the decision-making process related to the MSP plan;
- Interest of the public;
- Related to previous points, the extent to which certain matters are more appropriately assessed within a more detailed Environmental Impact Assessment (EIA), which is often required for the licensing of specific projects and activities after a Marine Spatial Plan has entered into force. An SEA has an important role in guiding EIAs because the challenges in reconciling issues at the EIA scale require a more strategic approach.

At general level, three more aspects should be stressed:

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

Step 7 – Implementing, monitoring and evaluating the plan

In general plan implementation is not responsibility of spatial planners. However, the implementation is a critical step to give concreteness and credibility to the whole process and reach the expected benefits. The design of an implementation plan and dissemination of the MSP plan can support and facilitate the implementation phase. This step should clearly specify responsibilities for the implementation, i.e. which is the lead/main institution responsible for coordination of implementation and, which are other institutions and administrative levels involved. Existing mechanisms for coordination should be used. It is also very important that implementation is coupled with monitoring and evaluation according to the adaptive approach:

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

For all the three sub-steps proper indicators can be developed, making synergies with mechanisms in place within the Barcelona Convention system: EcAp indicator can be used for the first sub-step, while specific socio-economic and governance or process indicators can be used for sub-step 2 and 3 respectively⁹.

Cross-step activity – Stakeholder consultation

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

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

⁹See also: Ehler, C., 2014. Guide to evaluating Marine Spatial Plans. IOC Manuals and Guides, 70, ICAM Dossier 8, Paris, UNESCO

Decision IG.23/8

Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at its twentieth meeting,

Having regard to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and in particular articles 11 and 12 thereof, addressing national and cooperative measures for the protection and conservation of species,

Recalling decision IG.22/7 on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016),

Recalling also decision IG.22/20, adopted by the Contracting Parties at their nineteenth meeting, which mandated the updating of the Action Plan on Marine and Coastal Bird Species and the revision of the Reference List of Marine and Coastal Habitat Types in the Mediterranean,

Noting the progress of work on revising the Reference List of Marine and Coastal Habitat Types in the Mediterranean, and emphasizing the need to pursue consultations with Contracting Parties with a view to the finalizing thereof, thus adding a renewed tool in the Mediterranean region to foster the implementation of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria at the national and regional levels,

Concerned about the potential threats that the marine and coastal bird species recently added to the updated Action Plan face in the Mediterranean region, and conscious of the need to maintain or restore the population levels of such species to a favourable conservation status and ensure their long-term conservation,

Committed to further streamlining the Mediterranean Action Plan ecological objectives and associated Good Environmental Status and targets, as well as the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria into the species and habitat actions plans adopted within the framework of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean,

Having considered the report of the thirteenth meeting of the focal points for the Specially Protected Area Regional Activity Centre,

1. *Adopt the updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, as set out in annex I to the present decision;*
2. *Request the Contracting Parties to take the necessary measures for the implementation of the updated Action Plan; and to report on its implementation in a timely manner, using the online Barcelona Convention reporting system;*
3. *Take note of the updated Reference List of Marine and Coastal Habitat Types in the Mediterranean, as contained in annex II to the present decision, so that it can be used, where necessary, as a first basis for identifying reference habitats to be monitored at the national level under the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria;*
4. *Request the Specially Protected Areas Regional Activity Centre to finalize, in consultation with focal points, the classification of benthic marine habitat types for the Mediterranean region and the Reference List of Marine and Coastal Habitat Types in the Mediterranean, with a view to submitting them to the Contracting Parties at their twenty-first meeting.*

Annex I
Updated Action Plan for the Conservation of Marine and Coastal Bird Species listed in Annex II
of the Protocol concerning Specially Protected Areas and Biological Diversity in the
Mediterranean

Foreword

In 1995, the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) adopted a new Protocol concerning Specially Protected Areas and Biological Diversity (SPA/BD Protocol) in the Mediterranean. Annex II of this new protocol lists endangered or threatened species found in the Mediterranean. Subsequently a series of nine Action Plans were also adopted by the Parties to the Convention for the protection of the marine environment and the coastal region of the Mediterranean. These Action Plans, including the Action Plan (AP) for the conservation of bird species listed in the Annex II of the SPA/BD Protocol, identify and lay out priorities and activities that need to be undertaken to attain their specific objectives. They also urge and encourage co-ordination and co-operation amongst Mediterranean states to work towards the achievement of conservation of a species or a group of species within this region. Following the request made for SPA/RAC during the 19th Meeting of the Contracting Parties to the Barcelona Convention (UNEP(DEPI)/MED IG.22/28; Decision IG.22/12), the Action Plan for the conservation of bird species drafted in 2003 is updated during the biennium 2016-2017.

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1. INTRODUCTION

1.1. General overview of the avifauna of the Mediterranean

1. Birds have always fascinated and captivated people's imagination. Their beauty and their song, as well as their power of flight, have inspired humankind throughout the millennia. Their aesthetic, recreational, social and economic values are recognized worldwide. Birds know no boundaries and they play an important part in nature's ecosystems. They are also good indicators of the health of the environment. In spite of all this it has been the anthropogenic pressure that throughout the years has threatened the existence of several species, not only in the Mediterranean region.

2. The ornithological calendar of the Mediterranean is dominated by the seasonal migrations of birds from Europe to Africa in autumn and vice versa in spring, and several species which breed in Europe over-winter in the Mediterranean basin. Nonetheless, the Mediterranean is the home of several hundred bird species, some of which occur exclusively in this climatic zone. The seabirds found along the crowded coastal zone and the islands of this almost land-locked sea are quite resilient, including the comparatively rare and localised Audouin's Gull *Larus audouinii*.

3. Pelagic bird species in the Mediterranean are relatively few, but several fine breeding colonies of Scopoli's Shearwater *Calonectris diomedea*, Yelkouan Shearwater *Puffinus yelkouan*, and the subspecies of the European Storm-petrel *Hydrobates pelagicus melitensis* may be found along sea-cliffs or on small isolated rocky islands and islets.

4. Coastal seabirds, including the subspecies emigratus of the Lesser Crested Tern *Sterna bengalensis* with its breeding area restricted to Libya, are found in river deltas and inland saltwater lagoons. Many other coastal species, however, are found breeding in sub-optimal and man-modified habitats such as salinas, while others rely on municipal waste dumps and discards from fishing boats for their food.

5. The ten new species added to Annex II, include the critically endangered (CE) Balearic Shearwater *Puffinus mauretanicus* and the near threatened (NE) Armenian Gull *Larus armenicus*. The trend of both their populations has been assessed by IUCN as decreasing. Although the rest of the new species are regarded from a global point of view as least concern (LC), their breeding range in the Mediterranean is restricted to a few countries, particularly eastern ones. Furthermore, the population trend of some of them (e.g. Kentish Plover *Charadrius alexandrinus*, the Greater Sand Plover *Charadrius leschenaultii*, the Mediterranean Gull *Larus melanocephalus* and the Common Gull-billed Tern *Gelochelidon nilotica*) has also been assessed as decreasing globally.

1.2. Background information of the Action Plan for the conservation of the bird species listed in Annex II

6. In 1995 the Parties to the Barcelona Convention adopted a new protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean. After a lengthy process of consultation and consent among international organisations, NGOs and experts throughout the Mediterranean, the draft action plan was discussed at the sixth meeting of the National Focal Points for SPAs in Marseilles in June 2003 and then approved and adopted by the XIII Conference of the Contracting Parties to the Barcelona Convention at Catania, Sicily, in November 2003.

7. During their meeting in Monaco in November 2001 the Contracting Parties had asked SPA/RAC to draw up a draft action plan for the bird species appearing in Annex II, which listed 15 endangered or threatened bird species¹. Consequently, in 2003, the Parties to the Barcelona Convention

¹The original number of species was 15, but two subspecies (*Puffinus yelkouan yelkouan* and *Puffinus yelkouan mauretanicus*) of one of the species (Mediterranean Shearwater *Puffinus yelkouan*), were given species status by

adopted an Action Plan for the conservation of the bird species listed in Annex II. The main purpose of the Action Plan was to maintain and/or restore their population levels to a favourable conservation status and to ensure their long-term conservation. The Action Plan also aimed to contribute to the sharing of knowledge and expertise between the Mediterranean countries and to co-ordinate efforts among the countries and other relevant initiatives and agreements. It also inspired a synergic approach among the Mediterranean countries in the protection of these bird species and their habitats and encouraged research to fill the many gaps in our knowledge concerning coastal and pelagic birds in the Mediterranean, particularly seabirds' distribution and their movements, as well as their feeding, moulting and wintering areas at sea.

8. The development of the Action Plan for the conservation of these species followed various initiatives taken by other organisations, such as BirdLife International partners in Mediterranean countries, WWF, IUCN, Medmaravis, and Tour du Valat, on the conservation of birds and their important sites and habitats. Various actions have been taken at national level by the competent authorities and at species level by several non-governmental organisations (particularly BirdLife International partners) in their respective countries, to counteract some of the threats, which were being faced by a number of the species covered by the Action Plan.

9. In 2005, the first Mediterranean Symposium on the ecology and conservation of the bird species listed in Annex II, was held in Villanova I la Geltrú (Spain) with the participation of 31 ornithologists and experts from 16 Mediterranean countries. The participants made several recommendations to SPA/RAC, including the addition of 10 new marine and coastal bird species to the list of Annex II². In November 2009, the 16th Ordinary Meeting of the Contracting Parties to the Barcelona Convention, held in Marrakech (Morocco), adopted the addition of the 10 species of marine and coastal birds in Annex II, bringing up the total number of bird species to 25. Ten years after the Villanova Mediterranean Symposium it was appropriate to hold another symposium; (a) to update the knowledge on the status of marine and coastal birds; (b) to assess the effect of new regulations, conventions and research tools; and (c) to call for a closer cooperation among the countries that adopted the list of 25 bird species of Annex II of the SPA/BD Protocol. Hence SPA/RAC, in partnership with the Tunisian NGO Les Amis des Oiseaux (AAO/BirdLife Tunisia), Medmaravis, Tour du Valat Biological Station and the Conservatoire du Littoral, organised the 2nd Symposium on Marine and Coastal Birds in the Mediterranean in Hammamet, Tunisia, in February 2015³. Subsequently, the 19th Conference of Parties to the Barcelona Convention, which was held in February 2016 in Athens, asked SPA/RAC, to update the Action Plan for the Conservation of Bird Species listed in Annex II to the SPA/BD Protocol to include the new added species (Decision IG22/12).

1.3. Bird Species listed in Annex II of the SPA/BD Protocol: List of Endangered or Threatened Species

The sequence and nomenclature follows del Hoyo, J. & Collar, N.J. (2014). HBW and BirdLife International Illustrated Checklist of the Birds of the World. Volume 1: Non-passerines. Lynx Edicions, Barcelona.

English Name	French Name	Scientific Name
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taxonomists, namely Yelkouan Shearwater *Puffinus yelkouan* and Balearic Shearwater *Puffinus mauretanicus*. The latter is one of the 10 added bird species to Annex II in 2009

²UNEP/MAP- RAC/SPA. 2006. *Proceedings of the first symposium on the Mediterranean action plan for the conservation of marine and coastal birds*. Vilanova i la Geltrú, (Spain), 17-19 November 2005, (Ed. Aransay, N.) RAC/SPA, Tunis.

³Yesou, P., Sultana, J., Walmsley, J. & Azafzaf, H. (Eds.) 2016. *Conservation of Marine and Coastal Birds in the Mediterranean*. Proceedings of the UNEP-MAP-RAC/SPA Symposium, Hammamet 20-22 February 2015, Tunisia.

Greater Flamingo	Flamant rose	<i>Phoenicopterus roseus</i>
European Storm-petrel	Océanite tempête	<i>Hydrobates pelagicus</i> ssp. <i>melitensis</i>
Scopoli's Shearwater	Puffin de Scopoli	<i>Calonectris diomedea</i>
Yelkouan Shearwater	Puffin yelkouan	<i>Puffinus yelkouan</i>
Balearic Shearwater	Puffin des Baléares	<i>Puffinus mauretanicus</i>
Pygmy Cormorant	Cormoran pygmée	<i>Microcarbo pygmaeus</i>
European Shag	Cormoran huppé	<i>Phalacrocorax aristotelis</i> ssp. <i>desmarestii</i>
Dalmatian Pelican	Pélican frisé	<i>Pelecanus crispus</i>
Great White Pelican	Pélican blanc	<i>Pelecanus onocrotalus</i>
Kentish Plover	Pluvier à collier interrompu	<i>Charadrius alexandrinus</i>
Greater Sand Plover	Pluvier de Leschenault	<i>Charadrius leschenaultii</i> ssp. <i>columbinus</i>
Slender-billed Curlew	Courlis à bec grêle	<i>Numenius tenuirostris</i>
Slender-billed Gull	Goéland railleur	<i>Larus genei</i>
Mediterranean Gull	Mouette mélanocéphale	<i>Larus melanocephalus</i>
Audouin's Gull	Goéland d'Audouin	<i>Larus audouinii</i>
Armenian Gull	Goéland d'Arménie	<i>Larus armenicus</i>
Little Tern	Sterne naine	<i>Sternula albifrons</i>
Common Gull-billed Tern	Sterne hansel	<i>Gelochelidon nilotica</i>
Caspian Tern	Sterne caspienne	<i>Hydroprogne caspia</i>
Lesser Crested Tern	Sterne voyageuse	<i>Thalasseus bengalensis</i>
Sandwich Tern	Sterne caugek	<i>Thalasseus sandvicensis</i>
Osprey	Balbuzard pêcheur	<i>Pandion haliaetus</i>
Pied Kingfisher	Martin-pêcheur pie	<i>Ceryle rudis</i>
White-breasted Kingfisher	Martin-chasseur de Smyrne	<i>Halcyon smyrnensis</i>
Eleonora's Falcon	Facoun d'Éléonore	<i>Falco eleonora</i>

1.4. Overview of threats

10. In general, birds are threatened by habitat loss and disturbance and also from contamination by oil pollutants. Fish farms and wind farms close to seabird colonies, as well as intensive deep water fishing may constitute serious threats to some bird species.

11. Among the 25 species listed in Annex II as endangered or threatened one finds those:
- which are globally threatened;
 - which are endemic to the region and have an unfavourable conservation status;
 - whose populations are not concentrated in the Mediterranean but which have an unfavourable conservation status and/or a restricted range in the region;
 - whose populations are not concentrated in the Mediterranean, have a healthy conservation status but are regarded as flagship species.

12. However, they all have something in common. They are all endangered by a number of threats, including:

- Contamination by oil pollutants
- Direct and indirect depletion of food resources
- Non-sustainable forms of tourism
- Disturbance
- Direct persecution including illegal hunting and the use of poison
- Mortality from bycatch
- Wind farms
- Loss of habitats
- Degradation of habitat, particularly wetlands and small islands of high biological importance
- Introduction of and predation by alien species
- Climate change

1.5. Ecology and status of the species

13. The biology, ecology, distribution and conservation status of the fifteen bird species in the original Action Plan (2003) had been presented in an information document entitled “List of Threatened Bird Species as Adopted by the Barcelona Convention”. It was composed of an annotated List compiled by Medmaravis and edited by J. Criado, J. Walmsley and R. Zotier (April 1996) and gave the status, population size and trends, ecology, threats and conservation measures for each species. This was complemented by other national, regional and global contributions, particularly by BirdLife International.

14. The additional 10 species, which were originally proposed in 2005 during the first Mediterranean Symposium on the ecology and conservation of the bird species listed in Annex II, held in Villanova I la Geltrú (Spain), were presented by Xavier Monbailliu on behalf of Medmaravis, using a scientific criteria to screen possible candidate species. They are species of particular importance for coastal habitats in the Mediterranean. Their biology, ecology, distribution and conservation status was based on BirdLife International’s publication *Birds in Europe: Population estimates, Trends and Conservation status* (2004). Their status in the Mediterranean has also been complemented by national experts’ input in response to a questionnaire sent out by SPA/RAC to its National Focal Points. The questionnaire was sent out in October 2016, after a roundtable discussion on the Action Plan for the conservation of bird species listed in Annex II, was organized at the 3rd African Congress for Conservation Biology held in September 2016 at El Jadida, Morocco.

15. Several ornithological studies have been carried out in the Mediterranean in the last twenty to thirty years, as can be noted particularly in the proceedings of various symposia including those organised by SPA/RAC, Medmaravis, Conservatoire du Littoral, Tour du Valat, and national NGOs in the Mediterranean countries. Despite all these studies, there are still many gaps in the knowledge of coastal and pelagic birds and their habitats in the Mediterranean, particularly seabird movements and their distribution at sea. There is an urgent need for mapping of breeding, feeding, moulting and wintering areas of pelagic birds in the whole region.

1.6. Geographical scope of the Action Plan

16. The geographical scope of the action plan is the entire semi-closed sea and the Mediterranean bio-climate parts of its bordering countries. Some of the species, such as Balearic Shearwater *Puffinus mauretanicus* and Yelkouan Shearwater *Puffinus yelkouan*, have a restricted breeding range in the Mediterranean. Others, such as Eleonora’s Falcon *Falco eleonora*, have migration routes and/or wintering areas outside the Mediterranean. Other species, such as White Pelican *Pelecanus onocrotalus*, Greater Flamingo *Phoenicopterus ruber*, Osprey *Pandion haliaetus*,

Sandwich Tern *Sterna sandvicensis* and Little Tern *Sterna albifrons*, are widespread elsewhere, but have a limited range and/or a small population in the Mediterranean. For Slender-billed Curlew *Numenius tenuirostris*, which is a globally Critically Endangered species, the Mediterranean used to be part of its wintering range, but now its population is estimated less than 50 according to BirdLife International species factsheet (2016) and there have been no recent confirmed records in the Mediterranean. Apart from the Armenian Gull *Larus armenicus*, which is Near Threatened, and the Balearic Shearwater, which is Critically Endangered, the other newly added species to Annex II are of Least Concern, according to BirdLife International. However their breeding population and/or range in the Mediterranean are quite restricted.

2. ACTION PLAN OBJECTIVES AND TARGETS

2.1. The main objective

17. The main purpose of the Action Plan is to maintain and/or restore the population levels of bird species listed in the Annex II of SPA/BD Protocol to a favourable conservation status and to ensure their long-term conservation.

2.2. Other objectives

- To share information, knowledge and expertise between Mediterranean countries and organisations dealing with the bird species listed in Annex II.
- To co-ordinate efforts among Mediterranean countries and other relevant organisations, initiatives and agreements, so as to ensure the implementation of this Action Plan.
- To encourage a synergetic approach among Mediterranean countries in the protection of the 25 listed bird species and their habitats.
- To encourage research to fill the many gaps which still exist in knowledge of coastal and pelagic birds in the Mediterranean, particularly of seabird distribution and movements, and of their feeding, moulting and wintering areas at sea.

3. STRATEGIC APPROACH

18. In the implementation of this Action Plan there are three levels of priority:

At Species level

- To implement this Action Plan for all species in Annex II of the SPA/BD Protocol.
- To consider the conservation of globally threatened species as one of the main priorities of the present Action Plan.
- To give priority to the conservation of other species, which have an unfavourable conservation status at regional level.

At National level

- To map the distribution of the species on land as well as at sea.
- To identify sea and coastal important bird areas, particularly for feeding and breeding.
- To identify and control threats for birds and their habitats.
- To protect and monitor Important Bird Areas (IBAs).
- To carry out proper Environment Impact Assessments for all proposed development where any of the species occur.
- To develop and implement appropriate legislation for the protection of birds and their habitats.
- To pursue the principles and adhere to the requirements of Agreements and Conventions related to bird conservation.

At Mediterranean level

- To strengthen co-operation and exchange of information and experience in research.

- To disseminate information.
- To promote and support the identification of coastal and sea areas which are important for birds.
- To promote the creation and monitoring of protected areas of coastal and marine important birds areas.
- To prevent and/or control the expansion of invasive species, particularly on small islands of high biological importance for birds.
- To identify and monitor migratory hotspots.
- To seek, whenever appropriate, collaboration at a broader international level with relevant Conventions/Agreements such as the Berne Convention, the Bonn Convention, and in particular with the Afro-Eurasian Water bird Agreement (AEWA).

4. ACTIONS TO ACHIEVE THE OBJECTIVES OF THE ACTION PLAN

4.1. Protected areas

- Important bird marine areas should be identified and given legal protection status.
- Breeding sites of all threatened species should be legally established as protected areas with an adequate management plan.
- Coastal and marine protected important bird areas should be continuously monitored and properly managed.

4.2. Legislation

- Throughout the Mediterranean, species should be afforded legal protection by the Contracting Parties in countries where they breed, winter or occur during migration, as per the guidelines provided by SPA/RAC (see para.5).
- Legislation should include dissuasive penalties.
- Assessment of environmental impact on these species and their habitats by any type of development should be legally obligatory.

4.3. Research

- In view of the existing gaps in knowledge of coastal and pelagic birds and their habitats in the Mediterranean, especially of their movements and distribution at sea, priority must be given to the mapping of breeding, feeding, moulting and wintering areas of the species concerned.
- Resources should be made available for researchers to fill the gaps in knowledge, such as for the establishment of a Mediterranean seabirds' atlas, and for monitoring population size and breeding success of less well-known species.

4.4. Monitoring Activities

19. In view of the adoption of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP),

- Contracting Parties to the Barcelona Convention, with the support of the SPA/RAC Secretariat, should update their national monitoring programmes in light of the new elements of IMAP and report regularly quality assured data.
- Contracting Parties, with the help of national, regional or international organisations, should undertake, when appropriate, joint monitoring initiatives on a pilot basis, with the aim to share and exchange best practices, using harmonized methodologies, and ensuring cost efficiency.
- Contracting Parties should support and take part in regional initiatives and projects led by competent partner organizations that will contribute to the implementation of the initial phase of the IMAP in order to strengthen strategic and operational regional synergies.
- The SPA/RAC Secretariat should work further and create more opportunities with relevant partner organizations, in order to strengthen technical support that countries might need to implement the IMAP.

4.5. Awareness, Education & Training

- Contracting Parties should promulgate legislation concerning endangered bird species.
- Contracting Parties should seek and/or provide the training of personnel for monitoring, conserving and managing protected important bird areas.
- The organisation of ornithological training courses *in situ* for trainers, important bird areas staff and relevant personnel should be supported by SPA/RAC and the partners of the Action Plan.
- Public awareness and education programmes and campaigns highlighting the vulnerability of threatened species, directed particularly at stakeholders and decision makers, should be planned and implemented in co-operation with non-governmental organisations.

4.6. National Action Plans

- Contracting Parties should formulate National Action Plans for the conservation of endangered and threatened bird species in the Mediterranean.
- National Action Plans should take into consideration the implementation of the specific actions relevant to the particular countries proposed in this Action Plan.
- New and updated National Action Plans should address the current factors causing loss or decline of the bird species in Annex II; suggest appropriate subjects for legislation; give priority to the protection and management of sites; and ensure continued research and monitoring of populations and sites.
- Contracting Parties should apply and implement their Action Plans.

5. IMPLEMENTATION

5.1. Regional co-ordination structure

20. Regional co-ordination of the implementation of the present Action Plan will be guaranteed by the Mediterranean Action Plan's (MAP) secretariat through the Regional Activity Centre for Specially Protected Areas (SPA/RAC).

21. The main functions of the co-ordinating structure shall consist in:

- Promoting co-operation among Contracting Parties in those actions executed in trans-boundary areas and at sea in national waters and beyond.
- Promoting the development of a regional network for monitoring populations and distribution of threatened Mediterranean bird species, in co-ordination with other organisations.
- Supporting and collaborating with Contracting Parties in the establishment of important bird areas at sea.
- Providing detailed guidelines to assist countries in their efforts to afford adequate legislative protection to endangered species.
- Elaborating guidelines for monitoring and management plans in collaboration with experts and other interested organisations.
- Urging and supporting the Contracting Parties to create and/or update their national monitoring programmes in light of the new elements of IMAAP (Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria) and report regularly quality assured data.
- Assisting countries in the monitoring and conservation of the species listed in Annex II according to the proposed actions by this Action Plan.
- Organising meetings of experts on specific subjects relating to the ecology and conservation of the bird species found in Annex II.
- Preparing progress reports on the implementation of this Action Plan.
- Encouraging complementary work, done by other international organisations with the same objectives, and promoting co-ordination to avoid possible duplication of effort, such as the

CMS Secretariat⁴, the Secretariat of AEWA, the Raptors MOU Coordinating Unit, the African-Eurasian Migratory Land birds Action Plan (AEMLAP) and Birdlife International.

5.2. Participation

22. Any interested international, regional and/or national organisation is invited to participate in actions necessary for the implementation of this Action Plan, while links with other bodies responsible for Action Plans dealing with one or more bird species listed in Annex II should be made, to strengthen co-operation and avoid duplication of work.

5.3. “Action Plan Partners”

23. To encourage and reward contributions to the work of applying the Action Plan, the Contracting Parties may at their ordinary meetings grant the title of “Action Plan Partner” to any organisation (governmental, nongovernmental, economic, etc.) that has to its credit concrete actions likely to help the conservation of birds in Annex II of the Protocol. Conditions for the awarding of the Partner title shall be adopted by the Contracting Parties following advice given by the meeting of National Focal Points for SPAs. The co-ordination structure shall set up a mechanism for regular dialogue between the participating organisations and where necessary, organise meetings to this effect. However any dialogue could also be done by mail/email and webinars (on line conferences).

5.4. Assessment and revision

24. National Focal Points for SPAs, in collaboration with national experts, will be expected to:

- Assess progress in implementing the Action Plan during their meetings.
- Suggest recommendations to be submitted to the Contracting Parties.
- Suggest adjustments to the implementation timetable.

5.5. Timing

25. The actions advocated by the present Action Plan have to be carried out over a three-year period, starting from when the Action Plan is adopted by the Contracting Parties. At the end of this period, SPA/RAC will prepare a report on the progress made so far in implementing the advocated actions, and will submit this to the National Focal Points for SPA, who will make follow-up suggestions to the Parties.

5.6. Timetable

Action	Deadline	By whom
1. Organisation of the third Mediterranean Symposium on ecology and conservation of the bird species in Annex II.	By beginning of the year 2023	SPA/RAC & Partners
2. Protect legally all bird species in Annex II	1 year after adoption	Contracting Parties

⁴including the Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean (MIKT) convened by the CMS Secretariat in conjunction with the Secretariat of AEWA, the Raptors MOU Coordinating Unit and the African-Eurasian Migratory Landbirds Action Plan (AEMLAP) Working Group.

3. Establishment/support of research and monitoring programmes to fill gaps in knowledge of threatened species in partnership with other organisations.	From 2018 to 2020	Contracting Parties, SPA/RAC, AP Partners, AEWA, BirdLife International
4. Revision of the directory of organisations and experts concerned with the threatened and endangered bird species in the Mediterranean.	By end of year 2020	SPA/RAC
5. Creation/update and implementation of National Action Plans for the conservation of endangered and threatened bird species in the Mediterranean.	From 2018 to 2020	Contracting Parties & SPA/RAC
6. Application and implementation of any Action Plans/monitoring activities already in existence for the conservation and monitoring the bird species listed in Annex II.	From 2018 to 2020	SPA/RAC & 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 2018 to 2023	SPA/RAC , AP Partners, AEWA, BirdLife International
8. Legal establishment of protected areas important for bird species with adequate management plans at breeding sites.	By end of year 2020	Contracting Parties
9. 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 2018 to 2020	SPA/RAC, AP Partners, AEWA, BirdLife International, ICCAT, GFCM
10. Identification of areas important for birds on land and at sea (mapping of breeding, feeding, molting and wintering areas.	From 2018 to 2023	Contracting Parties, AP Partners, AEWA, Birdlife International
11. Mapping of breeding, feeding, moulting and wintering areas of pelagic species.	From 2018 to 2023	Contracting Parties
12. Produce the third progress reports in the implementation of the Action Plan.	By end of year 2023	SPA/RAC
13. Organize specific training courses and workshops in coordination/synergy with international and/or national NGOs	From 2018 to 2023	SPA/RAC, Partners & Contracting Parties
14. Optimize synergies with international agreements and organisations dedicated to bird conservation	From 2018 to 2023	Contracting Parties
15. Target and lobby decision-making organisations and government bodies to stimulate the implementation of the Action Plan	From 2018 to 2023	Contracting Parties, SPA/RAC, AP Partner, ICCAT, GFCM

6. PROPOSED SPECIFIC PLANS

26. The hereafter listed Specific Action Plans for the 25 bird species listed in the Annex II of the SPA/BD Protocol should be implemented in all Mediterranean states where the species breed, winter or occur on migration. They should be reviewed and updated every three years. If sudden major environmental changes happen which may affect any of the species' populations in the Mediterranean, an emergency review should be immediately undertaken. The current status given below covers the countries that have a Mediterranean coast. Proposed actions, which apply to all species, should include inter alia the initiation of public awareness campaigns on the status of these species and the preparation of National Action Plans. Other on-going Action Plans, which have been developed by

other institutions, and which cover some of the species, are listed below, and should be taken in consideration and implemented where these species occur.

6.1. Greater Flamingo (*Phoenicopterus roseus*)

Current status

27. In the Mediterranean, it breeds in localised sites in suitable wetlands, mainly in Spain, France Turkey, Italy as well as in Algeria. Breeding colonies are established at sites free from human disturbance and secure from terrestrial predators. Breeding is irregular with numbers fluctuating from one season to another. Substantial numbers also occur in Tunisia, Greece and Cyprus but breed rarely. Mediterranean population seems to be separated from Asiatic populations, with minimal exchange and overlap in Libya and Egypt.

Current factors causing loss or decline

28. Urban development; habitat loss for tourism development; disturbance; and hunting.

Status under international instruments

Class A - African Convention on the Conservation and Natural Resources (1968).

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Listed in the AEWA Action Plan (Column B Category 2a)

Current Action Plans

None

Action Plan objectives and target

29. To maintain healthy breeding populations, and maintain wetlands where the species overwinter.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies.
- Monitor and warden breeding colonies.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Restore wetlands where the species used to breed.
- Maintain wetlands where the species over winter.

6.2. European Storm-petrel (*Hydrobates pelagicus ssp. Melitensis*)

Current status

30. This pelagic colonial species breeds in small to very large colonies mainly on islets and in caves along the coast. Subspecies melitensis is endemic to the Mediterranean. Important breeding colonies are found in Malta, Sardinia and Sicily. Breeding surveys are totally lacking for the Adriatic and eastern Mediterranean. A general decline has been recorded.

Current factors causing loss or decline

31. Loss of habitat; disturbance; predation by *Rattus* sp. and Yellow-legged Gull *Larus cachinnans*; possibly contamination by oil pollutants of the sea.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

None

Action Plan objectives and target

32. To halt the decline and maintain healthy breeding colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor and warden colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes, which may result in loss of habitat and the introduction and/or spread of invasive species, particularly mammals and Yellow-legged Gull *Larus cachinnans*.
- Control and/or eradicate species that have become invasive.
- Prevent oil spills and chemical pollution of the sea.
- Identify areas at sea important for the species.

6.3. Scopoli's Shearwater (*Calonectris diomedea*)

Current status

33. This pelagic, colonial species is restricted to the Mediterranean, nesting in sea-cliffs, on rocky islands and islets. Breeds in Algeria, Croatia, France, Greece, Italy, Malta, Spain, Turkey and Tunisia where the breeding population has been recently estimated at 140,000 pairs. The majority of the population spends the non-breeding season in the Atlantic. Its recent conservation status according to IUCN is of Least Concern (LC) but its population is thought to be in slow decline overall, although more research is required particularly in the eastern part of the Mediterranean and in the Adriatic.

Current factors causing loss or decline

34. Introduced mammals, such as *Rattus* sp., which affect breeding success; illegal hunting; taking of eggs and/or chicks; mortality from bycatch (longlines); development close to colonies and disturbance, and possibly oil spills and chemical pollution of the sea.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

None

Action Plan objectives and target

35. To halt the decline of the population and maintain healthy colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean. Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and warden colonies under threat of disturbance.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Prevent oil spills and chemical pollution of the sea.
- Monitor levels of mercury and chlorinated hydrocarbons in populations.
- Develop and implement management projects targeting the conservation of the breeding habitat and strict control of introduced mammals, as well as preventing the introduction of alien predatory species.
- Identify important bird areas at sea for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

6.4. Yelkouan Shearwater (*Puffinus yelkouan*)

Current status

36. This pelagic colonial species breeds on rocky islands and islets. Population estimated at less than 33,000 pairs, with 95% of the population breeding along the Mediterranean shores of South European countries, with main breeding colonies in Greece Italy and Malta. Some pairs breed along the North African coast. Breeding surveys in the eastern Mediterranean are lacking and for a number of countries the population is very poorly known.

Current factors causing loss or decline

37. Lack of food resources; lack of protection of breeding colonies; predation by *Rats Rattus sp*, Yellow-legged Gulls *Larus cachinnans*, and possibly feral cats and dogs; disturbance; some mortality from bycatch (nets); and possibly contamination by oil pollutants at sea.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
EU European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC)1994).

Current Action Plans

A European Action Plan for the Yelkouan Shearwater, led by the Ligue pour la Protection des Oiseaux (LPO), is being prepared by BirdLife International partners under a LIFE project EuroSPA. (<http://www.birdlife.org/europe-and-central-asia/project/life-eurosap>)

Action Plan objectives and target

38. To halt the decline of the species, to restore its numbers to former status and to increase the knowledge about its biology.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor the population dynamics of the species and warden colonies.
- Control and if possible eradicate rats in breeding colonies.
- Ensure the protection of the breeding habitat and create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Promote adequate fishing practices, which take into account the conservation of the species.
- Prevent oil spills and chemical pollution of the sea.
- Undertake surveys of colonies and research on the conservation biology of the species.
- Identify areas at sea important for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

6.5. Balearic Shearwater (*Puffinus mauretanicus*)

Current status

39. This pelagic, colonial species is restricted to the Balearic Islands; breeding on rocky islands and islets. It is the most threatened species in Europe. Current official population is estimated at 1989-2883 breeding pairs, but recent research at sea shows a much larger population of individual birds.

Current factors causing loss or decline

40. Predation by introduced carnivores (Genet, Pine Marten and feral cats); bycatch; and possibly oil spills and chemical pollution of the sea.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

International species action plan for the Balearic shearwater, *Puffinus mauretanicus* prepared by SEO/BirdLife & BirdLife International on behalf of the European Commission (Mars, 2011)

A national Action Plan is in place and is being implemented in Spain

There is a draft national action plan in France for the Atlantic coast and corresponding to the wintering areas of the species.

Action Plan objectives and target

41. To halt the decline of the species and restore its numbers to former status.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor the population dynamics of the species and warden colonies.
- Control and if possible eradicate rats and predators in the colonies and prevent any introduction of terrestrial mammals in breeding colonies.
- Ensure the protection of the breeding habitat and create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Promote adequate fishing practices, which take into account the conservation of the species.
- Prevent oil spills and chemical pollution of the sea.
- Undertake surveys of colonies and research on the conservation biology of the species.
- Identify the marine important areas for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

6.6. Pygmy Cormorant (*Microcarbo pygmaeus*)

Current status

42. The main breeding populations in the Mediterranean of this globally threatened species are found in Montenegro, Serbia, Greece, and Turkey, with some pairs in Albania, Bosnia, Israel and Italy. It is restricted to lowland freshwater and brackish habitats, and in winter frequents coastal lagoons, deltas, rivers and riparian forests. The whole population of the Mediterranean countries probably numbers 11,000-13,000 breeding pairs.

Current factors causing loss or decline

43. Degradation and loss of wetland habitat; disturbance and hunting; destruction of breeding colonies.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Listed in the AEWa Action Plan (Column B Category 1)

Current Action Plans

Action Plan for the Pygmy Cormorant *Phalacrocorax pygmaeus* in Europe prepared by BirdLife International on behalf of the European Commission (February 1996).

Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International – EU Life-Nature (1996).

Italy has a national Action Plan.

Action Plan objectives and target

44. To maintain the recent increase of the species' population size and distribution.

Proposed action

- Afford strict protection to the species and its habitat, particularly from hunting, disturbance and development.
- Manage wintering and breeding sites in order to meet the species' requirements.
- Monitor breeding and wintering populations.
- Monitor water levels and quality at breeding sites.
- Create SPAs where breeding colonies exist.
- Research its feeding and dispersal ecology.
- Develop education campaigns for hunters.
- Restore degraded wetlands used by the species.

6.7. European Shag (*Phalacrocorax aristotelis ssp. desmarestii*)

Current status

45. This Mediterranean endemic subspecies of the European Shag *Phalacrocorax aristotelis desmarestii* is present in the western Mediterranean (Balearic Islands, Corsica and Sardinia), and the Adriatic, Aegean and Black Seas, breeding along the coast on rocky islands and islets. The Mediterranean population numbers less than 9,000 pairs.

Current factors causing loss or decline

46. Human disturbance; oil pollution; habitat loss; mortality from bycatch; Seine net fishing and long-line hauling close to colonies and moulting areas.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979) (79/409/EEC/1979).

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

No national action plans, but a Species Action Plan for the Mediterranean Shag *Phalacrocorax aristotelis desmarestii* in Europe was prepared by BirdLife International on behalf of the European Commission (final draft December 1999).

Action Plan objectives and target

47. To ensure the survival of Mediterranean populations.

Proposed action

- Compile an inventory of breeding sites and map critical habitats.
- Confer strictly protected status on the species.
- Prohibit all types of disturbances to the breeding colonies.
- Carry out rat-eradication programmes at breeding colonies.
- Monitor populations.
- Create SPAs where the species breeds, and encourage buffer zones surrounding breeding areas including adjacent sea area.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to breeding sites.
- Take measures to influence fishing policies in order to avoid negative effects on food stocks and food availability, and to avoid mortality from bycatch.
- Prevent oil spills and chemical pollution of the sea.

- Identify important bird areas at sea for the species.

6.8. Dalmatian Pelican (*Pelecanus crispus*)

Current status

48. This species is vulnerable and globally threatened. In the Mediterranean, small populations (totalling 2500-2700 breeding pairs) are found mainly in Albania, Montenegro, Greece and Turkey. Breeds on inland and coastal wetlands and nests on floating islands of reeds and on bare ground on islands, isolated from mainland to be safe from mammalian predators. Up to about 3000 birds winter in Albania, Greece, Syria and Turkey.

Current factors causing loss or decline

49. Wetland drainage resulting in a sharp decline of available breeding sites; collisions with electric wires; persecution due to competition with commercial fisheries; and disturbance.

Status under international instruments

Class A - African Convention on Conservation and Natural Resources (1968).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Appendix I & II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Appendix I - Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973). European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Listed in the AEWA Action Plan (Column A Category 1a/1c).

Current action plans

Action Plan for the Dalmatian Pelican *Pelecanus crispus* prepared by BirdLife International on behalf of the European Commission (April 1996).

Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International – EU Life-Nature (1996).

A new Species Action Plan is under development through EU funded LIFE Euro SAP Project 2014-2018.

Albania has a NAP, but it is only partly implemented, while a NAP is in preparation in Turkey.

Action plan objectives and target

50. To prevent any declines and to increase the population size to a level at which it can be regarded as safe.

Proposed action

- Confer strictly protected status on the species and its habitats during breeding and wintering periods in all range states.
- Establish supervised buffer zones around breeding colonies.
- Prohibit all types of disturbance to the breeding colonies.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Manage in a sustainable way or restore where necessary all wetlands where the species occurs.
- Replace overhead electricity wires by thick cables or lay them underground.
- Monitor continually the breeding and wintering populations.
- Develop education campaigns for local fishermen and hunters, and decision-makers.

6.9. Great White Pelican (*Pelecanus onocrotalus*)

Current status

51. In the Mediterranean this species breeds in Turkey and Greece. Numbers have declined in the last thirty years, and now the breeding population in the Mediterranean is down to less than 1000 pairs (810-940bp). It nests on the ground in large reed beds, bare earth or rocky islands, in isolation from the mainland to be safe from mammalian predators. The species was also recorded during its migration in other countries such as Israel and Egypt. The available data indicates that more than 75,000 white pelican have been observed in Israel.

Current factors causing loss or decline

52. Habitat loss and destruction; depletion of fish stocks; persecution and disturbance; pollution; flooding; disease; and collision with electric power lines.

Status under international instruments

Class A - African Convention on Conservation and Natural Resources.

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Appendix I (Pal.) II (Western Pal.) - Convention on the Conservation of Migratory Species of Wild Animals (1979).

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean Current Action Plans (1626/94 (EC) 1994).

Listed in the AEWA Action Plan (Column A Category 1a/3c).

Current Action Plans

53. National action plan is in place and is being implemented in Israel.

Action Plan objectives and target

54. To reverse the decline of the breeding populations in the Mediterranean.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies and their habitat.
- Prohibit all types of disturbance to feeding areas during the species migration
- Monitor and supervise breeding colonies.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of (a) coastal development and infrastructure that impacts and/or fragments habitats; (b) pollution; and (c) overexploitation of fish stocks.
- Develop education campaigns aimed at local fishermen.
- Restore degraded wetlands used by the species.
- Create artificial nesting sites close to foraging sites.

6.10. Kentish Plover (*Charadrius alexandrinus*)

Current status

55. This predominantly coastal small wader species has an extremely large global range and hence is evaluated by IUCN as of Least Concern. However, the overall population trend is decreasing. It prefers sparsely vegetated, sandy or dry mud areas when breeding. While some populations of this

species are sedentary or only disperse short distances, most inland and northern coastal populations have distinct separate breeding and wintering ranges. Small breeding populations breed in most Mediterranean countries with some 5000 pairs in Tunisia, up to nearly 2000 pairs in Spain, Greece, and Italy, and 'several thousands' in Morocco.

Current factors causing loss or decline

56. Disturbance of coastal habitats; degradation and loss of wetland habitat; land reclamation; declining river flows; urbanisation and predation by foxes, feral cats and dogs.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Current Action Plans

57. National action plan is in place and is being implemented in Slovenia.

Action Plan objectives and target

58. To reverse the decline of the breeding populations and of the number of migrant birds in the Mediterranean.

Proposed action

- Control of recreation activities and human disturbance at breeding sites.
- Reverse the abandonment of saltpans.
- Stop pollution of wetland habitats, land reclamation, and infrastructure development at breeding sites.

6.11. Greater Sand Plover (*Charadrius leschenaultii* ssp. *Columbinus*)

Current status

59. This species has an extremely large global range and population size. According to IUCN criteria it is of Least Concern. However in the Mediterranean the subspecies *columbinus* is known to breed only in Turkey (probably 800-1200bp) and Syria (400-1000bp). As a migrant it is fairly common in Israel, and very scarce or vagrant in some other eastern Mediterranean countries. During the breeding season this species is predominantly found in open, dry, treeless areas and rocky plains. In Turkey the species frequents heavily grazed saline steppe and usually breeds near water but exceptionally also some kilometres away from it.

Current factors causing loss or decline

60. Hunting & disturbance.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Current Action Plans

None

Action Plan objectives and target

To ensure the safeguarding and to prompt an increase of the present few breeding populations in the Mediterranean, as well as to provide it with safe passage and wintering grounds where it occurs in other Mediterranean countries.

Proposed action

- Confer strictly protected status on the species and on its “lookalike” species, where it occurs on passage and during winter.
- Prohibit all types of disturbance to breeding areas and their surroundings.
- Monitor, warden and afford appropriate protection and management of all breeding, passage and wintering grounds.
- Instruct wardens, ornithologists and hunters in the identification of the species.
- Increase public awareness of the species’ rare status in the Mediterranean.

6.12. Greater Sand Plover (*Charadrius leschenaultii* ssp. *Columbinus*)

Current status

61. This is a globally threatened species, which is possibly extinct. Once described as common in the Mediterranean region, it is now one of the rarest and least known species in the Western Palearctic. Used to migrate from Siberia across eastern and southern Europe to winter in North Africa. On passage, occurs in a wide range of habitats: salt marshes, saltpans, brackish lagoons, dry fishponds, steppe and freshwater marshes. Last confirmed documented record in the Mediterranean was in Greece in 1999

Current factors causing loss or decline

62. Habitat loss at migrating and wintering areas. Other factors unknown.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix I - Convention on the Conservation of Migratory Species of Wild Animals (1979).

Appendix I - Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Memorandum of Understanding concerning Conservation Measures for the Slender-billed Curlew under the Bonn Convention (CMS) (1994).

Listed in the AEWA Action Plan (Column B Category 1a/1b/1c).

Current Action Plans

International Action Plan for the Slender-billed Curlew prepared by BirdLife International on behalf of the European Commission (February 1996).

Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International – EU Life-Nature (1996).

Italy has a national action plan.

Action Plan objectives and target

63. To provide safe passage and wintering grounds in the Mediterranean.

Proposed action

- Confer strictly protected status on the species and on its “lookalike” species, where it occurs on passage and during winter.
- Monitor and warden wintering sites
- Afford appropriate protection and management of all passage and wintering grounds.
- Plan, regulate and/or manage activities and processes of development near wintering sites.
- Train wardens, ornithologists and hunters in the identification of the species.
- Increase public awareness of the species’ critically threatened status amongst politicians, decision- makers and hunters.
- Ratify the AEWA Agreement by those countries which have not yet done so.

6.13. Slender-billed Gull (*Larus genei*)Current status

64. This gull is both resident and/or migratory in the Mediterranean. It breeds colonially on sandy islands in saltpans at the coastal zone but also (as in Tunisia) in inland wetlands including salt lakes. It is found breeding at widely isolated scattered localities in some countries. It is presently known to breed in Spain (1650-1950bp), France (ca.1000bp), Italy (3000-5000bp), Greece (100-130bp) and Turkey (2000-3000bp). In Tunisia, up to 4000bp have been recorded breeding in Thyna salt-pans, and 10,560bp have been recorded breeding in the Golfe of Bou Grara, apart from other scattered sites. It also breeds in Egypt but numbers are unknown; formerly bred in Morocco; and there is no evidence of breeding in Algeria. The European population seems to be decreasing.

Current factors causing loss or decline

65. Disturbance of coastal habitats; degradation and loss of wetland habitats; human disturbance; predation by feral dogs; eggs and chicks of this species are preyed upon by other gull species especially where colonies are frequently disturbed by humans; subsistence egg collecting by local people; pollution and flooding.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Appendix II of the Convention on Migratory Species and listed under the African Eurasian Water bird Agreement.

Current Action Plans

None. Regional management plans for seabirds including this species are in place and implemented in Spain.

Action Plan objectives and target

66. To maintain and increase a healthy breeding population and increase the number of its colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the North African Mediterranean countries.
- Increase management in breeding areas.
- Prevent disturbance from tourism and recreational activities.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.

- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Control or eradicate invasive competitive species and terrestrial mammals at colonies.
- Prevent oil spills and chemical pollution of the sea.
- Identify marine important areas for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

6.14. Mediterranean Gull (*Larus melanocephalus*)

Current status

67. This gull breeds in dense colonies at lagoons, estuaries, coastal as well as inland saltmarshes, and on large steppe lakes and marshes in open lowland areas. It breeds mainly on the Black Sea coast of Ukraine and at scattered localities throughout Europe. In the Mediterranean it breeds in Spain, southern France, Italy, Greece, and Turkey. The Mediterranean also hosts in winter a substantial number of the European population. The Mediterranean breeding population is estimated to be 9400-15,700 pairs

Current factors causing loss or decline

68. Tourist disturbance at breeding colonies; habitat loss resulting from development; possibly contamination by oil spill and chemical discharges at sea; bycatch from long-line fishing; and the taking of adults and eggs by fishermen.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Appendix II of the Convention on Migratory Species and listed under the African Eurasian Water bird Agreement.

Current Action Plans

None

Action Plan objectives and target

69. To maintain and increase a healthy breeding population; increase the number of its colonies; and give total protection to the wintering population

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies.
- Identify site based threats and necessary management actions of protected areas.
- Increase existing management in breeding areas.
- Prevent disturbance from tourism and recreational activities.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Create where possible artificially constructed nesting sites in coastal locations.

6.15. Audouin's Gull (*Larus audouinii*)

Current status

70. This is an endemic Mediterranean species, with its main breeding populations occurring in the western Mediterranean in coastal and island sites; an average of 16,800 breeding birds in Spain in the years 2004-2016 being the largest. Other colonies occur in other parts of the Mediterranean including Greece, Turkey, Tunisia and Sardinia. It was close to extinction in the 1970s, but better enforcement of protection measures has resulted in an increase in the breeding population.

Current factors causing loss or decline

71. Habitat alterations at breeding sites; changes in fishing practices; competition mainly with the Yellow-legged Gull *Larus cachinnans*; egg collection; rat predation; human persecution and disturbance; and possibly depletion of food resources and contamination by oil pollutants.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
Appendix I & II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.
European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).
Listed in the AEWA Action Plan (Column A Category 1a/3a).

Current Action Plans

International Action Plan for Audouin's Gull *Larus audouinii* prepared by BirdLife International on behalf of the European Commission (March 1996).
Globally threatened birds in Europe Action Plans. Council of Europe – BirdLife International –EU Life-Nature (1996).
Action Plan to restore the Audouin's Gull *Larus audouinii* by Government Committee of Palm Islands Nature Reserve in Lebanon.
Official Working Group in Spain (Ministry of Environment) to review status and propose conservation actions for *Larus audouinii*
A national action plan is in place and implemented in Italy; another is in preparation in Turkey and regional implemented management plans are on-going for a number of colonies in Spain.
A national action plan exists in France.

Action Plan objectives and target

72. To maintain a healthy breeding population and increase the number of colonies.

Proposed action

- Compile an inventory of breeding sites and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, particularly the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Control or eradicate invasive competitive species and terrestrial mammals at colonies.
- Prevent oil spills and chemical pollution of the sea.

- Identify marine important areas for the species.
- Develop an Action Plan to reduce mortality at sea especially from bycatch.

6.16. Armenian Gull (*Larus armenicus*)

Current status

73. This species nests colonially in huge aggregations. Its European population has declined rapidly and is listed by IUCN as Near Threatened. In the Mediterranean it breeds in western Turkey where it is resident, with a breeding population of 8000-10,000 pairs. In the Mediterranean it winters in the eastern part but numbers are not known. It is a common winter visitor and passage migrant to Israel where numbers have also decreased drastically. The species inhabits both coastal and inland waters, frequenting lakes, reservoirs, ponds and rivers. It breeds along the stony and grassy shores of mountain lakes, nesting and foraging in reed-beds and on beaches. In its winter range the species may also forage in agricultural fields and on fish-ponds.

Current factors causing loss or decline

74. Persecution (due to the damage it inflicted to fisheries); egg harvesting; and loss of habitat quality.

Status under international instruments

Appendix II of the Convention on Migratory Species and is covered by the African Eurasian Water bird Agreement.

Current Action Plans

None

Action Plan objectives and target

75. To halt the decline of the species and maintain a healthy breeding population.

Proposed action

- Identification and designation of important sites for these species.
- Education programmes to fishers to reduce persecution.
- Carry out studies to understand its ecology, including its diet and population trends.
- Compile an inventory of breeding sites and map critical habitats supporting the colonies, in the eastern part of the Mediterranean.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Develop an Action Plan to halt the decline of the species and maintain a healthy breeding population.

6.17. Little Tern (*Sternula albifrons*)

Current status

76. This coastal seabird is a strongly migratory species which usually fishes in very shallow water. It has the most inshore distribution of all terns. It breeds in solitary pairs or in very small groups

sometimes amidst colonies of other terns. Its European breeding population is estimated at 36,000-53,000 pairs. However the breeding population in all the Mediterranean countries is estimated at 11,000-14,500 breeding pairs with the highest populations in Turkey (3000-5000bp), Spain 2641-2691bp), Italy (2000-3500bp), Greece (1500-2000bp), France (700bp), Albania (200-500bp), and Israel (300bp). The overall global population trend is decreasing.

Current factors causing loss or decline

77. Habitat loss and destruction of breeding sites; human disturbance; and predation (feral cats and dogs and foxes).

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Listed in the AEWA Action Plan (Column A Category 3/a).

Current Action Plans

None; but national implemented action plans exist in Israel & Slovenia.

Action Plan objectives and target

78. To maintain healthy breeding colonies and to fill the gaps of knowledge in quantitative data of breeding populations in a number of countries.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies, particularly in the eastern Adriatic and eastern Mediterranean countries where quantitative data are lacking.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Eliminate predation.
- Monitor and warden colonies under threat of disturbance.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known colonies.
- Establish population size and trends.
- Restore wetlands where the species is known to breed.

6.18. Common Gull-billed Tern (*Gelochelidon nilotica*)

Current status

79. This species has an extremely large global range, but its breeding population in the Mediterranean is only 5800-7150 pairs: Spain (3185-3435bp), Turkey (1000-2000bp), France (873bp), Italy (550bp), Greece (180-280bp), Tunisia (150-350bp) and Libya (12bp). It breeds in a variety of locations not only in coastal areas, but also at inland lakes, rivers, marshes and swamps.

Current factors causing loss or decline

80. Deterioration and loss of habitat, e.g. through wetland drainage, agricultural intensification,

pesticide pollution and fluctuating water levels; Development close to breeding and/or at foraging sites; and human disturbance at breeding colonies.

Status under international instruments

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II -Convention on the Conservation of Migratory Species of Wild Animals (1979).

Current Action Plans

None

Action Plan objectives and target

To safeguard the breeding areas; maintain a healthy breeding population and possibly increase it.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies.
- Ensure breeding sites protection from disturbance, development and modification.
- Confer strictly protected status on the species.
- Eliminate predation.
- Monitor and warden colonies under threat of disturbance.
- Prevent erosion of is let complexes,
- Create SPAs where breeding colonies exist.

6.19. Caspian Tern (*Hydroprogne caspia*)

Current status

81. This species has an extremely large cosmopolitan but scattered distribution. Some populations are sedentary while others are strongly migratory. It prefers nesting on sandy, shell-strewn or shingle beaches, sand-dunes, flat rock-surfaces, sheltered reefs or islands. In the Mediterranean the breeding population is less than 500 breeding pairs, and is restricted to a few countries in the eastern part: Turkey (150-300bp), Syria (100-200bp), Greece (up to 10bp). It is said that it breeds in Egypt, but no numbers are given.

Current factors causing loss or decline

82. Loss and deterioration of breeding habitat, human disturbance at nesting colonies, contamination by oil spills and marine pollution and bycatch in fishing gears.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II -Convention on the Conservation of Migratory Species of Wild Animals (1979).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Current Action Plans

None, but it is listed in the AEWa Action Plan (Column A Category 1a/3a).

Action Plan objectives and target

83. To strictly protect the small breeding population and possibly to increase it.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies.
- Ensure breeding sites protection from disturbance, development and modification.
- Confer strictly protected status on the species.
- Eliminate predation.
- Monitor and warden colonies under threat of disturbance.
- Prevent erosion of islet complexes,
- Create SPAs where breeding colonies exist.

6.20. Lesser Crested Tern (*Thalasseus bengalensis ssp. emigratus*)Current status

This Mediterranean endemic subspecies is currently confined to Libya, at 4 colonies: Garah Island (2000 pairs), Ftiha Island (12 pairs) Ulbah Island (16 pairs) and Sabkhat Julyanah (70 pairs). Occasional breeding was recorded in former years in France, Greece, Italy and Spain.

Current factors causing loss or decline

84. Occasional disturbance by fishermen; probably predation by Yellow-legged Gull *Larus cachinnans*; and possibly contamination by oil pollutants and toxic chemicals.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).
Appendix II - (African pops.) Convention on the Conservation of Migratory Species of Wild Animals (1979).

European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Listed in the AEWA Action Plan (Column A Category 1/c).

Current Action Plans

None. However a national action plan is in place in Libya but it is not yet implemented. Protocol on Monitoring Mediterranean lesser crested terns *Thalasseus bengalensis emigrates* is elaborated by SPA/RAC in 2012 within the implementation of MedMPAnet Project.

Action Plan objectives and target

85. To safeguard the breeding areas; maintain a healthy population; and possibly increase its population.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to breeding colonies, including the taking of eggs and young.
- Monitor and supervise colonies regularly.
- Create SPAs where the species' breeding colonies exist and prohibit access to known sites except for scientific purposes.
- Investigate whether local fisheries impact on breeding success.
- Prevent oil spills and chemical pollution of the sea.
- Establish population size and trends.
- Provide small artificial islands at Sabkhat Julyanah to encourage an increase of the colony size in the lake.

6.21. Sandwich Tern (*Thalasseus sandvicensis*)

Current status

86. This species can be found in Europe, Africa, western Asia, and the southern Americas. Whilst the European population is estimated at 79,900-148,000 pairs, the breeding population in the Mediterranean is estimated to be 6300-8800 pairs, nesting in colonies mainly in river deltas, on sandbanks and in salinas. Also migrates from elsewhere into the Mediterranean for wintering.

Current factors causing loss or decline

87. Degradation and loss of habitat mainly due to coastal development; disturbance by humans, animals predation and hunting; and possibly reduction of small pelagic fish abundance.

Status under international instruments

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Listed in the AEWA Action Plan (Column A Category 3a/3c).

Current Action Plans

None

Action Plan objectives and target

88. To maintain healthy breeding colonies and stop the loss of habitat.

Proposed action

- Compile an inventory and map critical habitats supporting the colonies, particularly in the eastern part of the Mediterranean, where breeding surveys are lacking.
- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies.
- Monitor and supervise colonies under threat of disturbance.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development that impact on wetlands and other breeding habitats.
- Restore wetlands where the species breeds.

6.22. Osprey (*Pandion haliaetus*)

Current status

89. This is a cosmopolitan species, which is vulnerable in several regions. Whilst the European population is estimated at 8,400-12,300 pairs, less than 120 pairs breed in the Mediterranean (mainly Balearic Islands, Corsica, Morocco and Algeria). Some local small populations have disappeared from other islands (e.g. Ibiza, Sicily & Sardinia). The 5 pairs breeding presently in Italy have been introduced.

Current factors causing loss or decline

90. Habitat destruction and disturbance at breeding sites related to tourism. Mortality also occurs from illegal poaching and electrocution.

Status under international instruments

Class B - African Convention on Conservation and Natural Resources (1968).
Appendix II -Convention on the Conservation of European Wildlife and Natural Habitats (1979). Appendix II - Convention on the Conservation of Migratory Species of Wild Animals (1979).
DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.
European Union Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean (1626/94 (EC) 1994).

Current Action Plans

None; but a regional species action plan is in place in Spain and a national action plan existed in France between 2008 and 2012.

Action Plan objectives and target

91. Reverse the decline of the breeding population in the Mediterranean.

Proposed action

- Make an inventory and map critical habitats supporting the remaining breeding pairs.
- Confer strictly protected status on the species.
- Prohibit the destruction of its habitat, disturbance, and the taking or trade of the species.
- Use area-based measures to protect and restore its habitats.
- Create SPAs where it breeds.
- Plan, regulate and/or manage activities and processes of coastal and infrastructure development near to known breeding sites.
- Research the causes of the decline of the species.

6.23. Pied Kingfisher (*Ceryle rudis*)

Current status

92. This species has an extremely large range. However in the Mediterranean it is restricted to a few countries and is only known to breed in Israel (2500bp), Turkey (100-200bp) and in Syria and Egypt where breeding numbers are unknown. Decreases in populations have been noted in Syria, Israel, and Egypt. It inhabits small and large lakes, large rivers, estuaries, coastal lagoons and sandy and rocky coasts, dams and reservoirs with either fresh or brackish water with available waterside perches. It is generally sedentary with some local movements due to changes in the supply of food.

Current factors causing loss or decline

93. Use of poisons and pesticides; water storage developments; and bioaccumulation of pollution and toxins in the fish they eat.

Status under international instruments

Appendix II -Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Current Action Plans

None

Action Plan objectives and target

94. Reverse the decline and maintain a healthy breeding population in the Mediterranean.

Proposed action

- Compile an inventory of the breeding areas and populations.
- Protect legally the species and all its key breeding sites.
- Carry out research on the species' range, ecology, habitat requirements and movements, to be used for the necessary conservation measures.
- Assess the potential threats and their impacts in order to develop appropriate response.
- Develop Regional Action Plans for the protection and management of the species' key sites.

6.24. White-breasted Kingfisher (*Halcyon smyrnensis*)

Current status

95. This kingfisher has a very large global range. However, in the Mediterranean it is restricted to a few countries, and is only known to breed in Israel (15,000bp), Turkey (170-250bp) and Egypt (> 10,000bp, but no proper estimates). It inhabits various habitats ranging from water bodies to farmland and palm plantations.

Current factors causing loss or decline

96. Use of pesticides; habitat degradation from various factors; gaps in knowledge of the species' ecology and behaviour and of the threats facing this species.

Status under international instruments

Appendix II -Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Current Action Plans

None

Action Plan objectives and target

97. Reverse the decline and maintain a healthy breeding population in the Mediterranean.

Proposed action

- Compile an inventory of breeding areas and populations.
- All breeding sites should be strictly protected and supervised.
- Prohibit any development that would degrade the species' breeding sites.
- Carry out research on species ecology and habitat needs for future conservation measures.
- Assess the potential threats and their impacts in order to develop appropriate responses.
- Develop Regional Action Plans for the protection and management of the species' key sites.

6.25. Eleonora's Falcon *Falco eleonora*

Current status

98. This falcon breeds in colonies along the coast of the mainland or on rocky islands, which are often uninhabited. In Europe, which covers >95% of the breeding range, the population has been estimated recently at 14,300-14,500 pairs – the largest number of breeding pairs are found in Greece (12,360), followed by Italy (638-704), Spain (655), Cyprus (90-145) and Turkey (35-50). The North African population has been estimated at approximately 250 pairs (ca.72% of which are found in Tunisia). The current population trend is increasing. Almost all the entire population breeds on rocky Mediterranean islands.

Current factors causing loss or decline

99. Predation by cats and rats; human disturbance in colonies; habitat degradation; taking of eggs and young; hunting; and accidental poisoning from pest control methods.

Status under international instruments

Class B - African Convention on Conservation and Natural Resources (1968).

Appendix II - Convention on the Conservation of European Wildlife and Natural Habitats (1979).

Appendix II - Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973).

DIRECTIVE 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Current Action Plans

International Species Action Plan Eleonora's Falcon *Falco eleonora* prepared by BirdLife International on behalf of the European Commission (final draft December 1999).

A regional implemented species action plan for the Balearics, which host most of the breeding population in Spain, is in place.

A National Action Plan is in place and implemented in Italy.

Action Plan objectives and target

100. To safeguard the present colonies and encourage the increasing trend, through preserving the breeding sites particularly the uninhabited islands and eliminating any negative impacts on the species.

Proposed action

- Confer strictly protected status on the species.
- Prohibit all types of disturbance to the breeding colonies, including the taking of eggs and young.
- Monitor and warden colonies under threat.
- Create SPAs where breeding colonies exist.
- Plan, regulate and/or manage activities and processes, which may result in loss of habitat and the introduction/spread of invasive species.
- Control and/or eradicate species that have become invasive.
- Carry out breeding surveys in eastern Mediterranean countries.
- Prevent poisoning through awareness campaigns and cooperation with farmers.

Annex II

Updated Reference List of Marine and Coastal Habitat Types in the Mediterranean

Introduction

1. The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and the Action plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II), adopted by the Contracting Parties to the Barcelona Convention in 1995, contains provisions for the preparation of inventories of habitats at national as well as regional level.
2. In this context, and following a specific provision of MAP Phase II to prepare inventories according to common criteria, the Contracting Parties adopted at their 10th Ordinary Meeting (Tunis, 18-21 November 1997) criteria for the establishment of national inventories of natural sites of conservation interest. The criteria require that "Information concerning each inventoried site will be compiled according to a standard format, which will have to be agreed by the Parties upon a proposal from the Centre. Such information will include, but will not necessarily be limited to, the fields detailed in Appendix I to these criteria "(Art. 7)". To this end, a Standard Data-Entry Form (SDF) was conceived as an operational inventory tool made available to the relevant national authorities. It is designed to cover the fields of information detailed in the Appendix to the Criteria, and the specific criteria for the assessment of the importance of the site for habitats and species (Art. 4, 5 and 6 of the Criteria). The criteria provided also for the establishment of a reference list of marine and coastal natural habitat types, on the basis of a model classification. A model classification of marine habitat types for the Mediterranean region, as well as a reference list of habitat types were adopted in 1999.
3. During the last symposiums on the marine key habitats held in Portoroz from 27 to 31 October 2014, it was recommended to amend, discuss and propose new facies for integration within the Barcelona Convention's Habitats List.
4. The 19th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) requested SPA/RAC to revise the Reference List of Marine and Coastal Habitat Types in the Mediterranean for consideration by COP 20, taking in full account the biodiversity-related MAP Ecological Objectives, IMAP, and GES targets (Decision IG.22/12).
5. The Updated Reference List of Marine Habitat Types proposed hereinafter will be used for the Selection of Sites to be included in the National Inventories of Natural Sites of Conservation Interest in the Mediterranean. It will be also used to define the reference list of habitats types to be monitored within the framework of the Integrated Monitoring and Assessment Program (IMAP) in relation to the common indicator EO1.

Updated Reference List of Marine Habitat Types for the Selection of Sites to be included in the National Inventories of Natural Sites of Conservation Interest in the Mediterranean

6. In order to draw up the updated Reference List of Marine Habitat Types, an updated and more comprehensive draft classification of benthic marine habitat types for the Mediterranean region (UNEP(DEPI)/MED WG.431/Inf.17) was elaborated based on :
 - Classification of benthic marine habitat types for the Mediterranean region of the Barcelona Convention (1998),
 - the schemes of the new EUNIS classification system⁵ (Table1),

⁵ EUNIS is the European Nature Information System and brings together European data on habitat and species among others. It provides the reference information system to assist in the designation of Natura 2000 sites. It was submitted for EIONET consultation in 2015 and could be adopted in 2017.

- the List of French Mediterranean habitats (Michez et al, 2014),
- the Spanish inventory of marine habitats (Templado et al., 2012),
- the Croatian List of Marine Habitats (Bakran-Petricioli, 2011) and,
- new habitats based on the experts inputs.

7. Furthermore, the following lists were taken into account:

- the European Red list of marine Habitats in the Mediterranean
- the list compiled by OCEANA, with the contribution of experts on Mediterranean deep-sea habitats, in order to implement the UNGA Resolutions for the protection of Vulnerable Marine Ecosystems (VMEs)⁶ in the GFCM context.

8. Given that the habitats that deserve specific attention are those displaying certain features that make them important for conservation and are vulnerable to disturbances, the criteria used for inclusion in the Reference List take into account a series of eight traits that define more accurately this “importance” and “vulnerability”. While they are sometimes correlated, these traits account for different features of the habitats that make them worthy (or not) for protection.

9. They are partially based on those used in the last edition of the Mediterranean Reference List of marine habitat types (1999 and take into consideration the FAO’s criteria⁷ for identification of VMEs which were used by OCEANA in order to develop the list of VMEs in the GFCM context.

10. The eight traits are the following:

- 1) Fragility: Degree of susceptibility to degradation (i.e. maintaining its structure and functions) when faced to natural and anthropogenic disturbances.
- 2) Inability to recover quickly from a disturbance (resilience⁻¹). Usually related to life- history traits of component species that make recovery difficult (i.e. slow growth rates, late age of maturity, low or unpredictable recruitment, long-lived).
- 3) Uniqueness or rarity: Degree of rarity, i.e. unusual, very unfrequent, at the Mediterranean level.
- 4) Importance of the habitat for hosting rare, threatened, endangered or endemic species that occur only in discrete areas.
- 5) Species diversity: The number of species sheltered in the habitat.
- 6) Structural complexity: Degree of complexity of physical structures created by biotic and abiotic features.
- 7) Capacity of modifying the physical environment and the ecosystem processes (i.e. geomorphological traits, fluxes of matter and energy).
- 8) Significance of the habitat for the survival, spawning/reproduction of species not necessarily typical for the habitat during all their life cycle and other (ecosystem) services provided by the habitat.

⁶ United Nations General Assembly (UNGA) Resolutions 59/25, 61/105 and 64/72.

⁷ FAO (2009). International Guidelines for the Management of Deep-sea Fisheries in the High Seas.

11. Each habitat type has been rated from 1 (very low) to 5 (very high) in relation to each trait in relation to other habitats situated in the same bathymetric zone. Its inclusion in the list depends on the final rating adding the values of the eight traits altogether. The threshold used here for the inclusion of a habitat in the Reference List is of 22.
12. All habitats type having a rating of 5 in “Uniqueness” (i.e. those that are extremely rare) have been selected for the Reference List regardless of the final rating.
13. No water column habitats or habitats of anthropogenic origin have been considered for the inclusion in the Reference List.
14. When the main habitat-forming species is an alien, it has not been selected for the Reference List whatever it is the final rating.
15. The proposed Reference List of Mediterranean habitat types has been elaborated based on the discussions, comments and suggestions of the ad hoc group meeting held in Blanes, Spain, on 22-23 February 2017 in presence of a number of Mediterranean experts and regional partner organizations (GFCM, IUCN-Med, OCEANA and ETC/BD). The Focal Points for SPA will be invited to consider and review the proposed Reference List that should remain dynamic to ensure adequate harmonisation with other classifications defined in relevant frameworks, such as EUNIS, and according to the implementation inputs of the IMAP.

Updated reference list of marine habitat types⁸

MA1.5 Mediterranean littoral rock

MA1.51 Supralittoral rock

Wracks of dead seagrass

MA1.54 Lower mediolittoral rock

MA1.541 Facies with *Pollicipes pollicipes*

MA1.542 Belt of *Lithophyllum byssoides*

MA1.546 Belt of *Neogoniolithon brassica-florida/Dendropoma* spp. MA1.549
Belt of *Fucus virsoides*

Belt of *Palisada* spp.

Belt of *Titanoderma ramosissimum*

Anchialine environments MA1.54A

Mediolittoral rockpools

Deep mediolittoral rockpools with Fucales

MA2.55 Biogenic reef assemblages of the lower mediolittoral rock

MA2.551 Vermetid reefs (*Dendropoma* spp.)

MA2.552 Platforms with coralline algae (*Lithophyllum* concretions) MA2.561

Banks of dead leaves of *Posidonia oceanica* and other macrophytes Reefs of
Sabellaria alveolata

⁸ Final code will be harmonised once the final version of the new EUNIS classification is adopted.

MA3.5 Mediterranean littoral coarse sediment

MA3.51 Slowly drying wracks in supralittoral coarse sediment

MA4.5 Mediterranean littoral mixed sediment

MA4.51 Slowly drying wracks in supralittoral mixed sediment

MA5.5 Mediterranean littoral sand

MA5.51 Supralittoral sands

Supralittoral compacted terrigenous clays

MA5.52 Mediolittoral sands

Mediolittoral compacted terrigenous clays

Littoral sediments dominated by marine angiosperms

MB1.5 Mediterranean infralittoral rock

MB1.51 Infralittoral algae

Exposed to moderately exposed rocks, well illuminated, with Fucales Community of
Cystoseira mediterranea

MB1.513 Community of *Cystoseira amentacea* var. *stricta*

MB1.512 Community of *Cystoseira tamariscifolia*

Community of *Cystoseira sedoides*

Community of *Cystoseira barbatula*, *C. crinitophylla*, *C. corniculata*

Exposed to moderately exposed rocks, well illuminated, without Fucales Community of
Titanoderma trochanter

MA1.543 Community of *Tenarea tortuosa*

Exposed to moderately exposed rocks, shaded

MB.1.51O Exposed to moderately exposed and shaded upper
infralittoral rock with *Astroides calycularis*

Sheltered upper infralittoral rock, well illuminated with Fucales MB1.51G
with *Cystoseira crinita*

MB1.51F with *Cystoseira brachycarpa* var. *balearica*

with *Cystoseira spinosa* var. *tenuior*

with *Cystoseira algeriensis* with
Cystoseira caespitosa with
Cystoseira foeniculacea

MB1.51I with *Cystoseira sauvageauana*

MB1.51U with *Cystoseira compressa*

with *Cystoseira elegans*

with *Cystoseira compressa* var. *pustulata*

MB1.51H with *Cystoseira crinitophylla* MB1.51K

with *Sargassum vulgare*

with *Cystoseira barbatula*

with *Cystoseira* spp.

with *Cystoseira barbata*/*C. foeniculacea* f. *tenuiramosa*

Sheltered upper infralittoral rock, well illuminated without Fucales

with Rhodomelaceae (*Halopithys incurva*/*Digenea simplex*/*Rytiphlaea tinctoria*/*Alsidium* spp.)

MB1.51E with *Cladocora caespitosa*

Sheltered, shaded, upper infralittoral rock

MB1.51Y Coralligenous (in enclave)

Lower infralittoral rock, moderately illuminated with Fucales

MB1.51J with *Cystoseira spinosa*

with *Cystoseira funkii*

with *Cystoseira dubia*

with *Cystoseira corniculata* with

Cystoseira usneoides with

Cystoseira squarrosa

with *Cystoseira foeniculacea* f. *latiramosa*

with *Sargassum acinarium*/*S. trichocarpum*

Lower infralittoral rock, moderately illuminated, without Fucales Kelp beds of *Laminaria ochroleuca*

Kelp beds of *Saccorhiza polyschides*/*Phyllariopsis* spp. with *Eunicella singularis*

with *Cladocora caespitosa*

Sheltered and shaded, invertebrate dominated infralittoral rock

with *Cladocora caespitosa*

with *Pourtalosmia anthophyllites*

with *Corallium rubrum*

with *Astroides calycularis*

Infralittoral rock affected by sediments with
Eunicella singularis

with *Axinella* spp.

with *Eunicella gazella*, *E. labiata*, *E. singularis*, *Leptogorgia* spp.

Infralittoral rocky outcrops (“tègnue”)

with *Rhodymenia ardissoni* and encrusting *Peyssonnelia* spp. with
Cryptonemia lomation and Ceramiales

with *Ulva laetevirens*, *U. linza*, *Radicilingua thysanorhizans*

MB1.52 Euryhaline and/or eurythermal lagoon biocoenosis on rock
MB1.524 with *Cystoseira barbata*

MB2.5 Mediterranean infralittoral biogenic habitat

MB2.51 Biogenic reef assemblages of the infralittoral algae biocoenosis
MB2.511 with *Dendropoma* spp.

MB2.52 Meadows of *Posidonia oceanica*

MB2.521 Superficial meadows
Striped meadows

Barrier reefs/Fringing reefs/Reef platforms Atolls

MB2.522 Meadows on well developed matte
Meadows on hard substrate Meadows on
softsubstrate

MB2.524 Facies of dead "mattes" of *Posidonia oceanica* without much epiflora

MB2.525 Association with of dead “matte” of *Posidonia oceanica* with important
epiflora (e.g. *Caulerpa prolifera*, *Penicillus capitatus* and *Cymodocea nodosa*)

MB2.54 Biogenic reefs on fine sands in very shallow waters

MB2.541 Infralittoral reefs by *Sabellaria alveolata*/*S. spinulosa*

MB5.5 Mediterranean infralittoral sand

MB5.53 Superficial muddy sands in sheltered waters
MB5.534 with *Cymodocea nodosa*

MB5.535 with *Zostera noltei*

MB5.537 Hydrothermal oozes with *Tritia neritea* and nematodes

MB5.54 Euryhaline and/or eurythermal lagoon biocoenosis on sand MB5.541
Association with *Ruppia cirrhosa* and/or *Ruppia maritima* MB5.542
Association with *Stuckenia pectinatus*

MB5.544 with *Zostera noltei*

MB5.545 with *Zostera marina*
with *Cymodocea nodosa*

MB6.52 Euryhaline and/or eurythermal lagoon biocoenosis on mud MB6.521
Association with *Ruppia cirrhosa* and/or *Ruppia maritima* MB6.522
Association with *Stuckenia pectinatus*

MB6.524 with *Zostera noltei*

MB6.525 with *Zostera marina*

MC1.5 Mediterranean circalittoral rock

Algal dominated circalittoral rock with Fucales

MC1.511 with *Cystoseira zosteroides*/*C. spinosa* var. *compressa*

MC1.512 with *Cystoseira usneoides*

MC1.513 with *Cystoseira dubia* MC1.514
with *Cystoseira corniculata* MC1.515
with *Sargassum* spp.

Algal dominated circalittoral rock with kelps

MC1.518 with *Laminaria ochroleuca*

with *Laminaria rodriguezii*

with *Phyllariopsis brevipes*/*P. purpurascens*

with *Saccorhiza polyschides*

Algal dominated circalittoral rock, without Fucales or kelps with
Osmundaria volubilis/*Phyllophora crispa*

Algal dominated coralligenous

with *Halimeda tuna* and *Mesophyllum* spp.

MC1.51D with laminar soft red algae

MC1.517 with *Lithophyllum* spp.

MC1.515 with *Mesophyllum* spp. with
Ptilophora mediterranea

Invertebrate-dominated circalittoral rock

MC1.51E with *Leptogorgia sarmentosa*/*Eunicella verrucosa*

MC1.51B with *Paramuricea clavata*

MC1.51A with *Eunicella singularis* MC1.519

with *Eunicella cavolini*

with *Eunicella verrucosa*

with big sponges (*Spongia lamella* and others)

with *Agelas oroides*, *Biemna* sp. and big Dictyoceratida (*Spongia* spp., *Ircinia* spp., *Sarcotragus* spp.)

with big bryozoans (*Pentapora* spp., *Reteporella* spp., *Hornera frondiculata*, *Adeonella* spp.)

with *Corallium rubrum*

with *Ellisella paraplexauroides*, *Eunicella* spp., *Leptogorgia* spp. and

Paramuricea clavata

with *Dendrophyllia ramea*

with *Phakellia ventilabrum*/*Phakellia robusta* and axinellid sponges
with *Dendrophyllia cornigera*

with *Savalia savaglia* banks

with *Leptogorgia* spp.

Walls and slopes dominated by *Cladocora debilis*

Walls and rims with *Madracis asperula* Walls
and rims with *Leptopsammia pruvoti* with
Reteporella spp.

with *Dendrophyllia ramea* banks with
Ellisella paraplexauroides banks

with *Dendrophyllia cornigera* and sponge grounds made of *Phakellia ventilabrum*/*P. robusta* and *Poecillastra compressa* and *Pachastrella monilifera*

Circalittoral rock covered by sediments

Serpulid and/or Vermetid reefs, *Filograna implexa* included with
Neopycnodonte cochlear

with sponges (mainly *Axinella* spp.)
with *Dendrophyllia ramea*

with *Anomocora profunda* and *Anomocora* sp.
with *Cerianthus* sp.

with *Leptogorgia* spp.
with *Swiftia* spp.

Invertebrate-dominated coralligenous bioconstructions with
Paramuricea clavata

with *Eunicella verrucosa* with
Alcyonium acaule with
Leptopsammiapruvoti

with tube-forming polychaetes (*Filograna implexa*, *Salmacina dysteri*) with
Astroides calycularis

with *Corallium rubrum*
with *Agelas oroides* with
Axinella spp.

with Erythraean aliens

MC1.52 Shelf edge rock with macroscopic vegetation

Circalittoral rock

with coralligenous outcrops

with coralligenous outcrops affected by sedimentation with
Paramuricea clavata

with *Eunicella verrucosa*

with *Paralcyonium spinulosum*/*Alcyonium palmatum*/*Alcyonium coralloides*

dominated by Axinellida/Haplosclerida

dominated by Dictyoceratida/Hadromerida

dominated by bryozoans (*Myriapora truncata*, *Pentapora fascialis*,
Reteporella grimaldi)

with *Antipathella subpinnata*

with alcyonarians

with various suspension feeders (sponges, hydrozoans, bryozoans, ascidians, and
others)

with gorgonians (*Eunicella* spp., *Paramuricea clavata*)

with *Corallium rubrum*

with *Neopycnodonte cochlear* and/or polychaetes and/or brachiopods

Deep circalittoral banks

of *Astroides calycularis*

of *Dendrophyllia ramea*

of *Antipathella wollastoni*

MC1.521 of *Antipathella subpinnata*

of *Nidalia studeri* or *Chironophthya mediterranea*

MC1.53 Semi-dark caves and overhangs

Walls of infralittoral and circalittoral semi-dark caves and tunnels with
Phyllangia americana mouchezii

with *Corallium rubrum*

with lithistid sponges (ex-“Lithistida in brackish-water caves or caves
subjected to freshwater runoff

Walls of infralittoral and circalittoral semi-dark caves and tunnels affected by
high hydrodynamism

with massive sponges

with *Paramuricea clavata* and *Eunicella* spp.

with *Corallium rubrum*

with *Astroides calycularis*

dominated by scleractinian corals (*Caryophyllia*, *Hoplania*,
Paracyathus, *Polycyathus*, *Phyllangia*)

Ceilings of infralittoral and circalittoral semi-dark caves and tunnels

with *Schizoretepora serratimargo*

with *Corallium rubrum*

MC2.5 Mediterranean circalittoral biogenic habitat

MC2.51 Coralligenous platforms

MC3.5 Mediterranean circalittoral coarse sediment

MC3.51 Coastal detritic bottoms (without rhodoliths)

dominated by *Leptometra phalangium* or *Leptometra celtica*

MC3.513 with large bryozoa

with Pennatulaceans (*Pennatula*, *Pteroides*, *Virgularia*)

with *Eunicella filiformis*

with *Alcyonium palmatum*

with *Laminaria ochroleuca*, *Saccorhiza polyschides*, *Phyllariopsis* spp. MC3.515

with *Phyllophora crispa*/*Osmundaria volubilis*

MC3.521 with *Laminaria rodriguezii*

MC3.52 Coastal detritic bottoms with rhodoliths

MC3.523 Maërl beds dominated by *Phymatolithon calcareum*/*Lithothamnion
corallioides*

Maërl beds dominated by *Lithothamnion corallioides*/*Lithothamnion crispatum*

Maërl beds dominated by *Lithothamnion corallioides*/*L. crispatum* and

Macrorhynchia philippina

Maërl beds dominated by *Lithothamnion minervae*

Maërl beds dominated by *Neogoniolithon* spp. Rhodolith
beds dominated by *Lithothamnion minervae* Rhodolith
beds dominated by *Lithophyllum racemus* Rhodolith
beds dominated by *Lithothamnion valens* Rhodolith beds
dominated by *Lithophyllum dentatum*

Rhodolith beds mainly composed of cobble-sized “boxwork” rhodoliths with sessile
invertebrates

Rhodolith beds with mixed nodules and “boxwork” rhodoliths
MC3.522 Rhodolith beds with *Peyssonnelia* spp.

Rhodolith beds with zoanthids

Rhodolith and cobble beds dominated by invertebrates, with *Alcyonium palmatum*

Rhodolith and cobble beds dominated by anthozoans (*Veretillum*, *Sarcodictyon
catenatum*, *Epizoanthus arenaceus*, *Paralcyonium spinulosum*)

MC4.5 Mediterranean circalittoral mixed sediment MC4.51

Muddy detritic bottoms

with *Alcyonium palmatum*, *Pennatula rubra* and *Spinimuricea* spp.

MC6.5 Mediterranean circalittoral mud

MC6.51 Coastal terrigenous muds

MC6.513 Sticky muds with *Virgularia mirabilis* and *Pennatula phosphorea*

Circalittoral mud with Pennatulaceans and accompanying fauna

MD1.5 Mediterranean offshore circalittoral rock

MD1.51 Offshore circalittoral rock

Invertebrate-dominated circalittoral rock with *Leptogorgia
sarmentosa*/*Eunicella verrucosa*

Invertebrate-dominated circalittoral rock with *Eunicella verrucosa*

Invertebrate-dominated circalittoral rock with *Paramuricea clavata*

Invertebrate-dominated circalittoral rock with *Eunicella cavolini* Invertebrate-
dominated circalittoral rock with *Ellisella paraplexauroides*, *Eunicella* spp.,
Leptogorgia spp. and *Paramuricea clavata*

Circalittoral rock covered by sediments, with *Swiftia* spp.

Circalittoral rock with *Savalia savaglia* banks Circalittoral
rock dominated by *Leptogorgia* spp.

Circalittoral rock covered by sediments, with *Leptogorgia* spp.

Invertebrate-dominated circalittoral rock with *Corallium rubrum*

Circalittoral rocks with *Paralcyonium spinulosum* and/or *Alcyonium palmatum*
and/or *Alcyonium coralloides*

Deep circalittoral banks of *Nidalia studeri* or *Chironephthya mediterranea*

Deep circalittoral banks of *Antipathella subpinnata*

Deep circalittoral banks of *Antipathella wollastoni*

Invertebrate-dominated circalittoral rock with *Dendrophyllia ramea*

Circalittoral rock covered by sediments, with *Dendrophyllia ramea*

Deep circalittoral banks of *Dendrophyllia ramea*

Circalittoral rock dominated by *Dendrophyllia cornigera*

Circalittoral walls and slopes dominated by *Cladocora debilis*

Circalittoral rock covered by sediments with *Anomocora profunda* and

Anomocora sp.

Circalittoral rock covered by sediments, with *Cerianthus* sp.

Invertebrate-dominated circalittoral rock with big sponges (*Spongia lamella*
and others)

Deep circalittoral rock dominated by invertebrates with *Phakellia*
ventilabrum/Phakellia robusta and axinellid sponges

Circalittoral rock dominated by *Dendrophyllia cornigera* and sponge grounds
made of *Phakellia ventilabrum/P. robusta* and *Poecillastra compressa* and
Pachastrella monilifera

Circalittoral rock covered by sediments, with sponges (mainly *Axinella* spp.)

Circalittoral rocks dominated by Axinellida /Haplosclerida

Circalittoral rocks dominated by Dictyoceratida/Hadromerida

Invertebrate-dominated circalittoral rock with big bryozoans (*Pentapora* spp.,
Hornera frondiculata, *Adeonella* spp., *Reteporella* spp.)

Circalittoral rocks dominated by bryozoans (*Myriapora truncata*, *Pentapora*
fascialis, *Reteporella grimaldii*)

Circalittoral rock with *Neopycnodonte cochlear* and/or polychaetes and/or
brachiopods

MD2.1 Mediterranean offshore circalittoral biogenic habitat Serpulid
and Vermetid reefs, *Filograna implexa* included

MD4.5 Mediterranean offshore circalittoral mixed sediment MD4.51
Open sea detritic bottoms on shelf edge

MD4.512 with *Leptometra phalangium*

MD6.5 Mediterranean offshore circalittoral mud MD6.51
Coastal terrigenous muds

MD6.511 Sticky muds with *Virgularia mirabilis* and *Pennatula phosphorea*

ME1.5 Mediterranean upper bathyal rock
ME1.51 Upper bathyal rock

ME1.511 *Lophelia pertusa* reefs

ME1.521 *Madrepora oculata* reefs

ME1.513 *Madrepora oculata* and *Lophelia pertusa* reefs

Bathyal rocks with Scleractinia and Alcyonacea

with *Madrepora oculata* and/or *Lophelia pertusa* and *Corallium rubrum*

Bathyal rocks with Alcyonacea

Bathyal rocks with *Corallium rubrum*

Bathyal rocks with *Acanthogorgia hirsuta*/A. *armata*

Bathyal rock with *Paramuricea macrospina* and/or *Bebryce mollis*

and/or *Villogorgia bebrycoides*

Bathyal rock with *Viminella flagellum* and/or *V. furcata* and/or

Callogorgia verticillata

Bathyal rock with *Placogorgia massiliensis* and/or *Muriceides lepida*

Bathyal rock with *Nicella granifera*

Bathyal rock with *Swiftia pallida* Bathyal

rock with *Dendrobrachiabonsai*

Bathyal rocks with Antipatharia

Bathyal rocks with *Leiopathes glaberrima* and/or *Antipathes dichotoma*

and/or *Parantipathes larix*

Bathyal rock with Aphanipathidae

Bathyal rocks with Scleractinia

Bathyal rocks with *Dendrophyllia cornigera*

Bathyal rocks with *Desmophyllum dianthus*

Bathyal rocks with *Caryophyllia calveri*

Bathyal rocks with *Madracis pharensis*

Bathyal rocks with Scleractinia and Tetractinellida

Bathyal rocks with *Madrepora oculata* and/or *Lophelia pertusa* and/or
Desmophyllum dianthus with *Pachastrella monilifera* and/or *Poecillastra*
compressa

Bathyal rocks with Hexactinellida

Bathyal rocks with *Asconema setubalense* and/or *Tretodictyum tubulosum*

Bathyal rocks with Demospongiae

Bathyal rocks with Tetractinellida

Bathyal rocks with Geodiidae

Bathyal rocks with desma-bearing demosponges (ex-“Lithistida”)

Bathyal rocks with Crustacea Balanopomorpha Bathyal
rocks with *Pachylasma giganteum*

Bathyal rocks with Echinodermata Antedonoidea

Bathyal rocks with *Leptometra phalangium* or *Leptometra celtica*
and/or *Antedon mediterranea*

Bathyal rocks with Bivalvia

Bathyal rocks with *Neopycnodonte zibrowii*

ME1.52 Caves and ducts in total darkness (in enclave in upper zones) Muddy
detritic bottoms

Walls and ceilings

with *Dendroxea lenis*/*Diplastrella bistellata*

with *Penares euastrum*/*Rhabderemia minutula*/*Myrmekioderma spelaicum*

Walls and ceilings in anchialine environments

ME2.1 Mediterranean upper bathyal biogenic habitat

Bathyal Anthozoa bioconstructions

Madrepora oculata/*Lophelia pertusa*/*Desmophyllum dianthus* reefs

Madrepora oculata and *Serpula vermicularis* reefs

Bathyal Bivalvia bioconstructions

Neopycnodonte zibrowii and/or *Neopycnodonte cochlear* reefs

Bathyal sponge bioconstructions

Leiodermatium reefs

ME3.5 Mediterranean upper bathyal coarse sediment
Bathyal coarse sediment with Alcyonacea

Bathyal coarse sediments with *Chironephthya mediterranea* and/or *Nidalia studeri* and/or *Paralcyonium spinulosum* and/or *Alcyonium palmatum* Bathyal coarse sediments with *Bebryce mollis* and/or *Villogorgiabebrycoides* and/or *Paramuricea macrospina* and/or *Muriceideslepada*

ME5.5 Mediterranean upper bathyal sand ME5.51
Upper bathyal detritic sands

Bathyal sands with Pennatulacea

Bathyal sands with *Pennatula* spp. and/or *Pteroeides spinosum*

Bathyal sands with Demospongiae

Bathyal sands with *Rhizaxinella* spp.

Bathyal sands with Antedonidae

Bathyal sands with *Leptometra phalangium* and/or *Antedon mediterranea*

ME6.5 Mediterranean upper bathyal muds Bathyal
muds with Hexactinellida

ME6.514 Bathyal muds with *Pheronema carpenteri*

Bathyal muds with *Asconema setubalense*

Bathyal muds with Tetractinellida

ME6.511 Bathyal muds with *Thenaea muricata* and/or *Cladorhiza abyssicola*

Bathyal muds with Pennatulacea

ME6.513 Bathyal muds with *Funiculina quadrangularis* and/or *Protoptilum carpenteri*

Bathyal muds with *Kophobelemnon stelliferum*

Bathyal muds with *Pennatula* spp.

Bathyal muds with Alcyonacea

ME6.515 Bathyal muds with *Isidella elongata*

Bathyal muds with Scleractinia

Bathyal muds with *Madrepora oculata* and/or *Lophelia pertusa*

Bathyal muds with *Dendrophyllia cornigera*

Bathyal muds with *Dendrophyllia ramea*

Bathyal muds with Pennatulacea, Alcyonacea and Crustacea Decapoda

Bathyal muds with *Funiculina quadrangularis* and/or *Isidella elongata*
with *Aristeus antennatus*, *Aristaeomorpha foliacea* and/or *Nephrops
norvegicus*

Bathyal muds with Antedonidae

Bathyal muds dominated by *Leptometra phalangium* and/or *Antedon
mediterranea*

MF1.5 Mediterranean lower bathyal rock

MF1.51 Lower bathyal rock

MF1.511 *Lophelia pertusa* reefs MF1.512
Madrepora oculata reefs

MF1.513 *Madrepora oculata* and *Lophelia pertusa* reefs

MF6.5 Mediterranean lower bathyal mud MF6.51

Lower bathyal muds

MF6.511 Sandy muds with *Thenaea muricata*

MF6.513 Compact muds with *Isidella elongata*

MG1.1 Mediterranean abyssal rock

MG6.1 Mediterranean abyssal mud

Cold seeps and hydrothermal vents

Methane seeps

Sulfide vents

Table 1: Combinations are codes for marine EUNIS level 2

Combinations codes for marine EUNIS level 2

Zone		Substrate					
		Hard/firm		Soft			
		Rock*	Biogenic habitat*	Coarse	Mixed	Sand	Mud
Phytoplankton gradient / hydrodynamic gradient	Littoral	MA1	MA2	MA3	MA4	MA5	MA6
	Infralittoral	MB1	MB2	MB3	MB4	MB5	MB6
	Circalittoral	MC1	MC2	MC3	MC4	MC5	MC6
Aphytoplankton/hydrodynamic gradient	Offshore circalittoral	MD1	MD2	MD3	MD4	MD5	MD6
	Upper bathyal	ME1	ME2	ME3	ME4	ME5	ME6
	Lower bathyal	MF1	MF2	MF3	MF4	MF5	MF6
	Abyssal	MG1	MG2	MG3	MG4	MG5	MG6

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Decision IG.23/9

Identification and Conservation of Sites of Particular Ecological Interest in the Mediterranean, including Specially Protected Areas of Mediterranean Importance

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, in particular article 8 and annex I thereof, on the establishment of the list of Specially Protected Areas of Mediterranean Importance and the common criteria for the choice of protected marine and coastal areas that could be included in the list respectively,

Recalling decision IG.17/12, adopted by the Contracting Parties at their fifteenth meeting (COP 15) (Almeria, Spain, 15-18 January 2008), on the procedure for the revision of the areas included in the list of Specially Protected Areas of Mediterranean Importance, stating that for each of the Specially Protected Areas of Mediterranean Importance, a periodic review should be carried out every six years by a mixed national/independent technical advisory commission,

Recalling also decision IG.19/13, adopted by the Contracting Parties at their sixteenth meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009), on the regional working programme for the coastal and marine protected areas in the Mediterranean, including the high sea,

Recalling further decisions IG.22/13 and IG.22/14, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the road map for a comprehensive coherent network of well-managed marine protected areas to achieve Aichi Biodiversity Target 11 in the Mediterranean and on the list of specially protected areas of Mediterranean importance respectively,

Mindful of the objectives of the Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets, of the Convention on Biological Diversity, the outcome of the United Nations Conference on Sustainable Development and the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals, in particular Goal 14,

Noting the results of the evaluation of the implementation of the regional working programme for the coastal and marine protected areas in the Mediterranean Sea, including the high sea, supported by the road map for a comprehensive coherent network of well-managed marine protected areas to achieve Aichi Biodiversity Target 11 in the Mediterranean,¹

Expressing appreciation for the efforts of the Contracting Parties in establishing and managing marine protected areas effectively, thus contributing to a comprehensive coherent network of well-managed marine protected areas in the Mediterranean region,

Committed to further streamlining the Mediterranean Action Plan ecological objectives and associated Good Environmental Status and targets, as well as the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and related assessment criteria into the management plans of Specially Protected Areas of Mediterranean Importance and marine protected areas,

¹ See UNEP(DEPI)/MED WG.443/Inf.9.

Having considered the proposal made by France, pursuant to article 9(3) of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, to include a new area in the list of Specially Protected Areas of Mediterranean Importance, and the agreement reached in that regard by the focal points for specially protected areas at their thirteenth meeting,

Having considered a proposal made by Spain pursuant to article 9 (3) of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean to include the new area Cetaceans Migration Corridor in the list of Specially Protected Areas of Mediterranean Importance, and the discussion in that regard by the focal points for specially protected areas at their thirteenth meeting.

1. *Decide* to include the Calanques National Park (France) in the list of Specially Protected Areas of Mediterranean Importance;
2. *Welcome* the proposal by Spain and recognize the regional value of the Cetaceans Migration Corridor and the sound scientific basis provided for the inclusion of this area in the list, and encourage Spain to finalize the ongoing procedures at the national level to award to the area the status of marine protected area in line with the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean in order to formalize at the twenty-first Ordinary Meeting of the Contracting Parties to the Barcelona Convention its final inclusion in the list of Specially Protected Areas of Mediterranean Importance;
3. *Encourage* the Contracting Parties to strengthen their efforts to expand the list of Specially Protected Areas of Mediterranean Importance;
4. *Also encourage* the Contracting Parties to undertake further efforts to improve the management of Specially Protected Areas of Mediterranean Importance by strengthening collaboration through the promotion of tools such as twinning partnerships or other proven mechanisms for developing and managing Specially Protected Areas of Mediterranean Importance, thus contributing to a comprehensive coherent network of well-managed marine protected areas in the Mediterranean region;
5. *Further encourage* the Contracting Parties to ensure stakeholder involvement at the local and national levels with a view to facilitating a comprehensive and participatory process in developing and managing Specially Protected Areas of Mediterranean Importance;
6. *Request* Specially Protected Areas Regional Activity Centre to continue supporting the use of the online evaluation system of Specially Protected Areas of Mediterranean Importance for evaluating coastal national Specially Protected Areas of Mediterranean Importance and test the online evaluation system for transboundary high-sea Specially Protected Areas of Mediterranean Importance;
7. *Also request* Specially Protected Areas Regional Activity Centre to work with the relevant authorities in France, Italy, Lebanon, Monaco, Spain and Tunisia to carry out the ordinary periodic review for the nineteen Specially Protected Areas of Mediterranean Importance listed below, in accordance with the procedure established in decision IG.17/12, adopted by the Contracting Parties at their fifteenth meeting (COP 15) (Almeria, Spain, 15-18 January 2008), and bring the outcome of that review process to the attention of the Contracting Parties at their twenty-first meeting.

The following seven Specially Protected Areas of Mediterranean Importance are to be reviewed in 2018:

- Blue Coast Marine Park (France)
- Embiez Archipelago - Six Fours (France)
- Porto Cesareo Marine Protected Area (Italy)
- Capo Carbonara Marine Protected Area (Italy)
- Marine Protected Area of Penisola del Sinis - Isola di Mal di Ventre (Italy)
- Tyre Coast Nature Reserve (Lebanon)
- Palm Islands Nature Reserve (Lebanon)

The following twelve Specially Protected Areas of Mediterranean Importance are to be reviewed in 2019:

- Port-Cros (France)
- Pelagos Sanctuary for the Conservation of Marine Mammals (France, Italy and Monaco)
- Alboran Island (Spain)
- Natural Park of Cabo de Gata-Níjar (Spain)
- Sea Bottom of the Levante of Almeria (Spain)
- Natural Park of Cap de Creus (Spain)
- Medes Islands (Spain)
- Mar Menor and the Oriental Mediterranean zone of the region of Murcia coast (Spain)
- Columbretes Islands (Spain)
- La Galite Archipelago (Tunisia)
- Kneiss Islands (Tunisia)
- Zembra and Zembretta National Park (Tunisia)

Decision IG.23/10

Amendments to Annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, and in particular article 23 thereof, which establishes the amendment procedure for annexes to the Barcelona Convention and its Protocols,

Having regard also to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and in particular articles 14 and 16 thereof, on the procedure to amend the annexes to the Protocol and the adoption of common criteria for the inclusion of additional species in the annexes to the Protocol respectively,

Recalling decision IG.17/4 adopted by the Contracting Parties at their fifteenth meeting (COP 15) (Almeria, Spain, 15-18 January 2008) on common criteria for proposing amendments to annexes II and III to the Protocol and decision IG.21/6 adopted by the Contracting Parties at their eighteenth meeting (COP 18) (Istanbul, Turkey, 3-6 December 2013) on amendments to annexes II and III to the Protocol,

Reaffirming the need to ensure that the lists of species appearing in annexes II and III to the Protocol are updated, taking into account the evolution of the conservation status of species, the need for additional protection and the emergence of new scientific data,

Taking into account the proposal submitted by Spain at the recent meeting of the focal points for the Specially Protected Areas Regional Activity Centre to amend annex II to the Protocol to include four new Anthozoa species (*Isidella elongata*, *Dendrophyllia cornigera*, *Dendrophyllia ramea* and *Desmophyllum dianthus*) listed in the International Union for Conservation of Nature Red List as “critically endangered”, “endangered”, “vulnerable” and “endangered” respectively,

Taking into account also the need to align the denomination of the species listed in annex II to the Protocol with taxonomic changes that occur frequently and with a rectification concerning the particular taxonomic groups to which species belong,

Having considered the report of the meeting of the focal points for the Specially Protected Areas Regional Activity Centre in May 2017 and its conclusion to include the four proposed Anthozoa species in annex II to the Protocol,

1. *Adopt* the amendments to annex II to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean as set out in annex I to the present decision;
2. *Request* the Depositary to communicate without delay to all Contracting Parties the adopted amendments, pursuant to article 23 (2) (iii) of the Barcelona Convention.

Annex I

Annex II - List of endangered or threatened species

Annex I:

Annex II - List of endangered or threatened species

Magnoliophyta
<i>Cymodocea nodosa</i> (Ucria) Ascherson <i>Posidonia oceanica</i> (Linnaeus) Delile <i>Zostera marina</i> Linnaeus <i>Zosteranoltii</i> Hornemann
Chlorophyta
<i>Caulerpa ollivieri</i> Dostál
Heterokontophyta
Cystoseira genus (except <i>Cystoseira compressa</i>) <i>Fucus virsoides</i> J. Agardh <i>Kallymenia spathulata</i> (J. Agardh) P.G. Parkinson <i>Laminaria rodriguezii</i> Bornet <i>Sargassum acinarium</i> (Linnaeus) Setchell <i>Sargassum flavifolium</i> Kützing <i>Sargassum hornschurchii</i> C. Agardh <i>Sargassum trichocarpum</i> J. Agardh
Rhodophyta
<i>Fucus virsoides</i> J. Agardh <i>Gymnogongrus crenulatus</i> (Turner) J. Agardh <i>Kallymenia spathulata</i> (J. Agardh) P.G. Parkinson <i>Lithophyllum byssoides</i> (Lamarck) Foslie (synon. <i>Lithophyllum lichenoides</i>) <i>Ptilophora mediterranea</i> (H. Huvé) R.E. Norris <i>Schimmelmannia schousboei</i> (J. Agardh) J. Agardh <i>Sphaerococcus rhizophylloides</i> J.J. Rodríguez <i>Tenarea tortuosa</i> (Esper) Lemoine <i>Titanoderma ramosissimum</i> (Heydrich) Bressan & Cabioch (synon. <i>Goniolithon byssoides</i>) <i>Titanoderma trochanter</i> (Bory) Benhissoune <i>et al.</i>
Porifera
<i>Aplysina sp. plur.</i> <i>Asbestopluma hypogea</i> (Vacelet & Boury-Esnault, 1995) <i>Axinella cannabina</i> (Esper, 1794) <i>Axinella polypoides</i> (Schmidt, 1862) <i>Geodia hydronium</i> (Jameson, 1811) <i>Petrobionamassiliana</i> (Vacelet & Lévi, 1958) <i>Sarcotragus foetidus</i> (Schmidt, 1862) (synon. <i>Ircina foetida</i>) <i>Sarcotragus pipetta</i> (Schmidt, 1868) (synon. <i>Ircinia pipetta</i>) <i>Tethyasp. plur.</i>
Cnidaria
<i>Antipathella subpinnata</i> (Ellis & Solander, 1786) <i>Antipathes dichotoma</i> (Pallas, 1766) <i>Antipathes fragilis</i> (Gravier, 1918) <i>Astroides calycularis</i> (Pallas, 1766) <i>Callogorgia verticillata</i> (Pallas, 1766) <i>Cladocora caespitosa</i> (Linnaeus, 1767) <i>Cladocora debilis</i> (Milne Edwards & Haime, 1849)

<p><i>Dendrophyllia cornigera</i> (Lamarck, 1816) <i>Dendrophyllia ramea</i> (Linnaeus, 1758) <i>Desmophyllum dianthus</i> (Esper, 1794) <i>Ellisella paraplexauroides</i> (Stiasny, 1936) <i>Errina aspera</i> (Linnaeus, 1767) <i>Isidella elongata</i> (Esper, 1788) <i>Leiopathes glaberrima</i> (Esper, 1792) <i>Lophelia pertusa</i> (Linnaeus, 1758) <i>Madrepora oculata</i> (Linnaeus, 1758) <i>Parantipathes larix</i> (Esper, 1790) <i>Savalia savaglia</i> Nardo, 1844 (synon. <i>Gerardiasavaglia</i>)</p>
Bryozoa
<p><i>Hornera lichenoides</i> (Linnaeus, 1758)</p>
Mollusca
<p><i>Charonia lampas</i> (Linnaeus, 1758) (= <i>Ch. Rubicunda</i>= <i>Ch. Nodifera</i>) <i>Charoniatritonis variegata</i> (Lamarck, 1816) (= <i>Ch. Seguenzia</i>) <i>Dendropoma petraeum</i> (Monterosato, 1884) <i>Erosaria spurca</i> (Linnaeus, 1758) <i>Gibbula nivosa</i> (Adams, 1851) <i>Lithophaga lithophaga</i> (Linnaeus, 1758) <i>Luria lurida</i> (Linnaeus, 1758) (= <i>Cypraea lurida</i>) <i>Mitra zonata</i> (Marryat, 1818) <i>Patella ferruginea</i> (Gmelin, 1791) <i>Patella nigra</i> (Da Costa, 1771) <i>Pholas dactylus</i> (Linnaeus, 1758) <i>Pinna nobilis</i> (Linnaeus, 1758) <i>Pinna rudis</i> (= <i>P. pernula</i>) (Linnaeus, 1758) <i>Ranella olearia</i> (Linnaeus, 1758) <i>Schilderia achatidea</i> (Gray in G.B. Sowerby II, 1837) <i>Tonna galea</i> (Linnaeus, 1758) <i>Zonaria pyrum</i> (Gmelin, 1791)</p>
Crustacea
<p><i>Ocypode cursor</i> (Linnaeus, 1758) <i>Pachylasma giganteum</i> (Philippi, 1836)</p>
Echinodermata
<p><i>Asterina pancerii</i> (Gasco, 1870) <i>Centrostephanus longispinus</i> (Philippi, 1845) <i>Ophidiaster ophidianus</i> (Lamarck, 1816)</p>
Pisces
<p><i>Acipenser naccarii</i> (Bonaparte, 1836) <i>Acipenser sturio</i> (Linnaeus, 1758) <i>Aphanius fasciatus</i> (Valenciennes, 1821) <i>Aphanius iberus</i> (Valenciennes, 1846) <i>Carcharias taurus</i> (Rafinesque, 1810) <i>Carcharodon carcharias</i> (Linnaeus, 1758) <i>Cetorhinus maximus</i> (Gunnerus, 1765) <i>Dipturus batis</i> (Linnaeus, 1758) <i>Galeorhinus galeus</i> (Linnaeus, 1758) <i>Gymnura altavela</i> (Linnaeus, 1758)</p>

<p> <i>Hippocampus guttulatus</i> (Cuvier, 1829) (synon. <i>Hippocampus ramulosus</i>) <i>Hippocampus hippocampus</i> (Linnaeus, 1758) <i>Huso huso</i> (Linnaeus, 1758) <i>Isurus oxyrinchus</i> (Rafinesque, 1810) <i>Lamna nasus</i> (Bonnaterre, 1788) <i>Lethentero nzanandreae</i> (Vladykov, 1955) <i>Leucoraja circularis</i> (Couch, 1838) <i>Leucoraja melitensis</i> (Clark, 1926) <i>Mobula mobular</i> (Bonnaterre, 1788) <i>Odontaspis ferox</i> (Risso, 1810) <i>Oxynotus centrina</i> (Linnaeus, 1758) <i>Pomatoschistus canestrini</i> (Ninni, 1883) <i>Pomatoschistus tortonesei</i> (Miller, 1969) <i>Pristis pectinata</i> (Latham, 1794) <i>Pristis pristis</i> (Linnaeus, 1758) <i>Rhinobatos cemiculus</i> (E. Geoffroy Saint-Hilaire, 1817) <i>Rhinobatos rhinobatos</i> (Linnaeus, 1758) <i>Rostroraja alba</i> (Lacépède, 1803) <i>Sphyrna lewini</i> (Griffith & Smith, 1834) <i>Sphyrna mokarran</i> (Rüppell, 1837) <i>Sphyrna zygaena</i> (Linnaeus, 1758) <i>Squatina aculeata</i> (Dumeril, in Cuvier, 1817) <i>Squatina oculata</i> (Bonaparte, 1840) <i>Squatina squatina</i> (Linnaeus, 1758) <i>Valencia hispanica</i> (Valenciennes, 1846) <i>Valencia letourneuxi</i> (Sauvage, 1880) </p>
<p>Reptiles</p>
<p> <i>Caretta caretta</i> (Linnaeus, 1758) <i>Chelonia mydas</i> (Linnaeus, 1758) <i>Dermochelys coriacea</i> (Vandelli, 1761) <i>Eretmochelys imbricata</i> (Linnaeus, 1766) <i>Lepidochelys kempii</i> (Garman, 1880) <i>Trionyx triunguis</i> (Forskål, 1775) </p>
<p>Aves</p>
<p> <i>Calonectris diomedea</i> (Scopoli, 1769) <i>Ceryle rudis</i> (Linnaeus, 1758) <i>Charadrius alexandrinus</i> (Linnaeus, 1758) <i>Charadrius leschenaultii columbinus</i> (Lesson, 1826) <i>Falco eleonora</i> (Géné, 1834) <i>Gelochelidon nilotica</i> (Gmelin, JF, 1789) <i>Halcyon smyrnensis</i> (Linnaeus, 1758) <i>Hydrobates pelagicus</i> (Linnaeus, 1758) <i>Hydrobates pelagicus sp. melitensis</i> (Schembri, 1843) <i>Hydroprogne caspia</i> (Pallas, 1770) <i>Larus armenicus</i> (Buturlin, 1934) <i>Larus audouinii</i> (Payraudeau, 1826) <i>Larus genei</i> (Breme, 1839) <i>Larus melanocephalus</i> (Temminck, 1820) <i>Microcarbo pygmaeus</i> (Pallas, 1773) <i>Numenius tenuirostris</i> (Viellot, 1817) <i>Pandion haliaetus</i> (Linnaeus, 1758) <i>Pelecanus crispus</i> (Bruch, 1832) <i>Pelecanus onocrotalus</i> (Linnaeus, 1758) </p>

Phalacrocorax aristotelis ssp. desmarestii (Payraudeau, 1826)

~~*Phalacrocorax aristotelis* (Linnaeus, 1761)~~

~~*Phalacrocorax pygmaeus* (Pallas, 1773)~~

Phoenicopterus roseus (Pallas, 1811)

~~*Phoenicopterus ruber* (Linnaeus, 1758)~~

Puffinus mauretanicus (Lowe, PR, 1921)

Puffinus yelkouan (Brünnich, 1764)

~~*Sterna albifrons* (Pallas, 1764)~~

~~*Sterna bengalensis* (Lesson, 1831)~~

~~*Sterna caspia* (Pallas, 1770)~~

~~*Sterna nilotica* (Gmelin, JF, 1789)~~

~~*Sterna sandvicensis* (Latham, 1878)~~

Sternula albifrons (Pallas, 1764)

Thalasseus bengalensis (Lesson, 1831)

Thalasseus sandvicensis (Latham, 1878)

Mammalia

Balaenoptera acutorostrata (Lacépède, 1804)

Balaenoptera borealis (Lesson, 1828)

Balaenoptera physalus (Linnaeus, 1758)

Delphinus delphis (Linnaeus, 1758)

Eubalaena glacialis (Müller, 1776)

Globicephala melas (Trail, 1809)

Grampus griseus (Cuvier G., 1812)

Kogia simus (Owen, 1866)

Megaptera novaeangliae (Borowski, 1781)

Mesoplodon densirostris (de Blainville, 1817)

Monachus monachus (Hermann, 1779)

Orcinus orca (Linnaeus, 1758)

Phocoena phocoena (Linnaeus, 1758)

Physeter macrocephalus (Linnaeus, 1758)

Pseudorca crassidens (Owen, 1846)

Stenella coeruleoalba (Meyen, 1833)

Steno bredanensis (Cuvier in Lesson, 1828)

Tursiops truncatus (Montagu, 1821)

Ziphius cavirostris (Cuvier G., 1832)

Decision IG.23/11

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at its twentieth meeting,

Having regard to the Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea, hereinafter referred to as the 2002 Prevention and Emergency Protocol, and to the Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, hereinafter referred to as the Offshore Protocol,

Recalling decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), which, under Specific Objective 21, aims to revise the existing recommendations, principles and guidelines, and develop new ones to facilitate international cooperation and mutual assistance within the framework of the 2002 Prevention and Emergency Protocol,

Recalling also decision IG.22/18 on cooperation and partners adopted by the Contracting Parties at their nineteenth meeting, which requested the secretariat to initiate discussions with relevant regional and international organizations with the aim of optimizing synergies and coordination on response and assistance in case of major accidental pollution in the Mediterranean,

Recalling further decision IG.22/20 on the Programme of Work and Budget for the biennium 2016–2017, adopted by the Contracting Parties at their nineteenth meeting, in which they requested the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea to update the Mediterranean Principles and Guidelines on Cooperation and Mutual Assistance,

Acknowledging with gratitude the financial contributions from the Integrated Technical Cooperation Programme of the International Maritime Organization and the global oil and gas industry association for environmental and social issues for the preparation of the Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents,

1. *Adopt* the Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents, contained in the Annex to the present decision and hereinafter referred to as the “Guide”;
2. *Urge* the Contracting Parties to take the necessary measures to incorporate the procedures defined in the Guide into their national, bilateral and multilateral systems of preparedness and response to marine pollution;
3. *Recommend* to the Contracting Parties to regularly test those procedures during communication and full-scale exercises;
4. *Welcome* the constructive dialogue established with relevant stakeholders to optimize synergies and coordination on response and assistance in case of major accidental pollution in the Mediterranean;
5. *Request* the Secretariat to explore financial resources, including support from Contracting Parties, to prepare a printed publication of the Guide to facilitate its use and to develop an electronic version of the operational part of the Guide, which would facilitate requests for assistance.

APPENDIX

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents

This activity has been financed by the Mediterranean Trust Fund (MTF), the International Maritime Organization (IMO) Integrated Technical Cooperation Programme (ITCP), and The global oil and gas industry association for environmental and social issues (IPIECA), and has been implemented by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC).

FOREWORD

The Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents has been prepared in line with the mandate of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) (Decision IG.19/5) as approved by the Sixteenth Ordinary Meeting of the Contracting Parties, held in Marrakesh, Morocco, between 3 and 5 November 2009, considering in particular its objective, mission and scope of action.

One of the objectives of REMPEC is to develop regional co-operation and to facilitate co-operation among the Mediterranean coastal States in order to respond to pollution incidents which result or may result in a discharge of oil or other hazardous and noxious substances and which require emergency actions or other immediate response.

Among the main functions of REMPEC are:

- To assist coastal States of the Mediterranean region, which in cases of emergency so request, in obtaining assistance of the other Parties to the Protocol Concerning Co-operation in Preventing Pollution from Ships and Combating Pollution of the Mediterranean Sea by Oil and Other Hazardous and Noxious Substances in Cases of Emergency and Preventing Pollution from Ships, or when the possibilities for assistance do not exist within the region, in obtaining international assistance from outside the region;
- To prepare and keep up to date operational arrangements and guidelines, aimed at facilitating co-operation between Mediterranean Coastal States in cases of emergency.

INTRODUCTION

The Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents, hereinafter referred to as the “Guide”, is a tool developed by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) to assist Contracting Parties to the Barcelona Convention and its Protocols in managing requests and offers of assistance from other countries and organisations when confronted with large, complex or significant marine pollution incidents.

This Guide built on the existing manuals and guidelines is designed to provide the required background information and guidance to the national competent authorities in charge of managing and coordinating cooperation and international assistance when responding to marine pollution incidents.

This Guide addresses the needs of countries with limited response capacities as well as those of countries with robust response and preparedness systems.

Purpose

The Guide provides comprehensive and practical information and guidance material for the management of response to accidental marine pollution. It considers possible situations, scenarios and types of relations which would be established at the time of a marine pollution incident. It aims at ensuring cooperation and coordination of all parties involved in a major pollution incident in the Mediterranean region. The Guide does not cover operational and technical matters, which are addressed in other regional and international manuals and guidelines.

The Guide concentrates on relationships between the relevant national authorities of an affected Contracting Party and other parties involved (other governments, REMPEC, the polluter, industries, private sectors, insurances, etc.) taking into account the specificities of the Mediterranean region and building on the existing arrangements.

The Guide:

- reviews several types of scenarios for requests and offers of assistance: Government to Government; Government to REMPEC; Government to Private Sector; Private Sector to Government; and Private Sector to Private Sector;
- considers the roles of Requesting Country's and Assisting Country's relevant State authorities in supporting government and industry response personnel (i.e. operators) to obtain the appropriate tools and resources for operational needs through the establishment of dedicated management structure(s) for all aspects of cooperation and international assistance during a particular incident;
- addresses the relationship between the relevant Authorities of the Affected Country/ Requesting Country and the polluter/responsible party (and/or the responsible party's representatives and response contractors) in the context of the management of cooperation and international assistance: who initiates, who funds, and who directs the solicitation, coordination and management of response resources needed and accepted;
- outlines the role of Requesting Country's authorities involved: in requesting assistance; in resolving customs, immigration and trade issues; in appropriately expediting the receipt of response resources from other countries; as well as the role of the Response Authority in charge of response operations when it comes to defining the need for international assistance;
- takes into account the Assisting Country's role and responsibility in overseeing/authorizing release of government-owned and private sector equipment and personnel, whose movement may be restricted due to a need to meet minimum requirements of response capacity;

- addresses considerations for the Requesting Country to fund or reimburse costs associated with the receipt of resources from an Assisting Country or Assisting Organisation;
- considers how best to evaluate offers provided by Assisting Countries or Assisting Organisations to ensure they meet the operational needs of the response; and
- recall the **role of REMPEC in Assisting Countries** including its role in coordinating international assistance.

Organisation and use of the Guide

The Guide is composed of two parts which can be read separately. They contain the minimum information and guidance which authorities will need to access rapidly in case of emergency. The information and guidance contained in the body of the guide are complemented with detailed annexes and references to comprehensive documents including links to specialised websites, in particular to the Regional Information System (RIS) developed and maintained by REMPEC. Elements contained in this Guide can also be taken into account in the national preparedness and response system.

PART I BACKGROUND INFORMATION

Part I contains the basic background information and guidance which authorities will need to access rapidly in case of emergency.

Chapter 1 provides information on the legal and institutional framework regarding marine pollution incidents and on regional and international assistance in cases of emergency.

Chapter 2 provides an overview of the current situation.

Chapter 3 addresses the relationship between the parties involved in an incident and presents various scenarios of request and offer of assistance.

PART II REQUEST AND MANAGEMENT OF INTERNATIONAL ASSISTANCE (OPERATIONAL PROCEDURES)

Part II details the procedures for the request, management and organisation of cooperation and international assistance.

Chapter 1 provides step by step guidance for reporting, requesting and offering assistance up to the termination of the operation. It proposes also a set of standard forms to facilitate the (preparation of) request and offer of assistance at regional level.

Chapter 2 gives useful information on legal, administrative and financial aspects of the management of international assistance.

The Guide is completed by a set of annexes including fiches, lists, directories, inventories, and existing principles and guidelines on cooperation and mutual assistance (*Annex I*), forms for pollution reporting, request for assistance, offer of assistance, acceptance/declination of offer of assistance (*Annex II*) and procedures for the preparation and submission of claims (*Annex III*).

The Guide will be maintained electronically on the Centre's website to allow, in particular, periodic amendments of the lists, directories, inventories referred to in *Annex I*.

It is recommended that the guide be considered as a tool and be used by the relevant authorities in hard copy.

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PART I

BACKGROUND INFORMATION

Part I provides background information regarding the legal and institutional framework under which cooperation and international assistance to respond to marine pollution incident should be organised. It also provides an overview of the current situation and presents briefly the parties which will be or may be involved in a marine pollution incident. In addition, it addresses the relationship between the parties involved in an incident and presents various scenarios of request and offer of assistance.

Chapter 1 Legal and Institutional Framework

1.1 Legal Framework

1.1.1 International Conventions

1.1.1.1 The Law of the Sea Convention

The United Nations Convention on the Law of the Sea (UNCLOS) imposes a general obligation on States to protect and preserve the marine environment. It further provides that States:

- shall take, individually or jointly as appropriate, all measures to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities;
- have the right to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protect their coastline or related interests from pollution or threat of pollution following upon a maritime casualty; and
- shall individually or jointly develop and promote contingency plans for responding to pollution incidents in the marine environment.

1.1.1.2 IMO Conventions

It is through the competent international organisation, the International Maritime Organization (IMO), that rules and regulations to prevent, reduce and control pollution of the marine environment from ships as well as for compensation for pollution damage are established. These rules and regulations, which are contained in the following conventions and which have been complemented by manuals and guidelines, are the basis for establishing national systems for preparedness and response to marine pollution incidents, as well as for international and regional cooperation in cases of emergency.

a. *The MARPOL Convention*

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. The MARPOL Convention provides under its Article 2.4 a clear definition of ship¹. A number of provisions of the MARPOL Convention apply to fixed or floating platforms, as well as specific provisions contained in the Mobile Offshore Drilling Units Code

¹"Ship" means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms.

(MODU Code). The main provisions of the Convention addressing response to marine pollution incidents relate to:

- the notification and reporting of incidents; and
- the contingency planning.

Protocol I: Provisions concerning Reports on Incidents involving Harmful Substances.

It is an obligation of the master or other person having charge of any ship involved in an incident to report such incident without delays in accordance with the provisions of the Protocol. The Protocol specifies when to make reports, the contents of report, and the reporting procedures. IMO by Resolution A.851 (20) adopted the General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants. These were amended by MEPC resolution MEPC.138 (53) (Ref: par. 2.5.1).

MARPOL art 8: National contact point for pollution reporting

Parties to MARPOL convention shall make arrangement for an appropriate officer or agency to receive and process all report on incidents. Parties shall notify IMO with complete details of such arrangements for circulation to other Parties and Member States of the Organization

Regulation 37 of MARPOL Annex I: Shipboard oil pollution emergency plan

It requires that oil tankers of 150 gross tonnages and above and all ships of 400 gross tonnages and above carry an approved Shipboard Oil Pollution Emergency Plan (SOPEP).

Regulation 17 of MARPOL Annex II: Shipboard marine pollution emergency plan for noxious liquid substances

Similarly, regulation 17 of MARPOL Annex II requires that all ships of 150 gross tonnages and above carrying noxious liquid substances in bulk carry an approved shipboard marine pollution emergency plan for noxious liquid substances. The latter may be combined with a SOPEP, since most of their contents are the same and one combined plan on board is more practical than two separate ones in case of an emergency. To make it clear that the plan is a combined one, it should be referred to as a Shipboard Marine Pollution Emergency Plan (SMPEP). “Guidelines for the development of shipboard marine pollution emergency plans for oil and/or noxious liquid substances“have been adopted by the MEPC resolution MEPC.85(44) and amended by resolution MEPC.137(53) (Ref: par. 2.5.1).

b. OPRC Convention, OPRC/HNS Protocol

The International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC 90) and the Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances (OPRC-HNS Protocol 2000) are the international instruments that provide a framework designed to facilitate international co-operation and mutual assistance in preparing for and responding to major oil or HNS pollution incidents, and require States to plan and prepare themselves by developing national systems for pollution response in their respective countries and by maintaining adequate capacity and resources to address oil or HNS pollution emergencies.

Among the requirements of the OPRC Convention and of the OPRC/HNS Protocol the following should be underlined:

- **Emergency plans**

Parties shall:

- Ensure that **ships** have on board a shipboard marine pollution emergency plan;
- Request that operators of **offshore units** under their jurisdiction have oil pollution emergency plans which are coordinated with the national system and approved in accordance with procedures established by the competent national authority.
- Request that authorities or operators in charge of **sea ports and oil and chemical substance (HNS) handling facilities** under their jurisdiction have pollution emergency plans or similar arrangements which are coordinated with the national system and approved in accordance with procedures established by the competent national authority.

- **Reporting procedures**

Parties shall:

- Request the masters or other persons having charge of a **ship** to report without delay any event on their ship involving a discharge or probable discharge of oil or hazardous substances;
- Request persons having charge of **sea ports and oil and/or hazardous and noxious substances handling facilities** under their jurisdiction to report without delay any event on their facilities involving a discharge or probable discharge of oil or hazardous substances;
- Request persons having charge of **offshore units** under their jurisdiction to report without delay any event on their offshore unit involving a discharge or probable discharge of oil;

Reports shall be made in accordance with the requirements developed by IMO and based on the guidelines and general principles adopted by the Organization. (Ref: par. 2.5.1.).

- **National and regional systems for preparedness and response**

Parties shall:

- Establish a national system for responding promptly and effectively to pollution incidents. This system shall include in particular an authority which is entitled to act on behalf of the State to request assistance or to decide to render the assistance requested.
- Endeavour to conclude bilateral or multilateral agreements for pollution preparedness and response.

- **Cooperation with shipping industry, oil and chemical industries, port authorities and other relevant entities**

Parties shall, as appropriate in cooperation with oil and shipping industries, port authorities and other entities, establish: a minimum level of pre-positioned combating equipment, commensurate with the risk involved; and, mechanisms or arrangements to co-ordinate the response to a pollution incident with the capabilities to mobilise the necessary resources.

- **International cooperation in pollution response**

Party receiving a pollution report shall without delay inform all States whose interests are affected or likely to be affected by such pollution incident.

Upon a request of assistance of any Party affected or likely to be affected by a pollution incident, Parties agreed that subject to their capabilities and availability of relevant resources, they will cooperate and provide assistance to respond to a pollution incident. The Convention set out provisions for the financing of the costs of such assistance.

A Party which has requested assistance may ask the Organization (IMO) to assist in identifying sources of provisional financing of the cost of international assistance.

c. *The International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code)*

(made mandatory on 1 July 1998 by amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974))

The *Code* requires emergency preparedness i.e., the Company should establish procedures for the development of shipboard marine pollution emergency plan and is required to identify, describe and respond to potential emergency shipboard situations. In the ISM Code, "the *Company*" means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner and who, on assuming such responsibility, has agreed to take over all duties and responsibility imposed by the Code. Every company is expected "to designate a person or persons ashore (DPA) having direct access to the highest level of management". (Regulation IX/1 of SOLAS 1974 and paragraph 1.1.2 of the ISM Code).

d. *Guidance for the application of safety, security and environmental protection provisions to FPSOs and FSUs (Circular MSC-MEPC.2/Circ.9 of 25 May 2010)*

Circular MSC-MEPC.2/Circ.9 provides guidance to Member States such that they may develop regulations on safety, pollution prevention and security of Floating Production Storage and Offloading Facilities (FPSOs)/Floating Storage Units (FSUs). In the vast majority of cases an adequate safety and pollution prevention regime established by national legislation exists based on provisions of the SOLAS Convention, including requirements contained in the ISM Code, the Load Lines Convention, MARPOL Convention and the STCW Convention, implemented together with industry guidelines.

Jurisdiction and administration: regarding the current safety regime for FPSOs/FSUs, the Circular states that it is essential to recognize the sovereign rights that the coastal State has over:

- .1. non-disconnectable FPSOs/FSUs, which are designed to be permanently moored in the waters under the jurisdiction of the coastal State and have no mechanical means to transit under their own propulsion; and
- .2. disconnectable FPSOs/FSUs, self-propelled or non-propelled, while operating on location.

Flag States and coastal States should cooperate with a view to ensuring the compliance of FPSOs/FSUs with applicable international standards on maritime safety, marine environment protection, enforcement and control measures such as survey and certification, maritime search and rescue, casualty investigation and emergency response.

Emergency response: An emergency response procedure is recommended to be developed for the FPSO/FSU to address the safety and pollution risks associated with marine and production systems and operations, taking into account the MARPOL Convention, the ISM Code and appropriate guidelines.

e. Intervention Convention 1969 and its Protocol 1973

According to UNCLOS, coastal States are empowered to take and enforce measures within their territorial waters and Exclusive Economic Zone (EEZ) to protect their coastline or related interests, including from pollution or the threat of pollution following a maritime incident.

The basis for a coastal State to intervene in a pollution incident on the high seas, i.e. outside their territorial waters and EEZ, is provided through the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention Convention 69) that entered into force in 1975. Under certain conditions, State parties to the Convention are empowered to take measures on the high seas as may be necessary to prevent, mitigate, or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil. A Protocol to the Convention was adopted in 1973 to extend its scope to substances other than oil. The Intervention Convention and its Protocol are particularly relevant in the Mediterranean region due to the fact that EEZs have not been formally established.

f. Salvage Convention (1989)

The International Convention on Salvage (1989) provides uniform international rules regarding salvage operations, taking into consideration the increased concern for the protection of the environment and the contribution which efficient and timely salvage operations can make to the safety of vessels and other property in danger and to the protection of the marine environment. The 1989 Salvage Convention stipulates that “the reward shall be fixed with a view to encouraging salvage operations, taking into account the protection of the marine environment”.

The salvor must not only carry out the salvage operations with due care, but in doing this, he must “exercise due care to prevent or minimise damage to the environment”. In this way, due care to protect the environment becomes a legal duty in all of the salvage operations to which the Convention applies, and it cannot be varied by the contract.

g. Wreck Removal Convention

The Nairobi International Convention on the Removal of Wrecks, entered into force in April 2015, to provide a legal basis for States to remove, or have removed, shipwrecks located within their Exclusive Economic Zone (EEZ) that may have the potential to affect adversely the safety of lives, goods, and property at sea, as well as the marine and coastal environment. Among several provisions, the Convention places financial responsibility with shipowners for locating, marking, and removing certain wrecks posing a hazard to the affected State.

h. Convention on Limitation of Liability for Maritime Claims (LLMC)

Under the 1976 LLMC Convention, the limit of liability is specified for a wide variety of claims.

The Convention provides for a virtually unbreakable system of limited liability. Shipowners and salvors may limit their liability except if “it is proved that the loss resulted from his personal act or omission, committed with the intent to cause such a loss, or recklessly and with knowledge that such loss would probably result”.

The LLMC does not apply in the case of pollution damage covered by the 1992 CLC or HNS Convention when entered into force. It should also be noted that while the LLMC may apply to wreck

removal in some jurisdictions, the LLMC is not universally adopted and other limitation regimes may apply (e.g. under the Bunkers Convention) depending of the law of the state in which the spill occurs.

i. The 1992 Civil Liability Convention (1992 CLC)

The 1992 Civil Liability Convention (1992 CLC) governs the liability of tanker owners for persistent oil pollution damage and creates a system of compulsory liability insurance². A shipowner can normally limit his liability on the principle of strict (i.e. "no fault") liability to an amount which is linked to the tonnage of his ship. The 1992 CLC applies to oil pollution damage resulting from spills of persistent oil from tankers. The 1992 CLC covers pollution damage suffered in the territory, territorial sea or EEZ or equivalent area of a State Party to the Convention.

The flag State of the tanker and the nationality of the shipowner are irrelevant for determining the scope of application. "Pollution damage" is defined as loss or damage caused by contamination. The notion of pollution damage includes measures, wherever taken, to prevent or minimise pollution damage in the territory, territorial sea or EEZ ("preventive measures"). Expenses incurred for preventive measures are recoverable even when no spill of oil occurs, provided that there was a grave and imminent threat of pollution damage. For environmental damage (other than loss of profit from impairment of the environment) compensation is restricted, to costs actually incurred or to be incurred for reasonable measures to reinstate the contaminated environment.

The scope of compensation covers reasonable costs associated with: preventive measures (clean-up), property damage, economic loss and environmental damage (reinstatement).

Claims under the 1992 CLC can be made only against the registered owner of the tanker concerned or directly against his insurer. The insurer will normally be one of the Protection and Indemnity Associations (P&I Clubs) which insure the third party liabilities of the shipowner. If the damage exceeds the owner's liability under the 1992 CLC, or the owner is financially incapable and his insurance is insufficient, or he is exempted from liability under the specific exemptions listed in the 1992 CLC, the 1992 Fund (see below par 1.1.2.8) will pay the share of compensation that is not paid under the 1992 CLC.

j. The 1992 Fund Convention and Supplementary Fund Protocol

1992 Fund Convention provides a supplement to the 1992 CLC when compensation is not available from the shipowner or the money available under the 1992 CLC is inadequate to pay claims resulting from spills of persistent oil from tankers. This second tier of compensation provides up to 203 million of special drawing rights (SDR³) (including the amounts payable under the 1992 CLC) and is paid from a fund (the 1992 Fund) financed by receivers of oil in countries that have signed the 1992 Fund Convention. A Supplementary Fund is available providing a third tier of compensation up to 750 million SDR (approximately US\$1.1billion), including the amounts payable under the 1992 CLC and Fund Conventions, in countries that have signed the Supplementary Fund Protocol. The International Oil Pollution Compensation Funds, comprising the 1992 Fund and the Supplementary Fund (together the IOPC Funds) are administered by a Secretariat based in London.

² The 1969 International Convention on Civil Liability for Oil Pollution Damage (1969 CLC) currently remains in force in the region for Libya. The 1969 CLC provides for less compensation and coverage than under the 1992 CLC.

³ SDR refers to Special Drawing Rights as defined by the International Monetary Fund.

k. The 2001 Bunker Convention

The 2001 Bunker Convention aims at ensuring adequate compensation for pollution response and pollution damage arising from spills of ships' bunker oil not otherwise compensated under the CLC. The Bunker Convention is moulded on the CLC to provide compensation for pollution response and pollution damage. The provisions of this Convention do not affect the right of the shipowner or its insurer to limit liability under the applicable national or international limitation regime. The Convention requires the registered owner of a ship having a gross tonnage greater than 1000 tons to maintain compulsory insurance equal to the limit of liability calculated in accordance with the Convention on Limitation of Liability for Maritime Claims (LLMC), as amended. As with the CLC, compensation under the Bunkers Convention is paid by the vessel's owner backed by their insurer, usually a P&I Club.

l. Hazardous and Noxious Substances Convention (HNS Convention) (not yet in force)

The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention 1996, amended by the HNS Protocol in 2010), is modelled on the two tier compensation regime of the Civil Liability and Fund Conventions. The shipowner or insurer is strictly liable to pay claims under the first tier up to a limit of liability determined by the size of the vessel, with compensation paid by the vessel's insurer, usually a P&I Club. The second tier, providing compensation up to a maximum of 250 million SDR, is paid from a fund (the HNS Fund) established by receivers of HNS in countries that have acceded to the Convention. The Convention covers both pollution damage and damage caused by other risks (e.g. fire and explosion), including loss of life.

The shipowner is entitled to limit liability under this Convention in respect of any one incident to 10 million SDR for an incident caused by bulk HNS, and 11.5 million SDR for an incident caused by packaged HNS, for a ship not exceeding 2,000 tons. For larger ships, an aggregate calculated on the basis of the tonnage of the ship is added to that amount, and provides compensation of up to 100 million SDR for bulk goods, and 115 million SDR for packaged goods.

A substance is classified as HNS under the Convention if it is included in one or more lists of IMO Convention and Codes designed to ensure maritime safety and prevention of pollution. HNS includes non-persistent hydrocarbon oil, bulk cargoes (solid, liquids or liquefied gasses) and packaged goods.

The above-mentioned IMO Conventions impose requirements on the ships and it is for the flag States and the port States to ensure that the ships comply with such requirements. When it comes to offshore units and sea port and oil and chemical handling facilities it is for the State in the area of jurisdiction of which they operate to establish rules and regulations. There are no global liability and compensation regimes for pollution from offshore unit.

1.1.2 Regional Convention and Protocols

1.1.2.1 Convention for the Protection of the Mediterranean Sea Against Pollution

The Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) aims at protecting the marine environment and coastal zones through prevention and reduction of pollution, and as far as possible, elimination of pollution, whether land or sea-based. The Convention refers to a number of sources of pollution of the Mediterranean and is the umbrella framework convention under which the Protocols are implemented. In addition, besides setting general obligations, the Convention addresses some cross-cutting issues, such as pollution monitoring

of the Mediterranean Sea, scientific and technological cooperation, environmental legislation, public information and participation, and liability and compensation.

- Pollution from Ships (Article 6)

The Contracting Parties shall take all measures in conformity with international law to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area caused by discharges from ships and to ensure the effective implementation in that Area of the rules which are generally recognised at the international level relating to the control of this type of pollution.

- Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Article 7)

The Contracting Parties shall take all appropriate measures to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil.

- Cooperation in Dealing with Pollution Emergencies (Article 9)

The Contracting Parties shall cooperate in taking the necessary measures for dealing with pollution emergencies in the Mediterranean Sea Area, whatever the causes of such emergencies, and reducing or eliminating damage resulting therefrom.

Any Contracting Party which becomes aware of any pollution emergency in the Mediterranean Sea Area shall without delay notify the Organization and, either through the Organization or directly, any Contracting Party likely to be affected by such emergency.

1.1.2.2 Prevention and Emergency Protocol

The Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol) is the legal framework for regional cooperation in the Mediterranean region in the fields of prevention of and response to marine pollution.

General Obligations

The Parties shall cooperate:

- to implement international regulations to prevent, reduce and control pollution of the marine environment from ships; and
- to take all necessary measures in cases of pollution incidents.

The Prevention and Emergency Protocol is modelled on the related IMO Conventions, in particular the OPRC Convention, and contains the same requirements as those of the said Convention. The main requirements relate to:

- Contingency Plans (Article 4);
- Emergency Measures on Board Ships, on Offshore Installations and in Ports (Article 11);
- Pollution Reports and Reporting Procedures (Articles 8 and 9);
- Assistance (Article 12); and,
- Reimbursement of Costs of Assistance (Article 13).

Regarding assistance, the Protocol specifies that: “any Party requiring assistance to deal with a pollution incident may call for assistance from other Parties, either directly or through the Regional Centre ...”; and that “where the Parties engaged in an operation to combat pollution cannot agree on the organisation of the operation, the Regional Centre may, with the approval of all the Parties involved, coordinate the activity of the facilities put into operation by these Parties (Article 12).

In addition, the Protocol (Article 7) contains specific provisions requesting each Party to undertake directly and through the Regional Centre (i.e. REMPEC, see par. 1.2.1.1.c), dissemination to the other Parties and exchange of information on:

- their national system for prevention of, preparedness for and response to marine pollution incident,
- their competent national organisations and authorities responsible for preparedness for and response to marine pollution incidents and in particular the relevant authority(ies) in charge of cooperation and mutual assistance.

The Parties are encouraged (Article 17) to develop and maintain bilateral or multilateral sub-regional agreements. Upon request of the interested Parties, the Regional Centre shall assist them.

1.1.2.3 Offshore Protocol

The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol) requests the Contracting Parties to take, individually or through bilateral or multilateral cooperation, all appropriate measures to prevent, abate, combat and control pollution in the Protocol area resulting from offshore activities.

- Requirements for authorisations (Article 5)

The Contracting Party shall prescribe that any application for authorisation of exploration or exploitation is subject to the submission of the project by the candidate operator to the competent authority and that such application must include in particular:

- the operator’s contingency plan as specified in Article 16;
 - the insurance or other financial security to cover liability as prescribed in Article 27 (“Parties shall take all measures necessary to ensure that operators shall have and maintain insurance cover or other financial security of such type and under such terms as the Contracting Party shall specify in order to ensure compensation for damages caused by the activities covered by the Protocol”).
- Contingency Planning ((Article 16)

Each Party shall require operators in charge of offshore installations under its jurisdiction to have a marine pollution contingency plan coordinated with national preparedness and response system of the Contracting Party as required by the Prevention and Emergency Protocol. The plan shall be in accordance with the provisions contained in Annex VII to the Offshore Protocol

- Notification (Article 17)

Each Party shall require operators in charge of offshore installations under its jurisdiction to report without delay to the competent national authority any incident on their installation causing or likely to cause pollution.

- Mutual assistance in cases of emergency (Article 18)

Regarding preparedness for, response to and assistance in case of marine pollution incident the Parties shall implement *mutatis mutandis* the Prevention and Emergency Protocol.

In cases of emergency, a Party requiring assistance may request help from the other Parties, either directly or through the Regional Centre (REMPEC), which shall do their utmost to provide the assistance requested.

1.1.3 National legal framework

Laws and regulations of the Contracting Parties shall incorporate the relevant provisions of the international conventions (global and regional) to which they are party, providing a solid, familiar and uniform operating environment for all parties concerned. Therefore, the laws and regulations shall establish the requirements imposed on the parties concerned by the international conventions as well as specific requirements which countries may impose on parties operating in areas under their jurisdiction in particular regarding contingency plan for offshore units and oil and chemical handling facilities. It is up to the coastal State to establish rules and regulations regarding offshore exploration and exploitation in particular to prevent, reduce and control the pollution of the marine environment from such activities.

Most importantly, the laws and regulations must fix the responsibilities and designate the competent national authorities responsible for:

- preparedness;
- operational response; and
- management of cooperation and international assistance.

A prerequisite for ensuring a prompt and effective response to a pollution incident using its own resources and/or the resources provided through international assistance is to have in place a national preparedness and response system. The OPRC Convention, the OPRC/HNS Protocol and the Prevention and Emergency Protocol to the Barcelona Convention require Parties to promote and maintain a preparedness and response system establishing preparedness, management and response structures readily available prior to a pollution incident.

The basis for the action of the authorities responsible for response operations and those in charge of providing them with support, in particular regarding cooperation and international assistance, is laid down in the relevant provisions of the international conventions and must be incorporated in the national laws and regulations. These authorities must have a good knowledge of those conventions and national laws and regulations.

1.2 International Institutional Framework

1.2.1 Governmental institutions

1.2.1.1 Institutions belonging to the UN system

a. United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP)

The Barcelona Convention designates the United Nations Environment Programme (UNEP) as responsible for carrying out the secretariat functions. To this end, under the auspices of UNEP, the Coordinating Unit (MEDU) has been established as the Secretariat of the Mediterranean Action Plan (MAP) of UNEP (UNEP/MAP). It convenes and prepares the Meetings of the Contracting Parties,

regularly reports to the Contracting Parties on the implementation of the Convention and of the Protocols, prepares programmes and budget, and supervises the UNEP/MAP Components (Regional Activity Centres).

It is the function of the Meetings of the Contracting Parties to keep under review the implementation of the Convention and its Protocols and, in particular, to approve the Programmes and the Budget.

b. International Maritime Organization (IMO)

IMO is a United Nations Specialized Agency, designated in the Law of the Sea as the competent international Organization, with the mandate of developing universal, globally applicable rules regulations and standards regarding maritime safety, security and marine environment protection. A global regulatory regime has been put in place, consisting of conventions, protocols, manuals and guidelines covering prevention, reduction and control of pollution from ships which include preparedness for and response to marine pollution accidents as well as liability and compensation.

The Marine Environment Protection Committee (MEPC) is the forum where those issues are addressed.

IMO, as Co-operating Agency, has been entrusted by the “Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region for the Protection of the Mediterranean Sea” (Barcelona, 1976) with the responsibility for the establishment and operation of REMPEEC.

c. IMO/UNEP-REMPEEC

REMPEEC, which was established by Resolution 7 adopted by the Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region on the Protection of the Mediterranean Sea, is administered by IMO and UNEP, and the objectives and functions of the Centre are defined by the Contracting Parties to the Barcelona Convention.

Ordinary meetings of the Parties to the Prevention and Emergency Protocol shall be held in conjunction with Ordinary Meetings of the Contracting Parties to the Barcelona Convention. It shall be the function of the meetings of the Parties to this Protocol, in particular to:

- examine and discuss reports from the Centre on the implementation of the Protocol;
- formulate and adopt strategies, action plans and programs for the implementation of the Protocol;
- keep under review and consider the efficacy of these strategies, action plans and programs, and the need to adopt any new strategies, action plans and programs and to develop measures to that effect; and
- discharge such other functions as may be appropriate for the implementation of the Protocol.

Periodically (every two years) the Centre organises a meeting of the REMPEEC Focal Points. The REMPEEC Focal Points meetings examine and discuss reports from the Centre and formulate and approve strategies, action plans and programmes. The outcomes of these meetings are submitted to the meeting of the Contracting Parties for consideration and final adoption.

d. UNEP /OCHA Joint Unit

The UNEP / Office for the Coordination of Humanitarian Affairs (OCHA) Joint Unit (JEU) responds to environmental emergencies by coordinating international efforts and mobilising partners to assist affected countries requesting assistance. By pairing the environmental expertise of UNEP with the

humanitarian response network coordinated by OCHA, the JEU ensures an integrated approach in responding to environmental emergencies.

An environmental emergency can occur following a disaster or conflict when human health and livelihoods are threatened and affected on a major scale due to the release of hazardous substances, or because of significant damage to the ecosystem. Environmental emergencies include oil spills, toxic waste dumping, and groundwater pollution, when the environmental risks are acute and potentially life threatening.

1.2.1.2 Intergovernmental institutions which do not belong to the UN system

a. IOPC Funds

The IOPC Funds are two intergovernmental organisations (the 1992 Fund and the Supplementary Fund) which provide compensation for oil pollution damage resulting from spills of persistent oil from tankers.

The IOPC Funds were established through the entry into force of:

- The 1992 Civil Liability Convention (1992 CLC);
- The 1992 Fund Convention; and
- The 2003 Supplementary Fund Protocol.

The IOPC Funds are financed by contributions paid by entities that receive certain types of persistent mineral oil by sea transport. These contributions are based on the amount of oil received in the relevant calendar year, and cover claims, together with the costs of administering the Funds.

The 1992 Fund and the Supplementary Fund share a joint Secretariat, based in London. The Director is the chief administrative officer and is responsible for the overall management of the Funds. In order to fulfil the requirements of the 1992 Fund Convention and of the Supplementary Fund Protocol the governing bodies of the IOPC Funds meet normally twice per year. The governing bodies are required, amongst other things, to give instructions concerning the administration of the Funds to the Director and to supervise the proper execution of the Conventions and of their own decisions.

The Assembly is the supreme organ of the relevant Fund and decides on the annual budget and contributions to the Organization and approves Financial Statements.

b. Emergency Response Coordination Centre (ERCC) of the European Commission

The European Union (EU) is a Contracting Party to the Barcelona Convention and its Protocols. The European Commission is the executive of the EU, and within it the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) develops and carries out the Commission's policies on humanitarian aid and civil protection. The EU Civil Protection Mechanism (UCPM) aims at strengthening cooperation between the Union and the Member States in the field of civil protection in order to improve the effectiveness of systems for preventing, preparing for and responding to natural and man-made disasters including marine pollution incidents. The Emergency Response Coordination Centre (ERCC) within DG ECHO is the 24/7 operational hub of the UCPM. More info on ERCC can be found on http://ec.europa.eu/echo/what/civil-protection/mechanism_en.

The European Maritime Safety Agency (EMSA) is an EU body. The Agency provides technical expertise and operational assistance to the European Commission — EU Civil Protection Mechanism/ERCC, EU Member States, as well as operational assistance to third countries sharing a regional sea basin with the EU in cases of marine pollution incidents. More info at

<http://www.emsa.europa.eu/>. The activities of the Agency are focused on responding to ship-source marine pollution, firstly oil pollution and then pollution by hazardous and noxious substances. EMSA also has a mandate to respond to marine pollution caused by oil and gas installations.

In the event of a major emergency and upon request from the affected country, the ERCC facilitates co-operation in assistance interventions inside and outside the EU. It provides a one-stop-shop of civil protection and marine pollution response capacities and expertise made available by EMSA and in case of a marine pollution of a major scale, by the States participating in the UCPM (28 EU Member States, the Former Yugoslav Republic of Macedonia, Iceland, Montenegro, Norway, Serbia and Turkey). The ERCC matches offers of assistance with the needs of the disaster-stricken country and acts as a coordination hub between the participating States, the affected country and the dispatched team of field experts.

The affected country may request assistance through the ERCC, however assistance may also be requested through the United Nations and its agencies, or a relevant international organization.

1.2.2 Non-governmental institutions

a. ITOPF

The International Tanker Owners Pollution Federation Limited (ITOPF) is a not-for-profit organisation providing a wide range of technical services to its Members (tanker owners) or Associates (other shipowners) and their oil pollution insurers (P&I Clubs), who finance its activities. These are overseen by an international Board of Directors representing Members, Associates and P&I Insurers. ITOPF is the marine industry's primary source of objective technical advice, expertise and information on effective response to ship-source pollution. ITOPF's advice rests on a science-based appreciation of the fate and effects of pollutants in the marine environment and a practical evaluation of response options and claims for compensation. Since the 1970s, ITOPF has been providing services of emergency response to tanker owners (*Members*) and, from 1999, due to the growing awareness of pollution from non-tank vessels this service was formally extended to the owners of other types of ship who were eligible to become *Associates* of ITOPF. More recently, the pollution potential of substances other than oil, primarily chemicals, and the development of corresponding international conventions, e.g. the HNS Convention, has led to an increase in demand for ITOPF expertise in these areas.

ITOPF, which has consultative status with IMO and observer status with IOPC Funds, may also offer its services at the request of governments and intergovernmental organisations such as the International Oil Pollution Compensation Funds (IOPC Funds).

b. IPIECA and IOGP

The global oil and gas industry association for environmental and social issues (IPIECA) was formed in 1974 following the launch of UNEP.

IPIECA does not respond to pollution incidents – its mandate is solely to act as a convening organization for the Oil & Gas Industry to establish good practice. It also cooperates with UN system organizations such as IMO and REMPEC to encourage joint activities in support of conventions such as OPRC 1990.

IPIECA develops good practice and facilitates industry forums to share oil spill preparedness and response related knowledge. It works together with the International Association of Oil & Gas Producers (IOGP) in developing guidance material for preparedness and response to potential pollution from offshore installations. IOGP was also formed in 1974 and works on behalf of the

world's oil & gas exploration and production companies to promote safe, responsible, and sustainable operations.

Oil Spill Response activities stem primarily from the work of IPIECA's Oil Spill Working Group. Operating since 1987, the Group aims to improve oil spill preparedness and response around the world by:

- enabling the industry and its partners to improve oil spill preparedness and response around the world;
- informing global policy and external stakeholders pro-actively and credibly on oil spill related issues; and
- monitoring, assessing, and (where necessary) responding to oil spill related developments.

The IPIECA-IOGP Oil Spill Response Joint Industry Project (OSR-JIP) ran from 2012-2016 and was set up to implement learning opportunities in respect of oil spill preparedness and response following the 2010 well control incident in the Gulf of Mexico. As part of this effort, the OSR-JIP has produced more than 20 good practice guides, which are freely available. These guides update and replace the well-established IPIECA Oil Spill Report Series. The guides cover topics that are broadly applicable both to exploration and production, as well as to shipping and transportation activities.

c. *CEFIC/ICE*

The European Chemical Industry Council (CEFIC) is the forum of the chemical industry in Europe. CEFIC is a committed partner to EU policymakers, facilitating dialogue with industry and sharing its broad-based expertise. It represents thousands of large, medium and small chemical companies in Europe.

Under the Responsible Care programme the European chemical industry set up a co-operative programme called the Intervention in Chemical Transport Emergencies (ICE), which aims at minimising the effects of accidents that may happen during the transport of chemicals. In each European country, it seeks to create a framework for providing assistance in an effective way:

- by making use of the emergency response schemes of individual chemical companies;
- by building on existing emergency response schemes - local, regional and product-related (chlorine, isocyanates, ethylene oxide, etc.);
- by co-operating with national authorities through the National Chemical Federation;
- by promoting mutual assistance within the chemical industry.

Each national ICE scheme applies only to distribution incidents (i.e. those that occur outside manufacturing sites) and is formalised in a protocol between the national chemical industry federation and the national competent authorities.

For marine pollution incident CEFIC, the Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE) and EMSA have created the MAR-ICE Network in 2008, to provide information and expert advice on chemicals involved in maritime emergencies. The service is available to national administrations 24/7 via a dedicated contact points at CEDRE and EMSA.

d. *International Salvage Union (ISU)*

The majority of professional salvors are members of the International Salvage Union (ISU). This organisation represents some 60 salvage companies from 35 different countries around the world. In addition, Associate Membership of the ISU is open to all organisations and professionals with an interest in salvage, including P&I Clubs, other marine insurers, law firms, ports, national response

organisations, shipowners and managers, coastal local authorities, environmental organisations, clean-up specialists.

One of the ISU's primary objectives is to foster a wider understanding of the salvage industry's contribution to environmental protection and the recovery of property.

The salvage companies have tugs and other salvage equipment at a number of different ports and areas throughout the world and some of the companies have salvage tugs stationed at various strategic locations. Some salvage tugs are maintained at salvage stations in certain coastal States as a result of arrangements made between their owners and other commercial interests or the authorities in those States

e. The International Association of Classification Societies (IACS)

Dedicated to safe ships and clean seas, IACS makes a unique contribution to maritime safety and regulation through technical support, compliance verification and research and development. More than 90% of the world's cargo carrying tonnage is covered by the classification design, construction and through-life compliance Rules and standards set by the twelve Member Societies of IACS.

The purpose of a Classification Society is to provide classification and statutory services and assistance to the maritime industry and regulatory bodies as regards maritime safety and pollution prevention, based on the accumulation of maritime knowledge and technology.

The objective of ship classification is to verify the structural strength and integrity of essential parts of the ship's hull and its appendages, and the reliability and function of the propulsion and steering systems, power generation and those other features and auxiliary systems which have been built into the ship in order to maintain essential services on board. Classification Societies aim to achieve this objective through the development and application of their own Rules and by verifying compliance with international and/or national statutory regulations on behalf of flag Administrations.

1.3 Mechanisms for assistance and industry arrangements

1.3.1 Mechanisms for assistance

In the context of this Guide mechanism for assistance means the mechanism set up within international governmental/intergovernmental organizations/institutions (UN and non UN organizations) according to the mandate given to them by international Conventions (global or regional) or by the decisions of their member States. This raises the issues of the specific responsibility and role of these organizations/institutions; the relationship of the affected States with such organizations/ institutions; and the relationships among them in particular when it comes to the coordination of international assistance in case of a pollution incident of a major magnitude.

(The relationship is presented through two diagrams at the end of Part I)

a. Role of REMPEC

One of the main tasks of the Centre, deriving from its mandate, has been defined as "assistance to the coastal States of the Mediterranean region, which in cases of emergency so request, in obtaining assistance of the other Parties to the Prevention and Emergency Protocol or, when the possibilities for assistance do not exist within the region, in obtaining assistance from outside the region".

Any Party affected by a marine pollution can request assistance of REMPEC through the official communication channel or through the Pollution Report (*Annex II.1 and Annex II.2*).

Assistance rendered by the Centre may comprise:

Providing advice, technical information and expertise (advisory and facilitating role)

- Remote assistance
 - providing requested information and advice, by telephone or other communication means, on operational, technical, administrative and legal aspects of pollution response (e.g. oil and HNS response), forecasting model, response to affected wildlife, etc.;
 - providing assistance in communication with various interlocutors on behalf of the State(s) concerned;
 - providing advice on sources of information not available at the Centre; and
 - Regional Information System

REMPEC has developed and maintains a regional information system (RIS) composed of directories and inventories; operational guides and technical documents, which is complemented by decision support system tools, including the Maritime Integrated Decision Support Information System (MIDSIS-TROCS), the waste management decision support system, the Mediterranean Integrated GIS on Marine Pollution Risk Assessment and Response (MEDGIS-MAR).

- On-site assistance
 - providing expert advice on the site of accident by dispatching REMPEC officers or by mobilising the Mediterranean Assistance Unit (MAU) (*Annex I.5*).

At their Meeting in October 1993 the Contracting Parties to the Barcelona Convention decided to establish a Mediterranean Assistance Unit (MAU) for combating accidental marine pollution which REMPEC organises and at the request of a Contracting Party will activate within the limit of its budget or/and the financial resources it can mobilise.

At the time of writing the Guide, the MAU was composed of:

- Centre of Documentation, Research and Experimentation on Accidental Water Pollution, based in Brest, France (CEDRE);
- Federazione Nazionale dell'Industria Chimica, based in Milan, Italy (FEDERCHIMICA);
- Istituto Superiore per la Protezione e la Ricerca Ambientale, based in Rome, Italy (ISPRA);
- Sea Alarm Foundation, based in Brussels, Belgium (SEA ALARM), which collaborates with REMPEC for the response to oiled wildlife incidents in the Mediterranean Sea area;
- The Mediterranean Operational Network for the Global Ocean Observing System (MONGOOS) which can provide on request oil spill forecasting model within one hour to any Mediterranean coastal State.

Coordinating regional assistance (coordinating role)

Within the context of a pollution incident of a major magnitude, the type of assistance provided (advice, expertise, manpower, equipment, financial support, etc.) varies as well as sources (bilateral, international, intergovernmental/non-governmental organisations, private companies, individuals, etc.). This assistance contributes to the response operation, as expertise, equipment and manpower are required, *inter alia*, to carry out clean-up operations on extended stretch of shoreline, to protect various locations, to recover oil at sea (requiring heavy equipment and expensive means), etc.

However, massive mobilisation can also create difficulties and confusion due to the complexity of managing a multi-national and multi-organisation coordination and due to the quantity of information provided by the different sources which require a methodical information screening and dissemination policy. Hence, it is crucial to establish, at the early stage of an incident, a coordination procedure in order to avoid duplication of efforts and increase the efficiency of international assistance.

In very exceptional circumstances (major accident, no immediate liable parties, international offers of assistances from all around the world) REMPEC will play an important central role as clearing mechanism between the Party faced with the spill and the international offers of assistance in order to avoid duplication of means and inadequacy of the assistance offers; and to contribute to a good coordination of the mobilisation of the resources and to accelerating their delivery.

b. Role of IMO

In case of emergency, IMO will support REMPEC in fulfilling its role and responsibility, and will facilitate the provision of technical assistance and advice as well as identifying sources of provisional financing.

c. Role of UNEP/OCHA

In cases of environmental emergency UNEP/OCHA will coordinate international efforts and mobilise partners to assist affected countries requesting assistance. In cases of marine pollution incident, when following a disaster, a conflict or an act of terrorism, human health and environment (sensitive marine ecosystem) are threatened and affected on a major scale the assistance of UNEP /OCHA may be requested. UNEP/OCHA, IMO and REMPEC will cooperate and coordinate their efforts to avoid duplication.

d. Role of DG ECHO, the Emergency Response Coordination Centre (ERCC)

EU is a contracting Party to the Barcelona Convention and its Protocols. As the other Parties the EU shall use its best endeavour to render assistance to Parties when so requested. To that purpose the EU nominated as EU competent authorities for mutual assistance: ERCC operating within DG ECHO; and EMSA.

In case of an emergency, the Commission, through the ERCC, acts as a hub to collect information, circulate it between Member States and facilitate the offers of assistance, and promotes consistency in response to disasters outside the Union.

The ERCC is the main contact point for the Contracting Parties to the Barcelona Convention and its Protocols for:

- (1) requesting assistance from EMSA resources and services; and,
- (2) activating the UCPM – extending the request for assistance to all the participating States of the UCPM in case of exceptional circumstances and/or a pollution of a major scale.

The main EMSA assistance services are:

Equipment:

- The Network of Stand-by Oil Spill Response Vessels (oceangoing skimming vessels) distributed along the European coastline and equipped with different types of oil-combating equipment arrangements including dispersants spraying systems;

- The Equipment Assistance Service that offers dedicated stockpiles of marine pollution response equipment (high capacity response equipment such as high sea booms, skimmers, and floating storage units etc., and competent personnel to operate them);

Information:

- Clean Sea Net which is the satellite based oil spill and vessel detection and monitoring service;
- The MAR-ICE (Marine-Intervention in Chemical Emergencies) Information Service that provides expert information and advice in case of chemical spills at sea;
- The MAR-CIS database of substance-specific marine chemical information sheets;

The assistance through the activation of the UCPM:

- Assistance from EU Member States which are not Party to the Barcelona Convention
- pre-committed resources from Member States (modules) and experts: at the time of writing the Guide two modules for marine pollution have been registered:
 - Maritime Incident Response Group for extinguishing fires on board ship or handling facilities from the Netherlands;
 - Shoreline cleaning response team, trainers plus protective equipment for 50 people from Sweden.
 - Expert teams to support the assessment and facilitate the coordination on site.

Assistance of EMSA for the mobilisation of marine pollution response equipment (response vessels, pollution response equipment and products) and for the provision of information services shall be requested by the affected Contracting Party through the ERCC or through the Common Emergency Communication and Information System (CECIS). Upon receipt of request from a State EMSA will gather data from the “contractor(s)” (response provider) using its network of standby pollution response equipment and will inform the requesting State of the availability of the equipment in the area, mobilisation time and tariffs (fixed hire rates). Based on the information the requesting State shall decide which equipment to mobilise and accept the offer of assistance. EMSA will facilitate the signing of an incident response contract between the requesting State and the response provider “contractor” (For more details consult <http://www.emsa.europa.eu/operations/pollution-response-services.html>).

In case of a marine pollution of a major scale request for assistance shall be sent to the ERCC by the affected Contracting Party either directly or through REMPEC. In this case the ERCC will activate the UCPM. The request for assistance will be extended to all participating States to the UCPM (28 EU Member States, the Former Yugoslav Republic of Macedonia, Iceland, Montenegro, Norway, Serbia and Turkey). ERCC will facilitate the mobilization and coordination of assistance from the States participating in the UCPM ensuring a coherent European response during emergencies helping to cut unnecessary and expensive duplication of efforts. The EU coordination of assistance shall be fully integrated with the overall coordination provided by the relevant international/regional organization (IMO/UNEP REMPEC) and shall respect its leading role.

ERCC is the contact point for all official communication and requests for assistance: assistance of EMSA marine pollution response services in cases of marine pollution incident; and, the assistance of the UCPM in case of a marine pollution of a major scale.

e. Role of UN financing support mechanisms

In exceptional circumstances the World Bank and the United Nations Development Programme (UNDP) can facilitate and coordinate obtaining voluntary financing support from countries (e.g. Lebanese oil spill in 2006).

1.3.2 Industry arrangements

a. The Liability Insurer

The third-party liabilities of the shipowner will generally be covered by mutual insurance associations called Protection and Indemnity Clubs (P&I Clubs) of shipowners. A P&I Club covers only the shipowner's legal liabilities in the sense of damage or compensation which the owner is legally obliged to pay to others. Shipowners are entitled to limit their liability under various international conventions (such as the 1992 CLC or Bunkers Convention 2001, the LLMC convention) or national law. The insurance cover is often, in practice, restricted to the limitation amount applicable to the ship.

b. ITOPF

ITOPF will be called in by the shipowner or his P&I Club in almost every case of pollution of any size involving oil or HNS. ITOPF has expertise and experience in the practical aspects of response and clean-up, and in appraising the reasonableness of actions to be taken. It is, therefore, able to advise the P&I Club and the ship-owner on the type and extent of the contamination, what effect it is likely to have under different scenarios and what needs to be done to mitigate or prevent its effects. This advice is also available to the coastal State, should it ask for it, and cooperation between the coastal State and ITOPF will help to arrange and co-ordinate the pollution response and clean-up.

If the oil pollution affects a State Party to the 1992 Fund Convention, and if the pollution qualifies under the Fund, there is also close co-operation between the P&I Clubs concerned and the IOPC Funds. This co-operation usually extends to the appointment of joint technical experts, including those from ITOPF.

c. Tier 2 and Tier 3 Oil Spill Response Companies

Various spill response companies have been established to ensure prompt dispatch of specialised personnel and response equipment at regional or worldwide scale. Whilst these companies are generally contracted by the private sector, they can also be hired by the public sector and in certain cases even manage and maintain government owned response equipment (*Annex II.3 Directory of companies offering services in the Mediterranean in cases of emergency*).

d. CEFIC, ICE (chemical industry)

Under the Responsible Care program (ICE) the chemical industry, in the event of an incident, will provide information, practical help and, if necessary and possible, appropriate equipment to the competent emergency authorities in order to minimise any adverse effects. The MAR-ICE network will provide information and expert advice on chemicals involved in maritime emergencies. This service is available 24 hours a day/7 days a week via a dedicated contact point at Cedre that is accessible by the relevant national maritime administrations. For more details consult EMSA's website, on <http://www.emsa.europa.eu/chemical-spill-response/mar-ice-network.html>.

For on-land incidents, ICE assistance is provided by chemical companies. Depending on their capabilities and resources, they can offer three levels of intervention: Level 1 - remote product information and general advice by telephone or fax; Level 2 - advice from a company expert at the scene of the incident; Level 3 - assistance with personnel/equipment at the scene of the incident. Such a commitment applies firstly to products manufactured by the company itself and is normally incorporated into the company's own distribution emergency response scheme. If the product supplier is not known or cannot be contacted, certain companies may offer assistance on the basis of a prior arrangement with the national ICE scheme. However, in such a case, Level 2 and Level 3 interventions shall not be carried out at the expense of the safety of their own facilities.

The key document in the protocol between the competent national authorities and the chemical industry (represented by the national chemical federation) is the list of participating companies.

e. International Salvage Union

Some salvage tugs are maintained at salvage stations in certain coastal States as a result of arrangements made between their owners and other commercial interests or the authorities in these States. Some companies have the ability to mobilise equipment, either from their own resources or from elsewhere, together with expert personnel at very short notice.

Chapter 2 Current Situation

2.1 Current situation in the Mediterranean countries regarding prevention of, preparedness for and response to marine pollution

2.1.1 National systems for prevention, preparedness and response of all Contracting Parties to the Prevention and Emergency Protocol

Since its establishment REMPEC has provided its assistance in the field of development of national systems for preparedness for and response to marine pollution, to the competent national authorities of Albania, Algeria, Croatia, Cyprus, Egypt, Israel, Lebanon, Libya, Malta, Montenegro, Morocco, Slovenia, Syrian Arab Republic, Tunisia and Turkey.

At present 18 Mediterranean coastal States have existing national preparedness and response systems, including operational national contingency plans (Albania, Algeria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syrian Arab Republic, Tunisia and Turkey).

On the basis of information provided, REMPEC maintains a country profile of each Party to the Barcelona Convention which includes in particular:

- the status of national preparedness and response system;
- the status of ratification of the relevant conventions;
- the contact list of the competent national authorities;
- expertise and resources available for international assistance

It appears from the country profiles that within the region there are:

- Countries with well-developed national system including combating resources;
- Countries with a national contingency plan but with limited resources;
- Countries with a national system which requires improvement and with very limited resources;
- Countries with a national system still under preparation and with very limited resources.

Considering the different levels of response capacities available in the region, international cooperation and assistance will be required for a number of Mediterranean countries even in cases of medium size pollution. (*Annex I.3*)

2.1.2 Sub-regional and bilateral agreements

In addition to assisting individual coastal States in developing their national systems, and in conformity with its mandate, REMPEC assists the Mediterranean coastal States, which so request, in the preparation and development of bilateral and multilateral operational agreements between neighbouring countries. REMPEC has also been involved since 1992 in the development of sub-regional systems for preparedness and response to major marine pollution incidents. Such sub-regional arrangements for mutual assistance in case of marine pollution emergencies significantly extend the spill response capacities of individual countries, by providing a mechanism for pooling resources and jointly conducting response operations.

- Sub-regional agreements:
 - South eastern Mediterranean (Cyprus, Egypt, Israel) signed 9 June 1995, not yet in force
 - Adriatic (Croatia, Italy, Slovenia) signed 9 December 2005, not yet in force
 - South western Mediterranean (Algeria, Morocco, Tunisia) signed 20 June 2005, entered into force 11 May 2011.
 - RAMOGEPOL (France, Italy, Monaco) revised 2012
- Bilateral agreements:
 - LION plan (France, Spain) entered into force 22 July 2002

2.2 Pollutions incidents and the various types of situations

No two marine pollution incidents are the same and so response actions will vary depending on the source of the pollution, the type of pollutants involved, the size of the pollution, the place of the pollution, the causes of the pollution, and the number of countries affected.

2.2.1 Sources of pollution

The issue of pollution from ships is addressed in IMO Conventions regarding prevention, preparedness, response and liability and compensation. And it is for the flag States to ensure that the ships flying their flag comply with the requirements of those Conventions. This legal regime sets up a framework under which competent national authorities will initiate and organise response actions including request for international assistance. The cost of international assistance should be covered by the liability and compensation regimes.

Offshore activities, sea ports, oil and chemical handling facilities are mainly regulated under national laws and regulations. It is within this national legal framework, which shall require operators to have contingency plan and liability insurance, that competent national authorities will initiate and organise response actions including request for international assistance. For offshore activities, sea ports, oil and chemical handling facilities, there are no equivalent liability and compensation regimes as those established for ships. Therefore it is for the competent national authorities to impose on the operators the requirement to have prepositioned combating equipment and arrangement to increase their response capabilities and to have insurance or financial guaranty to cover response operation including international assistance and the cost of damage they may cause.

In many oil spills, the identification of the source of the oil is straightforward. However, in some situations, the source of the spilled oil may not be clear, with a number of potential sources identified. Good practice calls for samples of the spilled oil and oil from potential sources (e.g. vessel tanks and machinery spaces, terminals, and other shore-based sources) to be taken as soon as practicable. Samples should be appropriately handled, stored, and labelled ensuring that at all times a clear custodial chain can be proven in court. Correct procedures for sampling and storage of samples must be followed.

2.2.2 Type of pollutant

The type of pollutant, oil (cargo, bunker) HNS (cargo, package form) will determine the type of assistance needed in terms of expertise and of response equipment as well as to whom to send a request for assistance. If for oil it is easier to identify the need of response resources, for HNS it is much more difficult in particular when several HNS products are carried on board of a ship and the information on the products are not immediately available.

2.2.3 Type of release

The pollution incident may result in an instantaneous discharge of oil or hazardous and noxious substances or in a continuous release, such as the continuous leakage from damaged tank of a tanker or a blowout on an offshore unit.

2.2.4 Size of pollution

Tiered response has become a widely accepted operational concept that provides a convenient categorisation of response levels. Tiered response may also be incorporated into the equipment and operational preparedness requirements for ships, offshore installations, and oil handling facilities operating within the jurisdiction of a State. Tiered response systems are based on the concept that the response to spills may be categorised into the following three tiers:

- Tier 1 - preparedness and response capability for small spills within the purview of an individual facility or harbour authority that may be mitigated by locally available resources.
- Tier 2 - preparedness and response capability for medium spills that require equipment and personnel resources beyond those available locally (Tier 1). For a Tier 2 response, assistance can come from a number of entities outside the immediate geographic area, including national resources and if national resources are not available from international assistance.
- Tier 3 - preparedness and response capability for major spills, including those of national or international significance, requiring the mobilisation of national and international resources.

In exceptional circumstances when human health, livelihoods and the environment are threatened and affected on a major scale following a disaster or a conflict or an act of terrorism, the mobilization of assistance through dedicated international assistance mechanisms (UNEP OCHA, Union Civil Protection Mechanism/UCPM) may be requested.

Some countries do not have Tier 2 oil spill response equipment or capability, and few countries have Tier 3 resources. While it is generally recommended that countries ensure that Tier 1 level response equipment and capabilities are on site or immediately available, there is the understanding that Tier 2 and, if needed, Tier 3 level resources will “cascade” in over time. Integration of additional resources that may be needed should be planned for and addressed in oil spill contingency plans.

Further, response capabilities required over the course of an oil spill will vary, calling for mobilisation and demobilisation of equipment and personnel as dictated by the changing requirements of the spill. Response impacts and costs can be greatly reduced by rapid mobilisation and effective use of resources and by demobilising those that are no longer needed. It is a best practice for planners and response organisations to have a bias towards a proactive response in the early stages of a spill, especially when the extent of spill may not be fully realised. Early response is generally more effective than later response (i.e. secure the source of the spill, take a vessel in tow before it grounds, etc.). Planners and responders should mobilise resources early as it is better to scale down resources if not needed than to lose an opportunity to mitigate a spill early in the response for want of resources.

2.2.5 Place of pollution

The place of the spill together with the type of pollutant involved will determine the response strategy and the type of combating equipment.

Spill response equipment is, for the most part, very specialised. Specific equipment types will correspond to specific response options. Combating a large spill **at sea** will require high capacity response equipment such as oceangoing skimming vessels, long-range aerial dispersant aircraft, aerial surveillance, high sea booms, etc. Supply of such equipment and competent personnel to operate them is limited. The ability to move these specialised equipment and personnel rapidly into the spill area and the logistics process required to move it long distances will be critical and influence the response options/strategy.

Specialised and non-specialised equipment for combating pollution near the coast and on shore are available within the region and outside the region. Stockpiles of equipment together with trained personnel and experts in shoreline cleaning do exist: they belong to governments, oil or chemical industry, private sector (manufacturers, responders), and they can be easily mobilised.

Response capabilities required over the course of a spill will vary, calling for mobilisation and demobilisation of equipment and personnel as dictated by the changing requirements of the spill. The spill may occur at high sea and move to the shore.

The incident may happen in port areas involving ship and or oil or chemical handling facilities and threatening human health and the immediate environment requiring specific actions to be taken.

2.2.6 Nature of the pollution incident (causes of pollution)

The cause of the pollution is important in particular when it comes to considering early response in case of ship's grounding, collision, engine failure, explosion etc. But it is much more important when the cause of the pollution is due to sabotage, terrorist attack, or a conflict. In such cases there are no liability and compensation mechanisms which can be activated for covering the cost of response operations and economical and environmental damages. As has happened in the past, mechanisms for assistance would be contacted and IMO, UNEP and REMPEC would help in facilitating mobilisation of financing supports and technical assistance through UN financing mechanisms and voluntary contributions from States including the EU.

2.2.7 Number of countries affected

In case where more than one country is affected or likely to be affected, and in the absence of a bilateral or sub-regional agreement, the countries affected shall cooperate and coordinate the mobilisation and deployment of response equipment and agree on who will assume the leading role and have the overall responsibility for all decisions and actions taken to combat the pollution and for coordination of joint response operations. The assumption is that the leading role will be assumed by the operational authority of the country in the area in which the marine pollution incident occurred and which is directly affected. When the major part of the spill has moved from the area of responsibility of the country initially affected to the area of responsibility of a neighbouring country, the countries should agree to transfer the lead role from the first one to the other.

Unless an agreement concerning the financial arrangements governing actions of parties to deal with marine pollution incidents has been concluded on a bilateral or multilateral basis prior to the pollution incident, parties shall bear the costs of their respective actions. If the actions were taken by one party at the express request of another party, the requesting party shall reimburse to the assisting party the costs of its action. If the action was taken by a party on its initiative for protecting its own interests, that party will bear the cost of its action.

2.3 Different types of national response systems when it comes to who is in charge of response operations

Who will undertake operational response actions to a marine pollution incident?

Effective responses to major marine pollution incidents are complex operations that require the seamless integration of material resources, operational processes, and personnel from many different organisations (public and private / national and international), under a commanding team qualified to lead the response. This integration is made possible by establishing and operating command structure(s) for operational response which shall be supported by management structures dealing in particular with cooperation and international assistance. This response management system must be flexible enough to rapidly expand or contract to effectively manage the spill throughout the entire course of the response. For an incident management system to facilitate integration and coordination of government and industry response resources and help ensure the most effective response, representatives of responsible and interested parties shall be associated to the command and management structures and their tasks clearly assigned between the various entities.

Most countries have adopted the polluter pays principle wherein the party responsible for the spill must fund the response activities to the full extent of its legal liability.

Some Contracting Parties have purchased and maintained equipment; and personnel have been trained on the use of spill response equipment, whilst others have limited resources and expertise. Significant marine pollution incidents are an infrequent event and stockpiling response equipment is expensive for a national authority.

Under the 1990 OPRC Convention, a State, either individually or through bilateral or multilateral agreements and in co-operation with the oil/HNS and shipping industries, port authorities and other relevant entities, should ensure the availability of pre-positioned oil/HNS spill response equipment. Therefore a way for ensuring the availability of adequate response equipment is for States to require operators of offshore units and operators in charge of oil or chemical handling facilities to maintain a minimum level of prepositioned equipment commensurate with the risk involved and to have arrangements for mobilising additional necessary resources including those from abroad. Standards should be set for oil recovery or containment capacity, recovered oil storage capacity, and response timelines.

A clear distinction should be made between situations where the responsible party will provide the majority of response resources, and those in which such resources will need to be supplemented with government equipment and personnel including those mobilised through international assistance.

The extent to which the national competent authorities will be in charge and command of response operations will very much depend on the source of pollution (ships, offshore units or handling facilities), the type of pollutants (oil or chemical), the size of pollution (small, medium or large), the place of the pollution (at sea or on shore or both, port area), the cause of the pollution (there is a liable party or there is no identified liable party) and the number of countries affected. Therefore, when it comes to who will be in charge of undertaking response operations, three types of national response systems can be identified:

- the government is fully in charge of response operations;
- responsible party under the overall control and supervision of government authority carries out response operations;
- combination of the two systems according to the circumstances.

2.3.1 For marine pollution arising from ships

It is an obligation for a ship under the MARPOL Convention to have a shipboard marine pollution emergency plan. However, there are no obligations upon a shipowner to have pre-positioned equipment and arrangements for mobilising additional equipment. Therefore, that may lead a country with a well-developed response system to be fully in charge of a response operation.

When a country has a well-developed response system, including combating equipment and trained personnel, it is common that it will be in charge of response operations and exercise full command of response operations, even when it requests the polluter to take specific response measures.

However, in countries with limited response capabilities or because it is their national policy, the shipowner will be requested to take response measures aiming at controlling, minimising and combating the pollution within the limit of its liability. In this case, the competent national authority, the command structure, provides supervision to ensure that the shipowner/its representatives adequately execute the response and it coordinates the activities of any involved supporting government agencies. In any case, the competent national authority in charge of response operations shall communicate to those implementing response measures, a copy of the National Contingency Plan, indicating the national policy and underlining the government's expectations.

It is generally understood that under most insurance contracts and under the general principles of many systems of insurance law, even though the shipowner is insured, the shipowner should act as a prudent person without insurance. Therefore, the shipowner should act within his or her capabilities so as to minimise potential risks. The clause in the insurance contract which enshrines this principle is often called the "sue and labour" clause. A shipowner should not act in a manner that increases the risks which the insurer has underwritten.

Therefore, coastal States will expect the shipowner to co-operate in agreeing to any measures the coastal State wishes to put in place which would have the effect of minimising risks and combating the pollution, thus reducing the ship-owner's ultimate potential liability. In any event, whatever response and clean-up assistance the shipowner is able to muster, the shipowner should be able to mobilise the resources, the technical advice and services through its insurer. In practice, the insurer is usually very closely involved.

2.3.2 For marine pollution incidents arising from offshore units or shore oil and chemical handling facilities

According to their contingency plan, which shall be coordinated with the national system, operators shall take immediate response measures deploying the prepositioned combating equipment they should have been requested to maintain and, if needed, mobilising additional resources (including from abroad) according to pre-existing arrangements they should have. The moment when the national competent authorities will take over from the operator the full command of the operational response operations and be directly in charge of part of the response operations will be agreed upon according to the circumstances.

Offshore oil production and exploration installations require special consideration due to the potential for a large volume of oil to be released over a long period of time in cases where the spill source cannot be immediately secured. National authorities may require that an owner or operator of an offshore production or exploration installation develop a separate source control plan or section of the oil pollution emergency plan that describes how the owner or operator will control the source or a well blowout or other loss of well control event. In particular, the source control plan should identify

sources of well capping and containment equipment and associated resources (remotely operated vehicles, subsea dispersant application systems – if appropriate, debris removal equipment, etc.) as well as procedures for equipment mobilisation and deployment.

A co-operative approach with the oil industries operating within the area of jurisdiction of the country is a key element to the establishment and sustainment of an effective response system. It is the Government's role to establish the legal and organisational framework for this relationship. Whatever relationship is established, the roles of Government and industry should be clearly defined. It is essential that industry contingency plans should comply and align with national regulations and the national contingency plan. In some jurisdictions, the Government will be the lead responder whereas in others, the facility owner may be required by legislation to respond under the overall control and supervision of the relevant governmental response authority.

2.3.3 In case of major pollution

The polluter (responsible party) may/will mobilise response equipment from abroad. It will be imperative that the relevant authorities (management structure for dealing with international assistance), in cooperation with the command structure, ensure that:

- the combating resources which the polluter intends to bring in the country, will be in conformity with the national response strategy and the restrictions on or the preference for the use of selected response techniques based on spill location, environmental conditions, proximity to sensitive areas (approval and conditions for the use of dispersants, in situ burning), waste disposal and treatment;
- the procedures anticipated for requests of international assistance regarding in particular customs and immigration, will apply to expedite the importation of international resources.

The National Contingency Plan should identify which response techniques should be used and in what circumstances.

An incident affecting a number of countries may involve significant government resources of various countries, and care should be taken to ensure that duplication of efforts, resources and expenses, are avoided, in order to maximise the opportunity for compensation, when subsequently the claims are submitted for payment to the shipowner/insurer and/or the 1992 Fund. International response contractors may also be mobilised to further supplement the onsite tactical team (*See diagram 1 at the end of Part I*).

2.3.4 In exceptional circumstances

In exceptional circumstances, when following a disaster, a conflict or an act of terrorism, human health and environment are threatened and affected on a major scale the assistance of mechanisms for assistance (UNEP/OCHA, UCPM/ERCC) may be requested. The mechanisms for assistance, IMO and REMPEC will cooperate and coordinate their efforts to avoid duplication. REMPEC will act as a clearing mechanism to avoid duplication of means and inadequacy of assistance offers, and ensure in cooperation with the mechanisms of assistance a good coordination of the mobilisation of the resources. To that end personnel may be seconded to REMPEC to help carrying out this task (*See diagram 2 at the end of Part I*).

2.4 Resources available for International Assistance in the Mediterranean region

Various resources for spill response that could be used when a call for international assistance is launched by a Contracting Party to the Prevention and Emergency Protocol do exist in the Mediterranean region. REMPEC endeavours to collect all relevant information on such resources and to disseminate it to the Contracting Parties.

Through its network of National Focal Points, le REMPEC has access to the information on the Government owned or controlled equipment in each Contracting Party, as well as on expertise that each country may offer in case of emergency. The information on national Centres of Expertise is available in the Country Profiles on the Centre's website (<http://www.rempec.org/country.asp>).

Information on response equipment, vessels and other resources available from the private sector (specialised spill response contractors, salvage companies, etc.) is published in the Directory of companies offering services in the Mediterranean in case of emergency (RIS B3), which is Part B.3 of the Regional Information System (*Annex I.3*).

The Mediterranean Integrated GIS on Marine Pollution Risk Assessment and Response (MEDGIS-MAR), comprising *inter alia* information on response resources, can be consulted on the Centre's website (http://www.rempec.org/tools.asp?theIDS=2_250&theName=Tools&daChk=1).

2.5 Existing Guidelines

2.5.1 IMO Guidelines

A number of manuals, guidelines and tools have been developed through IMO, which cover many aspects of marine pollution preparedness, response and cooperation. Those of specific relevance for this document include:

- Manual on Oil Pollution:
 - Section I – Prevention (2011 edition)
 - Section II – Contingency Planning (update to be published in 2017)
 - Section III – Salvage (1997 edition)
 - Section IV – Combating Oil Spills (2005 edition)
 - Section V – Administrative Aspects of Oil Pollution Response (2009 edition)
 - Section VI – IMO Guidelines for Sampling and Identification of Oil Spills (1998 edition)
- Manual on Oil Spill Risk Evaluation OSRE and Assessment of Response Preparedness (2010 edition)
- Guidance Document on the Implementation of an Incident Management System (IMS) (2012 edition)
- Guidelines for the Development of Shipboard Marine Pollution Emergency Plans (2010 edition)
- Manual on Chemical Pollution CP:
 - Section 1 – Problem Assessment and Response Arrangements (1999 edition)
 - Section 2 – Search and Recovery of Packaged Goods lost at Sea (2007 edition)
 - Section 3 – Legal and Administrative Aspects of HNS Incidents (2015 edition)
- Guidelines on International Offers of Assistance in Response to a Marine Oil Pollution Incident (2016 edition)
- Guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants (IMO Resolution A. 851 (20) amended by MEPC Resolution MEPC.138(53))
- Guidelines for the development of shipboard marine pollution emergency plans for oil and/or noxious liquid substances (MEPC Resolution MEPC.85(44))
- Guidelines for facilitation of response to a pollution incident (IMO Resolution A.983(24))

The development of new guidance materials and the update of existing materials are considered by the IMO's Sub-Committee on Pollution Prevention and Response (PPR).

The Pollution Preparedness and Response section of the IMO website also provides much useful information on all aspects of marine pollution preparedness, response and cooperation <http://www.imo.org/en/OurWork/Environment/PollutionResponse/Pages/Default.aspx>

2.5.2 REMPEC Guidelines

Over the years REMPEC developed a number of Guidelines on oil and HNS preparedness and response including the following Guidelines and Principles adopted by the Contracting Parties, which are reproduced, [as amended and adopted by the Twentieth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Tirana, 18-22 December 2017], in *Annex I.4*.

- Guidelines for co-operation in combating marine oil pollution in the Mediterranean (*adopted, on 11 September 1987, by the Fifth Ordinary Meeting of the Contracting Parties to the Barcelona Convention*);
- Principles and guidelines concerning cooperation and mutual assistance which contain the following Principles, Guidelines and Check-lists (*adopted on 11 October 1991, by the Seventh Meeting of the Contracting Parties to the Barcelona Convention*):
 - Principles and Guidelines concerning the role and responsibilities of experts sent on mission by the Centre, following the request of a State in case of emergency, and duties and obligations of States towards them;
 - Principles and Guidelines concerning the sending, receiving and returning of equipment in case of international assistance operation;
 - Principles and Guidelines concerning arrangements and operational procedures which could be applied in case of a joint operation;
 - Check-list of procedures to be followed and persons to be contacted in case of emergency; and
 - Check-list of principal institutional provisions aimed at facilitating mutual assistance in case of a major marine pollution accident which should be included in national contingency plans.
- Guidelines concerning the exchange of liaison officers between the contracting parties in case of response operations involving several states (*adopted by the Ninth Ordinary Meeting of the Contracting Parties to the Barcelona Convention between 5 and 8 June 1995*);
- Guidelines concerning arrangements which might be made with a view to ensuring, in case of an accident, liaison between the Governmental Authorities and other interested Parties (*adopted by the Ninth Ordinary Meeting of the Contracting Parties to the Barcelona Convention between 5 and 8 June 1995*).

Chapter 3 Relationships, cooperation and mutual assistance in case of emergency and marine pollution incident

This chapter addresses the relationship between the parties involved in an incident and presents various scenarios of requests and offers of assistance.

3.1 Parties which will be involved

3.1.1 Government(s) of the affected country(ies)

When faced with a marine pollution emergency, the coastal State should consider both its international rights and duties as well as its national legal and institutional framework.

The relevant coastal State authority responsible for response action should focus its attention on its own response to the marine pollution emergency, and one question which may arise is the extent to which the coastal State may take action against the wishes of the master or other parties who have interests in the ship or cargo. Ideally, the coastal State will have considered the international law position on intervention in conjunction with the preparation of its contingency plan before the marine pollution emergency arises, and will have enacted legislation or made other satisfactory provisions for the taking of appropriate steps when an emergency arises.

One option for intervention by a coastal State is the requirement for salvage services to be accepted or provided, or even to undertake them itself.

Co-operation between the master of the ship and the coastal State should achieve all that is necessary, bearing in mind that the coastal State's task of coordinating and arranging all the pollution response and clean-up actions under its contingency plan must not be hindered by the ship or cargo interests. The same should apply to the operator of an offshore platform or the operator of an oil/chemical handling facility.

3.1.2 The ship interests

a. The shipowner

There may be diverse ownership interests in a ship. The main ones which a coastal State is likely to encounter in a marine pollution emergency are: the shipowner, time / voyage / bareboat charterer, and manager or operator (in the ISM Code the "*Company*" means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner and who on assuming such responsibility has agreed to take over all duties and responsibility imposed by the Code). In some cases a ship may be owned by more than one entity in equal or unequal shares. In such cases, there is usually an agreement between the different owners that one of them will take operational decisions on behalf of all of them, and joint ownership only becomes of particular interest when recovery of damages is sought.

Unless there is a bareboat charterer or manager of the ship, the shipowner is normally the entity responsible for the operation of the ship, and the master will be the representative of the shipowner for that purpose, at least until direct contact is established between the coastal State and the shipowner.

The first concern of the shipowner in a marine pollution emergency will be to see that the ship and all the life thereon are preserved together with as much as possible of the cargo. Therefore, his concerns will be the protection of his proprietary interest in the ship as much as the effect upon the sea or coast of polluting substances which may have escaped or may be threatening to escape. Because he may be liable to pay compensation for the pollution caused, the shipowner can be expected, either through the master of the ship or/and directly from his office through a Designated Person Ashore (ISM Code Section 4), to liaise with all others who are directly concerned with the position of the ship in the emergency.

The obligation of a shipowner to take pollution response and clean-up measures depends upon the law of the State where the pollution occurs.

b. *The Master of the ship*

The Master is responsible for the safety of the ship, the cargo and all personnel aboard, and he will take such action as he can to achieve this as soon as the incident giving rise to the emergency occurs.

The master is usually the person responsible for making notification to the nearest coastal State of the incident giving rise to the marine pollution. The master is in most, if not all, systems of law the agent of the shipowner in the navigation and shipboard management of the ship. Where the cargo is in danger, he is usually also deemed the agent of the cargo owner insofar as any action to save the cargo is taken. Coastal States may therefore deal with the master in confidence that his word will bind the shipowner and cargo owner insofar as the security of ship and cargo are concerned when their owners are themselves not in contact with the coastal State. The master is able to reach agreement with a salvor himself. The master will send out distress calls as appropriate after the incident occurs, and he will call specifically for tugs if that is what he needs. A master will often attempt to be in direct contact with his shipowner's office once the emergency has arisen.

After human lives, the protection of the marine environment must be the master's prime concern in all situations which arise and economic and other pressures on the master should not at any time interfere with the decisions he must take in that regard.

c. *The Designated Person Ashore DPA (ISM Code Section 4):*

The ISM Code makes it a requirement for the Company to have in place a Designated Person Ashore having direct access to the highest level of management to ensure the safe operation of each ship and to provide a link between the Company and those on board., The responsibility and authority of the Designated Person or persons should include monitoring the safety and pollution prevention aspects of the operation of each ship and ensuring that adequate resources and shore based support are applied, as required

d. *Cargo owner*

It may not be easy to establish who owns the cargo, although the chain of enquiry will start with the shipper named in the bill of lading, a copy of which will be retained on board by the master. Bulk HNS cargoes tend to be owned by a single entity, or perhaps by a few different entities. Packaged HNS cargoes, on the other hand, are more likely to be owned by a greater variety of different entities.

The individual cargo owner would not normally be liable to compensate any person suffering pollution damage, and certainly there is no international legal regime which makes provision for the liability of the cargo owner for such damage.

The cargo owner does not normally feature prominently in a marine pollution emergency. If the cargo owner is an end-user of the type of cargo involved, he/she may very well have technical staff that are familiar with the behavioural characteristics of the cargo, which is almost invariably the source of the marine pollution emergency. Therefore the cargo owner may be someone to whom the coastal State or even the shipowner may turn for advice about the cargo and how to handle it in the emergency. If the cargo owner is a trading company which does not use the cargo itself, such technical expertise is less likely to be available from that source and it may have to be sought from the manufacturer of the cargo or from an industry body.

e. Insurance: P&I Clubs, ITOFF

The costs of action to deal with pollution or the threat of pollution may be recoverable on the basis of the legal third party liabilities of the owner of the ship, from where the pollution emanates/threatens to emanate. Such liabilities will be insured. The majority of all ships are entered with one or more of the P&I Clubs. The P&I Clubs cover shipowner's third-party legal liabilities in the sense of damage or compensation which the owner is legally obliged to pay to others. Ship-owners are normally entitled to limit their liability under international conventions or national law. In practice the insurance cover is mostly restricted to the limitation amount applicable to the ship. The main job of the insurer in a marine pollution emergency is to handle all claims against their members and to pay the valid ones. The first thing the P&I Club might do, is put up financial security to ensure the release of the ship, in case the ship has been arrested. This is commonly done either by the claimant accepting a letter of guarantee or bond with a local bank.

The P&I Club will usually get independent technical assistance from ITOFF to advise on the type and extent of the pollution damage, what effect it is likely to have under different scenarios, what needs to be done to mitigate or prevent the effects and the most efficient way of doing so. This advice will be available to the coastal State should it ask for it. The P&I Club will also be involved in the decision concerning a possible lightening of the ship to another vessel because of the liabilities the lightening ship may incur as well as in a possible wreck removal, the latter being one of the risks P&I Clubs insure. The insurer is for the coastal State, one of the most important entities, on the ship owning interest's side, to enter into discussions with in a marine pollution emergency caused by oil or other harmful substances.

f. IOPC Funds

When an incident occurs, the 1992 Fund co-operates closely with the ship-owner's insurer, which will normally be one of the P&I Clubs that insure the third-party liabilities of shipowners, including liability for oil pollution damage. The P&I Club concerned and the 1992 Fund usually co-operate in the handling of claims, particularly when it is clear from the outset that compensation will be paid under both Conventions. Since in most cases the 1992 Fund only pays compensation once the shipowner/insurer has paid up to the limit applicable to the ship involved, claims should first be submitted to the shipowner or his P&I Club. In practice, claims are often channelled through the office of the P&I Club's correspondent closest to the incident location. Because of the close co-operation between the Fund and the insurer, claims, including supporting documentation, need only to be sent to either the P&I Club/correspondent or the 1992 Fund.

Occasionally, when an incident gives rise to a large number of claims, the 1992 Fund and the P&I Club jointly set up a local claims office so that claims may be processed more easily. Claimants should then submit their claims to that local claims office. Details of claims offices are given in the local press and are available on www.iopcfunds.org.

g. Flag State

Under Article 12 of MARPOL Convention, the flag State is obliged to discover the facts of a casualty in which one of its ships has been involved if the casualty has produced a major deleterious effect upon the marine environment.

3.1.3 Operators of offshore units

In accordance with the OPRC Convention, the Prevention and Emergency Protocol and the Offshore Protocol, the persons in charge of an offshore installation are required to report without delay any event on their offshore installation involving a discharge or probable discharge of oil, to the coastal State to whose jurisdiction the unit is subject.

Facility owners/operators should/must have a multi-level response organisation consisting of one or more teams for each level. The first level is generally activated for all spills and subsequent levels activated as necessary to manage escalating incidents. Ideally, they are organised around the three-tier concept.

The Tier 1 response should/must be undertaken by in-house teams of workers trained in pollution response, supplemented by local contractors where necessary, to conduct the tactical activities such as containment boom and skimmer deployment and operation. An incident management team may consist of facility personnel to support the tactical operations. Government agencies shall be notified and national operational authority shall control and supervise the response operation undertaken by the offshore operator and may contribute to the response.

The Tier 2 response team may consist of the facility owner's/operator's corporate or regional incident management team that may be supplemented by contractors or subject matter experts with specific skill sets. The tier 2 incident management team may be mobilised to the site and will integrate with the tier 1 incident management personnel but may also perform their functions remotely. Regional or national contractors may also be mobilised to the site to supplement the tier 1 tactical team and national operational authority shall control and supervise the response operation undertaken by the offshore operator and may contribute to the response.

A Tier 3 response national government authority will ensure that response actions are taken and cooperate with the facility owner/operator and contractor incident management personnel to further expand the capabilities of the tier 2 resources. An incident affecting a number of countries may involve significant government resources of various nations. International response contractors may also be mobilised to further supplement the onsite tactical team.

In accordance with the Offshore Protocol Article 27 the parties shall take all measures necessary to ensure that operators shall have and maintain insurance cover or other financial security of such type and under such terms as the Contracting Party shall specify in order to ensure compensation for damages caused by the activities covered by the Protocol.

3.1.4 Operators of sea ports and oil and chemical handling facilities

In accordance with the OPRC Convention, the OPRC/HNS Protocol and the Prevention and Emergency Protocol, operators of sea ports and oil and chemical handling facilities are required to report without delay any event on their facilities involving a discharge or probable discharge of oil or other harmful substances to the Coastal State to whose jurisdiction the facilities are subject. Facility owners/operators shall establish a minimum level of prepositioned combating equipment,

commensurate with the risk involved. The first level is generally activated for all spills and subsequent levels activated as necessary to manage escalating incidents. Ideally they are organised around the three tier concept.

As for the offshore units, the Mediterranean countries should ensure that operators of sea ports and oil and chemical handling facilities have and maintain insurance cover or other financial security in order to ensure compensation for damages caused by their activities/ facilities.

3.1.5 Assisting Entities

REMPEC

In case of emergency in the Mediterranean region which requires international cooperation and assistance the assisting entity to notify/contact as a priority, is REMPEC. The functions of REMPEC according to the Prevention and Emergency Protocol and its mandate are to promote a planned and regionally co-ordinated response to any marine pollution incident that is beyond the resources of the persons who have caused the marine oil spill or that has not been appropriately responded to by such persons and which affect a Contracting Party which does not have the necessary combatting resources and is in need of international assistance.

Mechanisms for assistance

The other entities which may be involved and provide assistance and support will be IMO, UN/OCHA, ERCC/EMSA. REMPEC will facilitate at regional level cooperation and coordination with these assisting entities, as required.

3.1.6 Assisting Countries

a. Under the Prevention and Emergency Protocol

The countries to which a request for assistance can be sent are the Contracting Parties to the prevention and Emergency Protocol which, according to their capabilities, are in position to render such assistance. That includes the EU as a Contracting Party. To that end, help for getting assistance can be requested from REMPEC.

b. Under the OPRC Convention

Contracting Parties to the Prevention and Emergency Protocol which are party to the OPRC convention may request assistance from a Party to the OPRC Convention either directly or through REMPEC.

3.1.7 Response contractors

Response providers may be contracted by the polluter or/and by the Affected Country, or/and by an Assisting Country or organisation (mechanisms for assistance).

(There are other parties which will be involved but the relationships and the role of those parties must be addressed in the National Contingency Plans)

3.2 Relationships with Parties involved

3.2.1 Relationships with Responsible Party (RP) and related parties

The competent national authorities of a Contracting Party affected by a marine pollution incident shall establish and maintain, throughout all phases of the planning and implementation of response activities, liaison with other parties having an interest in the pollution incident (Responsible Parties and interested/related parties). These include:

- the owners of the ship (the master of the ship, the Designated Person Ashore-*ISM Code*) and the cargo and, in particular, their insurers (P&I Club) and their respective technical advisers and experts (ITOPF);
- the operator of offshore unit, and the operator of sea port and oil and chemical handling facility, including their insurers; and
- salvage company, in certain circumstances.

The objective of liaison shall be:

- primarily to obtain and exchange necessary technical information required for planning and implementation of appropriate pollution response measures;
- to ensure as much as feasible, through an efficient coordination, the effectiveness of response operations limiting the impact on the environment and reducing the overall costs of the pollution measures; and
- to consider possible legal and financial implications of response actions taken or planned.

Responsible Parties/interested parties/related parties shall provide or shall be requested to provide information on:

- the incident (*source of pollution, type of pollutants, size of pollution, place of pollution, cause of pollution*);
- potential quantity and types of cargo/bunker at risk to be released
- response measures taken and/or planned to be taken
- response resources including personnel, equipment and other means these parties have available and/or will obtain for responding to the incident and intend to use;
- the contingency plans prepared by them; and,
- the availability of funds through their insurers.

Actions to be taken by the competent national authorities of the affected Contracting Party:

- at the initial stage of a pollution incident and if they feel that the situation so justifies (delay in taking appropriate measures, ...), the competent national authorities of the affected Contracting Party may request/impose on the Responsible Parties to take specific response measures specifying that in absence of actions, response measures will be taken by the affected (or threatened to be affected) country at the expenses of the Responsible Party.
- the competent national authorities of the affected Contracting Party should inform the Responsible Party of its national organisation for accidental marine pollution response as well as the national laws and regulations covering the field of accidental marine pollution including liability and compensation. They should provide details concerning the command structure(s) for operational response as well as on the management structure for cooperation and mutual assistance. Clear indication should be given regarding the way the relevant competent authorities of the Contracting Party will carry out the overall responsibility of the State to protect its coastlines or related interests from pollution or threat of pollution: whether

the government will be fully in charge of response operations; or, the Responsible Party under the overall control and supervision of government authorities will carry out response operations; or, a combination of the two systems will be applied according to the circumstances.

- the affected Contracting Party should provide information on:
 - (a) response resources (public and private) which are available or which might be made available in the country;
 - (b) the planning and arrangements made for response operations/response strategy;
 - (c) the intention and arrangements already made for obtaining international assistance.

- in order to ensure a permanent liaison with the Responsible Party the competent national authorities should incorporate when necessary representatives from the Responsible Party into the command structures for operational response and the management structure for cooperation and international assistance.

- the competent national authorities of the affected Contracting Party should establish and maintain throughout all phases the liaison with the insurers and their representatives to consider and address legal and financial implications of response actions taken and planned as well as the compensation for pollution damages.

3.2.2 Relationships with REMPEC

Under the Prevention and Emergency Protocol, Contracting Parties are committed to communicate to REMPEC all marine pollution incidents posing or likely to pose a threat to the marine environment or to their coasts or related interests. Contracting Parties shall provide REMPEC with information regarding the assessment of the situation, and on actions taken and planned to be taken. The Contracting Parties shall use the mutually agreed standard form for the reporting of pollution incidents (*Annex II.1* and *Annex II.2*)

One of the main functions of REMPEC is to assist coastal States of the Mediterranean region, which in case of emergency so request, in obtaining assistance. Therefore, a Contracting Party in need of assistance in case of emergency can contact REMPEC using the emergency line to obtain:

- information and advice using the Centre's expertise information system and network;
- advice of selected experts on the site of the accident by dispatching REMPEC officers or by mobilising the MAU;
- access to the requested equipment and resources from other Contracting Parties or from countries outside the region or/and from the private sector;
- support from the mechanisms for international assistance and the UN system in case of a very large pollution incident and/or in the case there are no liability and compensation mechanisms which can be activated to cover the cost of response operations and of economic and environmental damages;
- establish special mechanisms and arrangements for coordinating the offer, mobilisation and deployment of international assistance in case of very large pollution.

The State requesting the assistance of experts (REMPEC officers / MAU) should

- specify as precisely as possible, considering the given circumstances, the field or fields of expertise required using the standard form for request of assistance (*Annex II.3*);
- make the necessary arrangements concerning immigration procedures and customs clearance for the expert and material;
- make the necessary arrangements for accommodation of the expert and provide the necessary working space and office facilities; and,
- provide for free access of the expert to necessary communication facilities

Initial financing (air tickets, daily subsistence allowance, etc.) of the expert's mission will be covered by the Regional Centre (*Annex I.5*).

The State requesting assistance from REMPEC to obtain access to equipment and resources from other Contracting Parties or from countries outside the region or/and from the private sector should:

- specify as precisely as possible its need using the standard form for request of assistance (*Annex II.3*);
- take the necessary administrative and financial measures (*See Part II*).

It has to be understood that in case of a request or offer for the mobilisation of response resources, REMPEC has a facilitating role but it will not be involved in the negotiation and in the financial aspect, in particular with response providers.

3.2.3 Relationships with other Contracting Parties affected or likely to be affected

Under the Prevention and Emergency Protocol, a Contracting Party in the area of which a marine pollution incident occurs, shall immediately communicate the information to the other Contracting Parties likely to be affected and keep these Contracting Parties informed on its assessment, directly or through REMPEC, of the situation and on the measures taken and planned to be taken.

Unless a bilateral or sub-regional contingency plan already addresses cooperation among neighbouring countries affected or likely to be affected by the same pollution incident, these neighbouring countries should:

- cooperate and coordinate the mobilisation and deployment of response equipment and agree on who will assume the leading role and have the overall responsibility for all decisions and actions taken to combat the pollution and for coordination of joint response operations;
- agree that the leading role will be assumed by the operational authority of the country in the area of which the marine pollution incident occurred and which is directly affected;
- agree to transfer the lead role from the first one to the other when the major part of the spill has moved from the area of responsibility of the country initially affected to the area of responsibility of a neighbouring country;
- agree to bear the costs of their respective actions. If the actions were taken by one Party at the express request of another Party, the requesting Party shall reimburse to the assisting Party the costs of its action. If the action was taken by a Party on its initiative for protecting its own interests, that Party will bear the cost of its action. (*Annex I.4*)

Any State involved, Party to a bilateral or sub-regional contingency plan, may escalate the response activities and call upon assistance from other States participating in the plan or from States or organisations not participating in the plan (including other Contracting Parties, REMPEC, mechanisms for assistance such as ERCC, UN-OCHA, IMO, etc.).

3.2.4 Relationships with Contracting Parties requested to provide assistance

Any Contracting Party in need of assistance to deal with a pollution incident may request assistance from other Contracting Parties (including EU). The requesting Contracting Party shall follow as much as possible the recommendations contained in Part II of this Guide and use the dedicated forms which appear in the attached annexes (*Annex II.3 and Annex II.4*).

3.2.5 Relationships with response providers

An affected Contracting Party may search for specific response resources and contact directly response providers. Again, the affected Contracting Party shall follow the recommendations and procedures contained in Part II of this Guide and use the forms proposed in the set of Annexes related to emergency procedures.

3.2.6 Relationships with compensation organisations for ships pollution incident

The speed with which claims are settled depends on how long it takes for claimants to provide the information required. It is advisable to contact those bodies likely to be involved in paying compensation (and their technical advisers) as soon as possible after an incident to discuss the presentation of claims.

Claimants should submit their claims as soon as possible after the damage has occurred. For incidents involving the IOPC Funds, an incident-specific claims form will be made available on the IOPC Funds' website.

If a formal claim cannot be made shortly after an incident, the 1992 Fund should be notified as soon as possible of a claimant's intention to present a claim at a later stage.

Claimants will lose their right to compensation from the ship-owner and his insurer under the 1992 Civil Liability Convention unless they bring court action against them within three years from the date when the damage occurred. Similarly, claimants will ultimately lose their right to compensation under the 1992 Fund Convention unless they bring court action against the 1992 Fund within the same timeframe, or make formal notification to the 1992 Fund of a court action against the ship-owner or his insurer within the three-year period.

Although damage may occur sometime after an incident takes place, court action must in both cases in any event be brought within six years of the date of the incident. In order to avoid their claims becoming time-barred claimants are recommended to seek legal advice if they have not been able to settle their claims. If steps have been taken to protect the claim against the 1992 Fund, any rights to additional compensation from the Supplementary Fund will be automatically protected.

It is important that Governments inform the IOPC Funds promptly of any incidents in respect of which the Funds will or may have to pay compensation. If there is a reasonable likelihood that the IOPC Funds will be involved, potential claimants should consult with the Funds and their technical experts at the earliest possible time, especially in respect of any major items of expenditure. The objective of the Funds is to compensate claimants under the terms of the Conventions; the Funds therefore regard themselves as providing an international public service, and their claims handling is conducted accordingly.

3.2.7 Relationships with insurers of offshore units and sea ports and oil and HNS handling facilities

In the case of a pollution incident originating from an offshore unit or a handling facility, the liability regime applicable is the one the country will impose on the operators of offshore units and of handling facilities according to the national law. Governments shall require the operators of offshore units and handling facilities to have insurance or financial guarantee for covering their liability in case of pollution.

Therefore it is important that relations are established with the insurers immediately after the pollution incident occurs.

3.3 Types of Requests and Offers of Assistance Scenarios

Where coordination and arrangements for provision of oil spill response resources do exist, they are mainly made by a contract between shipping companies, offshore units, or oil handling facilities and an oil spill response organisation that maintains a stockpile of equipment, trained oil spill response experts, and the logistical support to deliver both to the location of a larger spill. Few arrangements exist between governments and oil spill response organisations. Industry may maintain and operate locally the appropriate initial oil spill response equipment and resources for small and most probable spills.

For response to maritime incident involving chemical substances the European chemical industry has developed the ICE scheme which promotes mutual assistance within the chemical industry.

When the spills are larger in magnitude, then pre-established mechanisms or arrangements should be in place to ensure the availability of adequate pollution response equipment and resources within an effective timeframe.

EMSA, as part of the European Union Civil Protection Mechanism, has developed pre-established mechanisms and arrangements to ensure the availability of oil spill response equipment under agreed conditions.

When a marine pollution incident reaches a level that exceeds the response capabilities of the affected Contracting Party that Party will initiate the process of requesting assistance. To that end the affected Party will likely employ one or more of the possible mechanisms for cooperation and assistance. The following presents possible types of mechanisms for requests and offers of assistance.

3.3.1 Government of affected country to Government of a Contracting Party

In accordance with Article 12 para. 1 of the Prevention and Emergency Protocol, any Contracting Party requiring assistance to deal with a marine pollution incident, may call for assistance from other Parties, either directly or through REMPEC. Parties so requested shall use their best endeavours to render this assistance. This "Government to Government" mechanism for requesting assistance includes all interactions and transactions related to cooperation and international assistance between the designated competent national authority for dealing with international assistance of the affected Contracting Party and similar authority of any other Contracting Party. A request for assistance or offer of assistance may also be addressed to, or come from, a government which is not Party to the Protocol or from the region. In some cases, requests made by the Requesting Country to an Assisting Country may result in the Assisting Country recommending contact with the private sector (such as oil spill contractors, equipment vendors and manufacturers, as well as any oil company/facility which

might have equipment to offer) within its country. However, in such case the Requesting Country remains free to choose the private response provider it intends to contract with.

3.3.2 Government of affected country(ies) requesting through REMPEC assistance from Government(s) of other country(ies)

REMPEC according to the Prevention and Emergency Protocol and its functions shall assist Contracting Parties which so request in obtaining assistance from other Contracting Parties. When the possibilities for assistance do not exist within the Mediterranean region, REMPEC shall assist in obtaining international assistance from outside the region. This “Government to REMPEC” mechanism for requesting assistance includes all interactions related to cooperation and international assistance between governments of Contracting Parties requesting assistance and REMPEC and those offering assistance. REMPEC may play an important role in facilitating and coordinating the offers of assistance.

REMPEC will help locate the requested equipment and resources from the relevant competent authorities of the Contracting Parties and facilitate communication between the relevant competent authorities of the Requesting Country and those of the Contracting Party which may be able to provide assets or indicate their availability on the private market.

REMPEC may also in some cases facilitate obtaining technical and financing support. REMPEC does not, however, interact directly with the private sector (spill contractors, equipment manufacturers or other private companies with response equipment) within the Contracting Party countries.

3.3.3 Government of affected country preferably through REMPEC to mechanisms for assistance (IMO, UNEP/OCHA Joint Unit, DG ECHO/ERCC)

Party to the OPRC Convention and to the OPRC/HNS Protocol may ask, directly or through REMPEC, IMO to assist in identifying sources of provisional financing. Similarly, in case of a major environmental pollution incident, assistance may be requested from UNEP/OCHA and/or the European Union Civil Protection Mechanism (DG ECHO/ERCC). This mechanism for request of assistance would be mainly used in exceptional circumstances when human health, livelihoods and the environment are threatened and affected on a major scale following a disaster or a conflict or an act of terrorism, in particular when there are no liability and compensation mechanisms which can be activated for covering the cost of response operations and economical and environmental damages.

When so requested IMO will, in cooperation with the UN financing mechanisms (WB, UNDP) and EU, launch a process for collecting financing support. This mechanism for request of assistance would include all interactions related to cooperation and international assistance between the governments of Contracting Parties requesting assistance, REMPEC and these mechanisms for assistance and financing mechanisms. REMPEC with the support of IMO will play an important role in facilitating and coordinating this assistance.

3.3.4 Government of affected country to Responsible Party - private sector-response contractors

Among the measures the relevant competent authorities of an affected Contracting Party may take, one is to request the Responsible Party (shipowner/master of the ship, operator of offshore unit, operator of oil or chemical handling facility) to take response actions. In the absence of appropriate actions or insufficient actions the relevant national competent authorities may contract the private sector such as salvors, spill response contractors, equipment providers, as well as any oil company response centre that might have equipment to offer. This mechanism for requesting assistance will

include all interactions and transactions between the relevant competent authorities of the affected country and the Responsible Party and with response contractors for ensuring the availability of combating equipment and personnel.

3.3.5 Responsible Party to response contractors

This mechanism includes all interactions that the Responsible Party (or its representatives) has directly with the private sector such as spill contractors, equipment manufacturers and vendors. While the transactions and negotiations that take place via this mechanism will be conducted primarily by the Responsible Party (or its representative), once the process of mobilising response resources has been triggered, the relevant national competent authorities of the affected country should be fully informed, approve the mobilisation and track these mobilisations to maintain overall awareness of the situation concerning the specific types and amounts of resources that will be entering their borders and take the appropriate actions related to these mobilisation (see Part III and Part IV). They should establish and maintain relationships with the response contractors contracted by the Responsible Party.

3.3.6 Responsible Party to Assisting Country and REMPEC

This mechanism includes all interactions that the Responsible Party (or its representatives; spill contractors) has directly with an Assisting Country and REMPEC. There may be cases where an Assisting Country or REMPEC might be willing or able to facilitate or negotiate directly with the Responsible Party or their spill contractor to mobilise a specific piece of equipment or response resource. Once the mobilisation process has been triggered, as with the other mechanisms, the relevant national competent authorities of the affected country should be fully informed, approve the mobilisation and track these mobilisations to maintain overall situational awareness of the specific types and amounts of resources that will be entering their borders and take actions as appropriate.

Diagrams of relationships between REMPEC and other Organisations

Diagram 1	<p>This diagram relates to cooperation and mutual assistance in cases of Tier 2 or Tier 3 situations when an affected Contracting Party is requesting assistance to other Contracting Party as well as to response providers or industry arrangements; and, when REMPEC will provide technical advices and assistance of experts (through the mobilisation of the MAU) and has mostly an advisory and facilitating role.</p>
Tiers 2 & 3	<p>Type of situations: Tier 2 or Tier 3 situations relate to intermediate or large pollution when the mobilisation of the require response resources can be obtained from the Contracting Parties and the industry within the regional frame.</p>

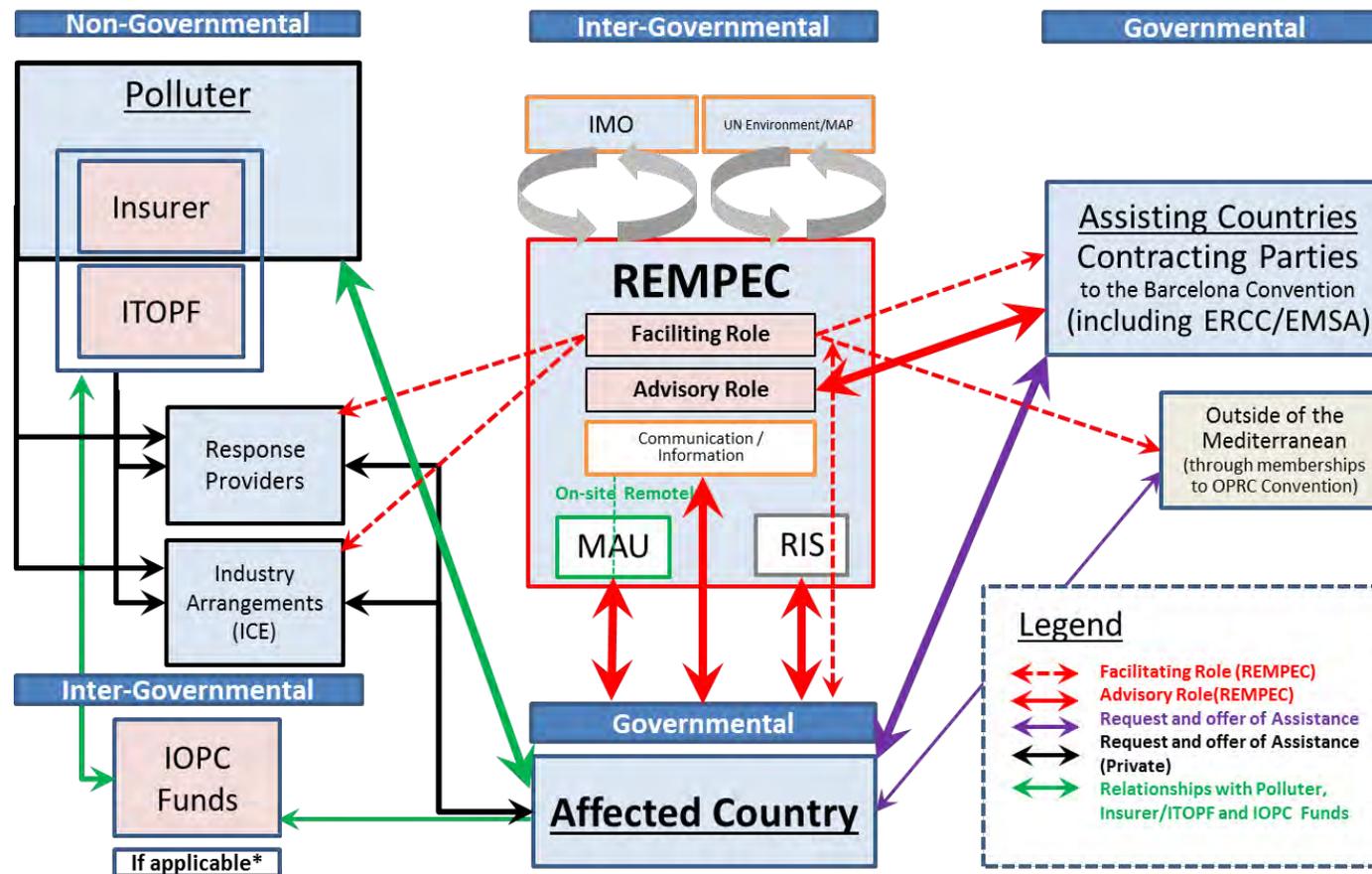
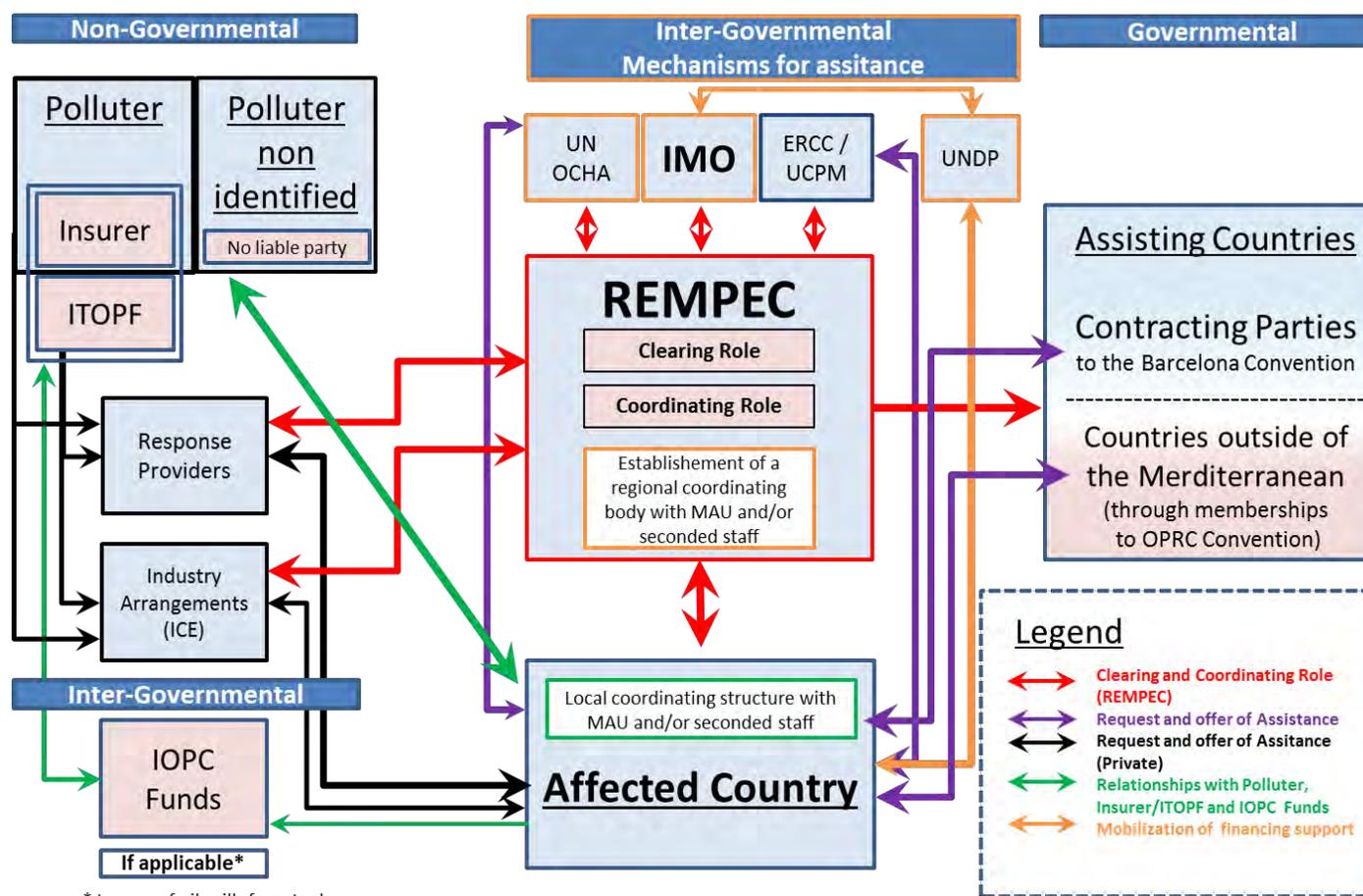


Diagram 2

Exceptional circumstances

This diagram relates to exceptional circumstances and to large and complex pollution leading to a massive mobilisation of response means provided by various sources (from the region and outside the region) that may include situation where there are no immediate liable parties raising the issue of financing international assistance. Means mobilized will come from intergovernmental mechanisms, individual governments, non-governmental organisations, private companies.

Situations where REMPEC will play a clearing and coordinating role in order to avoid duplication of means and inadequacy of the assistance offer and ensure a good coordination of the mobilisation of the resources.



PART II

REQUEST AND MANAGEMENT OF INTERNATIONAL ASSISTANCE

(OPERATIONAL PROCEDURES)

Part II details the procedures for the management and organisation of cooperation and international assistance.

Chapter 1 Procedures for request and offer of assistance

Chapter 1 provides step by step guidance for reporting, requesting and offering assistance up to the termination of the operation supported by a flowchart, attached at the end of this chapter. It proposes a set of standard forms to facilitate the request and offer of assistance at regional level.

1.1 National preparedness and response system, a pre-requisite

1.1.1 General Principles

According to the OPRC Convention (Article 6) and to the Prevention and Emergency Protocol (Article 4) the Contracting Parties shall establish and maintain a national system for responding promptly and effectively to marine pollution incidents. Such system shall include the designation of: the competent national authority responsible for combating marine pollution incidents; the competent authority responsible for receiving pollution reports; and the responsible authority in charge of cooperation and international assistance. This information shall be communicated to the other Contracting Parties and to REMPEC, and these requirements are a pre-requisite for successful cooperation and international assistance. (*Annex I.2*)

With a view to ensuring an efficient coordination of regional and international assistance, it is recommended that the national system makes a clear distinction between the management of international assistance and the management of operational response measures. To that end, the National Contingency Plan should establish a dedicated management structure for cooperation and mutual assistance to respond to marine pollution incidents, which is to be activated when needed.

The management structure for international assistance shall act in full coordination with the command structures for operational response established by the National Contingency Plan to which it should endeavour to provide the required support. The management structure for international assistance shall provide support to the national response authorities and to the industry which might take part in the response operation in particular in managing and coordinating the provision of personnel, equipment and other resources and taking care of logistic support, immigration and customs formalities. The National Contingency Plan shall determine the functions and tasks of the management structure for international assistance as well as designate the members of the structure. The National Contingency Plan shall, in particular, designate the authority having the overall responsibility for requesting, accepting or deciding to render assistance. A robust system of processes for requesting, receiving, managing, and accepting international assistance from multiple sources (national governments, through the Regional Centre, the private sector, ...), acting as a centralised point of contact to coordinate deployment logistics of the accepted resources into the affected area, shall be established.

Working arrangements, communication and reporting procedures shall also be established.

1.1.2 Initial assessment (by the command structure for operational response)

Upon receipt of a pollution report by the designated authority/office and according to the Prevention and Emergency Protocol Article 10 para 1(a), any Contracting Party faced with a pollution incident shall “make the necessary assessments of the nature, extent and possible consequences of the pollution incident or, as the case may be, the type and approximate quantity of oil or hazardous and noxious substances and the direction and speed of drift of the spillage.” This initial assessment shall be carried out by the authority responsible for operational response.

1.1.3 Notification (by the designated authority/OPRC Focal Point -*the command structure for operational response*)

According to the Prevention and Emergency Protocol Article 10 para 1(c), any Contracting Party faced with a pollution incident shall “immediately inform all Parties likely to be affected by the pollution incident of the assessment carried out and of any action already taken or intended to be taken, and simultaneously provide the same information to the Regional Centre, which shall communicate it to all other Parties.” To that purpose the Parties shall use the mutually agreed standard form proposed by REMPEC for the notification and reporting of pollution incidents (POLREP). Details of notification and reporting procedures according to POLREP format are given in *Annex II.1 and Annex II.2*.

1.1.4 Activation of the National Contingency Plan

Based on the initial assessment the authority responsible for operational response, the command structure, may decide/propose to activate the National Contingency Plan and if the situation so requires, decide/propose to establish the management structure for cooperation and international assistance.

1.2 Request for assistance, mobilising external resources

1.2.1 Assessment of the needs (by the command structure)

The authority responsible for operational response of the Contracting Party affected by an incident will assess and determine, taking into consideration the severity of the incident including its place of occurrence, the nature and quantity of the pollutant and other relevant elements, the level of response required and whether or not to request assistance.

Experts (national or international/MAU experts) of the command structure in the field shall carry out a detailed assessment of the situation. At that stage the command structure may propose to the management structure for international assistance to request the assistance of the experts of the MAU to carry out the detailed assessment of the situation. (*Annex II.3*)

The experts in the field (Field Command Unit) shall help the On Scene Commander (OSC) and the Supreme On Scene Commander (SOSC)/ National On Scene Commander (NOSC) having the overall responsibility for response operations to identify resource constraints and limited supplies of specifically required equipment and other response resources, for the duration of the response. The command structure shall evaluate the needs for international assistance taking into account the

available national resources and resources mobilised by the Responsible Party including those from abroad.

Following the detailed assessment of the situation, the command structure shall specify, as precisely as possible, the type and quantity of equipment and products needed.

It is recommended that the requests for equipment, response resources, and technical specialists be generated by the Requesting Country's **command structure for operational response** at the Field Command structure level and formalised within the **management structure for cooperation and international assistance**

The command structure(s) and the management structure for international assistance should work closely together. It is recommended that these structures establish frequent communication to determine any changing needs and to provide updates on the arrival status of accepted offers and of resources mobilised by the Responsible Party from abroad.

It is recommended that the technical expert of the Field Command Unit then communicates the needs for resources and equipment to the **management structure for cooperation and international assistance** through the Standard Field form for request of resource (Appendix to *Annex II.4*), and, through a daily conference, call determines any changing needs and provides updates on the arrival status of accepted offers and the track of resources mobilised from abroad by the Responsible Party.

The Request for assistance can consist of:

- specified equipment only;
- specified equipment with trained personnel;
- complete strike teams;
- personnel with special expertise;
- aerial surveillance.

Strike teams referred to above consist of:

- team leader independently able to conduct the work of strike teams according to instructions from the appointed On-Scene Commander (OSC);
- trained crews and personnel for handling the equipment;
- specialised and non-specialised vessels and aircrafts;
- specialised and non-specialised response equipment;
- communication equipment and facilities;
- personal safety equipment (personal protective equipment, protective suits, breathing apparatus, etc.);
- storage capacity for limited quantities of recovered oil, etc., on board (if tank capacity is available);

1.2.2 Requesting procedure (by the management structure, on the basis of the needs expressed by the command structure)

As soon as the management structure for international assistance has been activated, it is recommended that the Foreign Ministry of the affected Party, acting on behalf of and in coordination with the management structure, provides guidance through its diplomatic channels to its embassies and missions in other Contracting Parties and contact REMPEC with a view to facilitating international assistance.

A request for assistance shall be made in a clear and precise manner (quantity, type etc.) by indicating for which purposes equipment, products and response personnel will be used.

It is recommended that the standard formats for requesting assistance provided in *Annex II.3* (Standard form for request of expert) and *Annex II.4* (Standard form for request of equipment and products) is used by the Requesting Country.

With a view to providing information to the requested Assisting Party on the specifics of the incident and the operational needs, as part of request for specific resource, the Requesting Country should use and join to the request **the Standard form for additional information (POLINF) provided in Annex II.2.**

It is recommended that, as a minimum, the Request for Assistance Form includes:

- incident name, serial/reference number and location;
- date and time of transmission;
- authorised requesting representative's name, position and contact information;
- point of contact for equipment source, including name and contact information;
- the exact number, type, and specification of the equipment requested including technical parameters of the requested assistance (e.g. voltage, frequency (pumping), capacity, couplings, plugging) with as much specification as necessary;
- other specific requirements (e.g. labelling, packing, expiration dates, language of manuals);
- date when and location where the equipment is needed, and an indication of how long it will be needed (or indicate a request for donation);
- indication as to whether the Requesting Country will provide for all the in-kind assistance/goods from all customs duties, taxes, tariffs, fees and from all export and import restrictions;
- resource delivery points, including type (land, air, maritime), name of point and location/address of point;
- whether in-country warehousing will be provided by the Requesting Country;
- whether distribution of resources within the country will be carried out by the Requesting Country;
- consignee name and contact details; and
- authorised official's name, title, organisation, signature and date signed.

Requests should also include information on relevant procedures such as:

- information on the preliminary responses to offers of assistance, including, if appropriate, descriptions of how the offer of assistance will be further evaluated within the framework of the command structure for operational response and related laws and regulations, and any applicable interagency evaluation process;
- instructions for providing detailed information about each offer of assistance from a foreign government or international organisation; and
- instructions for forwarding and transmitting any offers to the Requesting Country's nearest embassy or mission. It is recommended that the Requesting Country also provides instructions to its embassies and missions worldwide on how to deliver these offers to the appointed officer responsible for receiving and dispatching, in coordination with the command structure, the resources to the place where they will be used.
- contact details of the Ministry of Foreign Affairs (i.e. email, facsimile and telephone, contact information of specific points of contact that will require the information).

1.2.3 Terms and conditions

It is recommended to establish clear and official communication between the relevant authorities of the affected Contracting Party and those of the Assisting Party, as well as with REMPEC, regarding who will lead the negotiations.

For a request of assistance to be completely accepted and its mobilisation to the affected area can start, the Assisting and Requesting Country must agree on the specific terms and conditions of the transaction. These include:

- clear agreement and understanding of compensation expectations: whether the piece of equipment (or resource) will need to be paid for, or rented, or returned "in kind"; and,
- clear agreement among all parties regarding liability concerns, requirements for insurance, and conditions for the equipment's return (if applicable), etc. (*Annex II.7*).

In the absence of bilateral or multilateral agreements, Article 13 of the Prevention and Emergency Protocol stipulates that Parties shall bear the costs of their respective actions in dealing with pollution. If the actions are taken by one Party at the express request of another Party, the Requesting Party shall reimburse to the Assisting Party the costs of its actions. If the actions are taken by a Party at its own initiative, that Party shall bear the cost of its actions.

It is recommended that the financial conditions for the operation be agreed upon between the Requesting and Assisting Parties before the transfer of equipment or resources commences.

The Assisting Party shall be prepared to give information on the financial consequences connected with the requested assistance. The Assisting Party shall use its best endeavours to bring about the requested assistance and to decide to what extent the request can be complied with. The Assisting Party shall be prepared to appoint liaison officers to the staff of the command structure and/or the management structure of the Requesting Party in order to secure necessary knowledge of rendered national resource. (*Annex I.4.3*)

It is recommended that:

- general arrangements and compensation for sending, receiving and returning of equipment requested or offered be identified and agreed upon quickly once the international assistance process has started;
- the Assisting Party attach in its reply a detailed list of the equipment, systems or products available, including necessary shipping details to include dimensions, the type of fuel, and envisaged transport modalities. It is recommended that the list also indicates the equipment needed for handling such material in the port or airport of entry, the number of people required for offloading operations, and the necessary means of transportation of response material to the site of the incident. (*Annex I.4.2 B*)

1.2.4 Communication and reporting

The need for a common operating picture and accurate situational awareness for all participating parties is critical. It is recommended that the field command structure ensures that the national level, the Command Structure and the management structure for international assistance are fully aware of the rapidly unfolding situation, in particular the evolving needs for limited or critical response resources.

It is recommended that Parties consider, in practical, the establishment of Internet-based information portal(s) to facilitate the following:

- providing information to Contracting Parties, REMPEC, international organisations, or others regarding current or projected operational needs that may be met through international assistance;
- providing information regarding the level of detail required for international assistance (equipment and personnel) to ensure the most meaningful and efficient review and evaluation;
- providing portal(s) for the submission of offers of international assistance that simplify the collection of information and streamline communications regarding the receipt and status of offers;
- providing information for the media and general public about the full scope of the response effort and to publicly acknowledge, as appropriate, all who are contributing toward the response; and
- providing points-of-contact for Contracting Parties, REMPEC or international organisations to obtain additional information.

1.3 Offers of Assistance

1.3.1 From Contracting Parties

Offers of equipment from Contracting Parties that can be deployed or utilised in response operations may be made in response to a request of the affected Contracting Party or by a Contracting Party at its own initiative.

It is recommended that offers of assistance to the affected country, using a detailed offer of assistance Form (*Annex II.5*), include the following:

- the exact type and specification of the equipment offered including, to the fullest extent possible, detailed photographs of the equipment, identification of the manufacturer(s), model numbers, specification documents and, if practical, any information regarding the prior operational use of the offered equipment in related events of oil or hazardous material discharge/release;
- the current condition of the equipment and the possibility of degradation of the equipment during operational use;
- the total number or amount of each specific type or category of equipment offered;
- weight, dimensions and other physical characteristics of equipment offered;
- when and for how long the equipment would be available (or indicate donation);
- whether the equipment is being offered on a reimbursable basis or without charge, and summary of the terms and conditions of the offer if the equipment is being offered on a for-fee basis;
- means of transport required;
- where the equipment is currently located;
- the location of the international airport or seaport from which the equipment will be transported;
- whether the offering government or organisation will transport the equipment, and the terms and conditions under which transportation is offered including any export or customs restrictions that may apply under the offering government's national laws;
- resource delivery points, including type (land, air, maritime), name of point, and location/address of point;
- any special logistic problems that may be encountered in transporting or deploying the equipment;
- any specific conditions regarding use of the equipment by the offering Party or organisation;
- estimates of the time required to make the equipment available for transfer;

- contact information for authorised points-of-contact who are knowledgeable about relevant technical details of the offered equipment and would be available to discuss additional technical or operational details with technical specialists;
- expectations regarding the cleaning and repair of equipment before it is returned to the Assisting Country; and
- authorised official's name, title, organisation, signature and date signed

With respect to offers of personal, technical, advisory or expert assistance from a Contracting Party or international organisation, such detailed information to be provided to the Requesting Contracting Party may include, but are not limited to, the following:

- the credentials and/or a brief description of the experience of each individual who would provide assistance;
- an assessment of the capability of each individual engaged in response operations to speak and read in the official language of the country, and the availability of effective translation services if a language barrier is expected;
- each individual's availability in terms of (1) how quickly the individual can be deployed to response operations, (2) for how long the individual can be deployed and (3) any requirement for the individual to depart the site of operations over the anticipated deployment period;
- any costs the receiving government would be expected to defray (e.g. airfare, lodging, per diem, compensation costs for the salary paid during assistance);
- whether the Contracting Party or organisation would facilitate direct communications between the individuals offering to provide assistance and technical specialists of the Requesting Country to further evaluate the offer;
- any special requirements of the offering Contracting Party or organisation regarding the status of the individual during any deployment period (e.g. requirement that the individual have the status of embassy technical staff); and
- setting up means to ensure the personal safety and security of individual responders while assisting in the affected country, as well as ensuring their indemnity against any existing responder liability laws within that country.

1.3.2 From mechanisms for assistance (intergovernmental mechanisms UN-OCHA, DG ECHO/ERCC)

Offers of equipment from mechanisms for assistance that can be deployed or utilised as a contribution to a large response operations may be made following a request made jointly by REMPEC and the affected Contracting Party in case of major pollution and/or exceptional circumstances.

Each mechanism for assistance shall facilitate and coordinate the provision of assistance which can be mobilised through its own assistance mechanism. It should ensure that the assistance provided is consistent with the request and the needs of the affected country. These offers of assistance provided as a contribution to an intervention led and coordinated by REMPEC in case of major pollution and exceptional circumstances will imply good coordination among these mechanisms and REMPEC in order to avoid duplication of means and inadequacy of the assistance offer

With respect to offers of assistance from mechanisms for assistance detailed information shall be provided to REMPEC and the affected Contracting Party, that should include similar information as mentioned above. The standard form for offer of assistance may be use for that purpose.

1.3.3 From private sector

Offers from private entities following a request from the management structure for international assistance of the affected Party.

Following the advice of the response structure, the management structure for international assistance may negotiate directly with response providers, equipment manufacturers or centres of expertise in foreign country to obtain the exact piece of equipment or expertise required.

Offers initiated by private entities

During a large, complex or significant spill response, unsolicited offers may come in from private entities to provide equipment, resources and technical personnel. It is recommended that the unsolicited offers be forwarded to the management structure for international assistance, even if these are received directly by the Field Command Unit.

It is recommended that:

- the management structure for international assistance, log each of these offers and track the status of the replies, including the times they were sent and their contents;
- the management structure for international assistance, create a list of offered equipment and resources and share this regularly with the Field Command Unit, as a need may arise later in the response for some of the equipment and resources offered;
- Some offers may need to be rejected if the equipment or resources offered are clearly not needed or appropriate and are not anticipated to be needed later in the response.

1.3.4 Acceptance and declination (evaluation of offers)

As solicited and unsolicited offers come in, it is recommended that:

- they be logged and their status tracked as they are processed and evaluated, and later accepted or declined;
- the management structure for international assistance be sufficiently staffed and trained to handle this set of processing procedures.

When an affected country has received an assistance offer, whether solicited or unsolicited, it is recommended that the affected country responds with a receipt/acknowledgement of the offer (*Annex II.5*), including:

- name(s) of person(s) who have received the offer;
- date and time at which the offer was received; and
- proposed date of acceptance/decline decision notification to the offering Party.

One of the primary objectives of a successful international assistance system is to ensure that the offers aid and support the response, using only the necessary tools, and not to hinder the progress of the response with unnecessary, unwanted or outdated equipment.

It is recommended that an evaluation team be established, charged with receipt, evaluation, and acceptance/decline of these offers. It is critical to the success of international assistance that the evaluation teams include a technical specialist(s) who is closely involved in the response and is intimately aware of specific and evolving response needs in detail, such as the type and kind of skimmer, boom, or other equipment.

When an affected country has made a decision with respect to accepting or declining an offer, it is recommended that the affected country responds to the Offering Party with an Acceptance/Decline Communication Form (*Annex II.6 / Annex II.7*) that may include:

- the name/descriptor of each offer and the decision made regarding the offer (accepted, declined, or on hold);
- for each offer accepted, include the date when the resource is needed, name and location of delivery points and transportation mechanism for the resource;
- for each offer declined, include the rationale for declining the offer; and
- authorised official's name, title, organisation, date and signature.

1.4 Resources mobilised by the Responsible Party at its own expense

1.4.1 Following the request of the government of the affected country to take measures to combat the pollution, mobilisation of resources by the Responsible Party at its own expense

The relevant competent authority of the affected country may request the owner of a ship, the operator of an offshore unit or the operator of a handling facility to take response measures aiming at controlling, minimising and combating the pollution within the limit of its liability. That may lead the Responsible Party to mobilise combating resources from abroad and bring them into the affected country at its own expense.

In that case the relevant authorities from the command structure and the management structure will ensure that the procedures for the mobilisation of international assistance will apply.

Once the international assistance process has been triggered, the relevant national competent authorities of the affected country should be fully informed and should track these transactions to maintain overall situational awareness of the specific types and amounts of resources that will be entering their borders and take the appropriate actions related to this mobilisation. They should establish and maintain relationships with the response contractors contracted by the Responsible Party.

1.4.2 At its own initiative and with the agreement of the affected country, mobilization of resources by the Responsible Party at its own expense

In case of large and major pollution incidents, the polluter (Responsible Party) may/will mobilise response equipment from abroad. It will be imperative that the relevant authorities, management structure for dealing with international assistance, in cooperation with the command structure ensure that:

- the combating resources, that the polluter intends to bring in the country, will be in conformity with the national response strategy and the restrictions on or the preference for the use of selected response techniques based on spill location, environmental conditions, proximity to sensitive areas (approval and conditions for the use of dispersants), waste disposal and treatment regulations;
- the procedures for request of international assistance regarding in particular, customs and immigration, will apply to expedite the importation of international resources.

The National Contingency Plan should identify which response methods and techniques should be used and in what circumstances, including elimination of the source of pollution, containment and recovery of floating oil at sea, use of dispersants, protection of sensitive areas, and shore clean-up.

Approval by the command structure and the management structure for international assistance, to be established under the National Contingency Plan, shall be required when the operator or the person designated in the emergency plan of an offshore unit or a handling facility requests the assistance from abroad of personnel, equipment, products provided by the industry. (This refers in particular to means made available by regional or global stockpiles run by the industry).

1.5 Joint response operations carried out by neighbouring countries

“Joint response operations” means all pollution response operations in which personnel, equipment, products and/or other means, of at least two neighbouring countries directly affected or under threat of being affected are involved. (Annex II.4.2)

This refers to a marine incident of such magnitude, which causes or is likely to cause pollution, and which can possibly affect one or more Contracting Parties, that calling for assistance from the other threatened parties, is justified. The incident might be a spill, which occurs in the area of responsibility of one Contracting Party and threatens the area of responsibility of another one.

The relevant Authority of the Contracting Party in whose area of responsibility or interest the pollution incident has occurred shall, after receiving and verifying the initial assessment report, immediately inform the Operational Authorities of the other Contracting Parties through their national Contact Points as well as REMPEC.

1.5.1 Cooperation among the neighbouring countries (request/offer of assistance) and coordination of the mobilisation of the resources

A request for assistance, on the basis of the response structure requirements and advice, may be sent following the activation of the National Contingency Plan or/and the bilateral or multilateral contingency plan, by the relevant authority of the management structure of the affected Contracting Party to the relevant Authorities of the threatened Contracting Parties using the Standard form for request of Assistance (*Annex II.3*).

Unless a bilateral or multilateral contingency plan addresses the issue of pooling resources in case of emergency, the procedures for mobilising and coordinating response resources described in this Guide should apply. The national resources of the affected Contracting Party will be supplemented as necessary by the personnel and means rendered as assistance by the neighbouring (threatened) Contracting Parties upon the request of the management structure of the affected Party.

Information concerning aircraft suitable for spill surveillance (including technical characteristics and specialised equipment), to which each Contracting Party has access should be exchanged by the Contracting Parties, preferably through REMPEC. This is valid both for aircraft belonging to the Parties or for those belonging to the industry.

The leading role will be assumed by the command structure of the Contracting Party whose area of responsibility has been affected or is likely to be affected by a pollution incident and who has requested assistance.

When the major part of the pollutant has moved from the area of responsibility of the Contracting Party who had initially requested assistance, to the area of responsibility of another Contracting Party who is also requesting assistance, the two Parties may agree to transfer the lead role from the first Party to the other.

1.5.2 Request of international assistance by each individual country, and management of external offers of assistance made to each individual country (coordination)

In case of large and major pollution affecting more than one country, in addition to pooling together their own resources, each country may individually request international assistance. In such a situation, where for the same event countries may individually request international assistance, there is a need for a strong co-operation among the countries concerned for the evaluation of the need for international assistance and for the mobilisation and coordination of the deployment of the combating resources. In such case the affected countries may request the assistance of REMPEC for coordinating the international assistance. In cooperating, the affected countries should keep in mind all the financial implications of their actions.

1.6 Dispatching of resources

The Principles and Guidelines concerning the sending, receiving and returning of equipment in case of international assistance operation in *Annex I.4.2 / B* shall apply.

1.6.1 Role and responsibility of the Assisting Country for dispatching resources

The role and responsibility of the Assisting Country are to oversee and authorise the release of government-owned and private sector equipment and personnel, whose movement may be restricted due to a need to meet minimum requirements of response capacity.

It is recommended that the Assisting Party

- attach in its reply (*Offer of Assistance Form – Annex II.4*) a detailed list of the equipment, systems or products available, including necessary shipping details to include dimensions, the type of fuel, and envisaged transport modalities. It is recommended that the list also indicates the equipment needed for handling such material in the port or airport of entry, the number of people required for offloading operations and the necessary means of transportation of such response material to the site of the incident;
- determine minimum standards of:
 - training required to operate equipment sent to the Requesting Party;
 - safety required to operate equipment sent to the Requesting Party;
 - maintenance required to operate equipment sent to the Requesting Party;
 - security required to operate equipment sent to the Requesting Party.

1.6.2 Role and responsibility of the management structure of the Requesting Country to receive and dispatch, in coordination with the command structure, the resources to the place where they will be used

The management structure for cooperation and international assistance should act as a centralised response point of contact for processing requests, receipt, evaluation and acceptance of offers of international assistance from multiple sources (national governments, REMPEC, the private sector, etc.) and to coordinate logistics of the deployment of accepted resources into the affected area.

The management structure shall:

- appoint an authority to receive the equipment, products and/or personnel, and ensure control of operations from the moment equipment, products and personnel arrive in the country and while these are conveyed to and from the scene of operations;

- make arrangements for the rapid entry of equipment, products, and personnel prior to their arrival and ensure that customs formalities are facilitated to the maximum extent. It is recommended that equipment be admitted on a temporary basis and that products be admitted free of excise and duties;
- supply all that is needed for the correct operation and maintenance of equipment and provide accommodation and food for response teams;
- ensure that ships are granted all necessary authorisations and aircraft cleared to fly in the national air space, should ships and aircraft be provided. It is recommended that a flight plan or a flight notification be filed and accepted as an authorisation for aircraft to take off and land ashore or at sea outside regular customs airfields;
- return all unused products and ensure that equipment is returned or compensated for as agreed in advance, once response operations are complete;
- send to the appropriate authorities or representatives of the Assisting Party a report on the effectiveness of equipment, products and personnel provided; and
- record the equipment that has been used as well as its whereabouts and any other relevant information.

The command structure shall ensure that when requested equipment has to be used by national personnel such personnel is fully qualified for that task.

1.7 Operational command of the resources mobilised in the context of international assistance

The government of the affected country has the overall responsibility to take and enforce measures to protect its coastlines or related interests from pollution or threat of pollution. Therefore although the national systems may be different (e.g. *the government is fully in charge of response operations, or the Responsible Party under the overall control and supervision of government authority carries out response operation, or a combination of the two systems according to the circumstances*), the operational control and supervision of response operation shall be exercised by the relevant authorities of the Requesting Country.

1.7.1 The command structure of the Requesting Country shall have the overall operational control and supervise response operations

Personnel from Assisting Country shall execute their tasks and duties under the operational control and supervision of the command structure of the Requesting Country, following the decisions of the command structure (operational authority, Supreme On-Scene Commander) and the tactical command of their respective team Leaders and unit Commanders.

The command structure shall, in addition to assuming overall Operational command/control, be specifically responsible for coordinating actions taken by national means (strike teams, vessels, aircraft) of the Requesting Country with those taken by the means of the Assisting Parties (government, private sector).

The management structure shall appoint an officer responsible in the field (within the field command structure) for receiving the personnel, equipment, products and/or other means from the Assisting Country/parties and for facilitating their integration in the response operations from the moment of their arrival in the country to the moment of their departure. This officer shall closely collaborate with the Liaison Officer of the Assisting Country/party.

1.7.2 Operational arrangements in case of joint response operations by neighbouring countries

If a pollution incident which has occurred in the area of interest of one country directly (imminently) threatens the interests of another country, the countries, in the absence of a bilateral or sub-regional agreement, may agree in direct contacts between their command structure Operational Authorities, that the threatened country will assume the lead role (operational control and supervision).

The countries may agree that the lead role shall be transferred from that country to another, when the major part of the pollutant has moved from the area of responsibility of the country who had initially requested assistance, to the area of responsibility of the other country who is now affected and who is requesting assistance.

The transfer of the lead role in cases when the major part of the pollutant is moving from the area of interest of one country to the area of responsibility of another country shall be agreed upon after consultations between the countries concerned.

The lead country shall be responsible for surveillance of the pollution, assessment of the situation, spill movement forecasting, reporting, exercising Operational Command over Joint response operations

The Principles and Guidelines concerning arrangements and operational procedures which could be applied in case of a joint operation (Annex I.4.2/C) shall apply.

1.7.3 Use of dispersants

The Requesting Country shall inform the other Assisting Parties (government, private sector) on its policy regarding the use of dispersants. The information shall include a list of the dispersants approved for use in the territorial waters of the Requesting Country together with an indication of the zones where the use of dispersants is allowed, restricted or prohibited, as well as any other information deemed relevant.

1.7.4 Disposal and treatment of wastes

The Requesting Country shall inform the other Assisting Parties (government, private sector) on its policy regarding the disposal and treatment of waste collected during the response operations. The information shall include clear indication of the place where the wastes shall be temporarily stored and disposed of, and of the pre-treatment the wastes may need to be subject to.

1.7.5 Maintaining liaison between the Assisting Party and the Requesting Country during the response operations, according to circumstances

The liaison between the Assisting Party and the Requesting Country during the response operations shall be maintained, through:

- direct contacts, through the Liaison Officer of the Assisting Party integrated in the staff of the SOSC/OSC the field command structure; (*Annex I.4.3*)
- situation reports (*Annex II.8*) during the entire period between the dispatching of resources and the termination of assistance.

The Requesting Country shall keep the Assisting Parties and REMPEC regularly informed through situation reports SITREP (*Annex II.8*) on:

- development of the situation regarding a pollution incident;
- actions taken to combat pollution;
- progress of response operations; and
- record of the resources used.

1.8 Termination of assistance

1.8.1 Termination by the Assisting Party

If the circumstances so demand, the Assisting Party can fully or partly terminate its assistance. Information on the termination shall be communicated to the competent authority of the Requesting Party.

1.8.2 Termination by the affected country

The progress of the response and clean-up operations should be monitored and as the activities wind down, resources should begin to be demobilised, and ultimately, a decision should be made to terminate the response. When this decision is made, the response enters the remediation or restoration phase to monitor or enhance natural recovery of the impacted areas.

International assistance shall be terminated when, according to the judgement of the command structure:

- pollution response measures have been finalised and the pollutant no longer threatens the interests of the Requesting Country; or
- the situation has reached a point where the response capabilities and resources of the Requesting Country are sufficient for successfully finalising the response activities.

Once the decision regarding the termination of international assistance has been taken, unless otherwise agreed, all personnel, equipment, unused products and other means which were involved in response operations shall return or be returned to their respective countries of origin. Returned equipment shall be in the best possible working order (clean and repair *guidelines in Annex I.4*);

1.9 Possible role of REMPEC in coordinating international assistance

In conformity with its mandate REMPEC, when so requested in case of emergency, can assist the affected Contracting Party in:

- providing advice, technical information and expertise (facilitating role)
 - helping the command structure in the field in carrying out a detailed assessment of the situation;
 - helping the command structure to evaluate the needs for international assistance and to specify, as precisely as possible, the type and quantity of equipment and products needed;
 - helping the management structure in identifying from whom to get assistance;
 - evaluating of offers of assistance;
 - providing technical advice;
 - facilitating communication and exchange of information;

- facilitating relationship with different parties involved.
- coordinating international assistance (coordination role)
 - assisting in identifying sources of assistance from outside the region;
 - in exceptional circumstances, by helping in mobilising response resources and financing support, in particular through the mechanisms for assistance and UN financing mechanisms;
 - liaising with mechanisms for assistance and coordination of international assistance

Flowchart of steps to follow regarding request of regional and international assistance in cases of marine pollution incident

1. RECEIPT OF POLLUTION REPORT

By the designated authority/office (MARPOL: Art. 8, Para. 2.1)
From the Master of a ship, the Operator of an offshore unit or the Operator of a handling facility.

2. INITIAL ASSESSMENT

By the designated Authority/Office which is responsible of follow-up actions upon receipt of a pollution report (the Command structure).

3. NOTIFICATION

By the designated Authority/OPRC Focal Point (the command structure) **to** all the Contracting Parties who are likely to be affected and **to** REMPEEC **by filling** the pollution report (**POLREP**), starting with the **POLWARN** and continue to update accordingly further development **by using** the **POLINF**.

By: OPRC Focal Point

POLREP: Part I : POLWARN Part II : POLINF

To: All Contracting Parties likely to be affected & REMPEEC

4. ACTIVATION OF THE NATIONAL CONTINGENCY PLAN

Setting up of the Command structure and the Management structure for cooperation and international assistance.

5. ASSESSMENT OF THE NEEDS BY THE COMMAND STRUCTURE
(Experts in the field shall carry out a detailed assessment of the situation)

5.1 The assistance of MAU Experts may be requested to carry out the assessment. The Command structure shall specify the nature of the expertise required and **fill-in** the **Request of MAU Experts Form**.

By: Command structure

Request of MAU Experts Form

To: Management structure

5.2 Based on the Experts assessment, a **Request of Equipment and Products Form** shall be **filled-in** by the Command structure.

By: Command structure

Request of Equipment and Products Form

To: Management structure

6. REQUEST OF ASSISTANCE BY THE MANAGEMENT STRUCTURE FOR COOPERATION AND MUTUAL ASSISTANCE
(Based on the request and the needs expressed by the Command structure)

6.1 Send a request of MAU Experts **by filling** the **Request of MAU Experts Form**

By: Management structure

Request of MAU Experts Form

To: REMPEEC

6.2 Send a request of Equipment and Products **by filling** the **Request of Equipment and Products Form**:
- directly **to** other Contracting Parties or **to** other Contracting Parties **through REMPEEC** (facilitating role) and/or;
- outside of the Mediterranean region directly or **through REMPEEC** (facilitating role)

By: Management structure

Request of Equipment and Products Form

To: Contracting Parties directly or through REMPEEC

and attach the **Standard form for additional information POLINF** provided in *Annex II.2 - page 92*.

7. OFFERS OF ASSISTANCE

It is recommended that the Party offering assistance [to](#) the affected country [by filling](#) the proposed detailed Assistance Form

By: [Assisting Party](#)

Offer of Assistance Form

To: [Affected Country](#)

8. ACCEPTANCE OR DECLINE OF OFFERS OF ASSISTANCE

Acknowledge receipt of an offer of assistance [by filling](#) the **Standard Form**;

Evaluation and Negotiation of offers (Ref. : Appendix items to consider);

Acceptance or Decline/On Hold [by filling](#) the **Standard Forms**.

By: [Management structure](#)

Acknowledge receipt Form

To: [AssistingPartie\(s\)](#)

By: [Management structure](#)

Acceptance Form

To: [AssistingPartie\(s\)](#)

By: [Management structure](#)

Decline / On Hold Form

To: [AssistingPartie\(s\)](#)

9. MOBILISATION, RECEIVING, AND DISPATCHING THE RESOURCES

Make all the necessary arrangements for the mobilization, receipt and dispatch of the requested resources;
Maintain a record of the resources used.

10. KEEP THE ASSISTING PARTIES AND REMPEC REGULARLY INFORMED

Inform with a situation report [by filling](#) the **SITREP standard Form**.

By: [Affected Country](#)

SITREP

To: [REMPEC & Assisting Partie\(s\)](#)

11. TERMINATION OF ASSISTANCE/DEMOBILISATION

Send a Notice of termination [to](#) REMPEC and the assisting Parties.

By: [Affected Country](#)

Notice of TERMINATION

To: [REMPEC & Assisting Partie\(s\)](#)

STEP	Form	Annex
3.	POLREP	Annex II.2
5.1 & 6.1	Request of MAU Experts	Annex II.3
5.2 & 6.2	Request of Equipment and Products	Annex II.4
7.	Offer of Assistance	Annex II.5
8.	Acknowledge receipt	Annex II.6
8.	Acceptance	Annex II.7
8.	Items to consider by both Parties	Appendix to Annex II.7
8.	Decline / On Hold	Annex II.8
10.	SITREP	Annex II.9

Chapter 2 Administrative, Legal and Financial Aspects

This Chapter gives useful information on administrative, legal and financial aspects related to the requests and offers of assistance.

2.1 Administrative aspects

Once the management structure of the affected Country has accepted solicited and unsolicited offers of assistance from other countries and private entities including the bringing of combating resources by the Responsible Party, it shall, in particular:

- make the necessary arrangements for accommodation and transportation, within the country, of all assisting personnel;
- take the necessary measures to provide the following facilities for equipment and other means received from the assisting Parties:
 - safe storage space or parking places, as appropriate, including cranes, fork-lifts and other handling equipment, as necessary;
 - fuel, lubricants and basic repair and maintenance facilities.

As regards the stay in the territory of the Requesting Country, of vessels and aircraft rendered as assistance by other Parties, the management structure shall take the necessary measures to ensure assistance to the crews at airports and in ports, as appropriate, and to provide security services for ships, aircraft and related equipment, while these are in ports or at airports of the Requesting Country.

2.1.1 Customs

The management structure shall determine how best it can facilitate the entry of the equipment, property or personnel from Assisting Parties into its own territory. These may be government or private sector owned resources or REMPEC experts. To that end, the management structure shall ensure that measures are taken to facilitate the arrival of accepted resources, including expeditious processing or complete waiver of customs and visa requirements.

The management structure shall also provide regular information and updates to arriving experts or response teams with regard to entry points, customs, and visa requirements, and other arrival arrangements.

Many countries have laws in place for customs duty and/or restriction exemptions with regard to certain types of resources imported and exported for use in emergencies. The management structure shall evaluate the applicability of such laws, if they exist within its country, for emergencies related to marine pollution incidents.

If such laws exist within the affected Country and can be applied to international assistance for pollution response, the management structure shall determine how these exemptions will be implemented for response equipment, property and personnel arriving from the Assisting Parties. International responders from the Assisting Party shall have prepared and have ready detailed manifests of their equipment or property, in order to facilitate expeditious customs processing.

2.1.2 Immigration issues

Immigration laws regarding employment of foreign nationals may require that consent be obtained for them to work within a country. For purposes of immigration, customs and excise laws, it is recommended, subject to security consideration, that affected countries consider legislating special emergency procedures, or allowing temporary easements, that could be invoked by the management structure in the event of a spill in which a foreign response organisation's services are needed. It is recommended that the management structure for international assistance coordinates closely with the appropriate national agencies or departments within the affected country to determine if any easements or provisions can be made to facilitate foreign nationals working on the spill response, if appropriate. Ideally, this coordination would occur in a planning context, in advance of a marine pollution incident.

2.1.3 Points of entry

It is recommended that all Contracting Parties and organisations consider establishing pre-identified points of entry for incoming resources when implementing an international assistance system as part of their response to a large, complex or significant oil spill. Entry points can be any type of border crossings (e.g. roads, rivers, ports, railroads, airports). It is recommended that the management structure of the affected Party makes all necessary arrangements to receive and expedite entry of the incoming resources at the points of entry, as appropriate.

2.2 Transboundary movement of response personnel, equipment, products and self-contained units

The management structure of the affected Party shall:

- make arrangements for the rapid entry of equipment, products and personnel prior to their arrival and ensure that customs formalities are facilitated to the maximum extent. Equipment should be admitted on a temporary basis and products should be admitted free of excise and duties;
- ensure that, should ships and aircraft be provided, ships are granted all necessary authorisations and aircraft cleared to fly in the national air space. A flight plan or a flight notification will be filled and accepted as an authorisation for aircraft to take off, land ashore or at sea outside regular customs airfields.

2.2.1 Overflight procedures

The management structure of the affected Party should allow aircraft of assisting parties to enter and operate in the airspace of the affected Party for one of the following purposes:

- search and rescue;
- surveillance flights;
- transportation of response personnel, equipment and products;
- spraying of dispersants or other treatment products.

A Contracting Party should make, in advance, the necessary arrangements concerning the rapid granting of permits and clearances for civilian aircraft (fixed wing or helicopters) of other Contracting Parties and other Assisting Parties who might be requested to or will take part in response operations within its airspace. Similar arrangements will be made for the use of airport facilities by civilian fixed wing aircraft and helicopters engaged in response operations.

Overflight, for the above-mentioned purposes, over the national territory or territorial waters of one of the Contracting Parties by military aircraft of other Contracting Parties will be decided on a case-by-case basis by the Parties concerned.

2.2.2 Navigation procedures

Upon the request and the approval of the management structure of the affected Party, vessels of the Assisting Parties might enter and operate in the territorial waters of the affected Party for one of the following purposes:

- search and rescue;
- salvage operations;
- pollution response operations, including containment and recovery of spilled products, spraying of dispersants or other treatment products, storage and transportation of recovered pollutant;
- transportation of response personnel, equipment and products;
- any other voyage related to pollution response operations.

The management structure of the affected Party shall make, in advance, the necessary arrangements concerning the rapid granting of permits and clearances for the navigation of civilian vessels (ships, boats, specialised anti-pollution vessels) of the other Contracting Parties and other Assisting Parties who might be requested to or will take part in response operations within its internal and territorial waters. Similar arrangements will be made for the use of port facilities by civilian vessels engaged in Joint response operations.

Navigation, for the above mentioned purposes, in the internal or territorial waters of the affected Party by naval vessels of other Contracting Parties will be decided on a case-by-case basis by the Parties concerned.

In all cases, the provisions of the International Convention on Facilitation of International Maritime Traffic, as amended, will be taken into account by the Parties concerned.

2.2.3 Personnel, equipment, products and self-contained units provided by the industry

Any personnel, equipment, products and self-contained units provided by the industry or any other entity to respond to a marine pollution incident in the territory, the territorial sea of the affected Party may need approval by the management structure for international cooperation and mutual assistance of that Party. Once approved, the management structure will facilitate their movements as mentioned above.

2.3 Legal aspects

2.3.1 Liability for injuries or damage/insurance of personnel

The management structure of the affected Party shall coordinate with the Assisting Parties to determine which party will assume the responsibility for equipment damage and loss, as well as third-party claims. A Responsible Party may obtain documented liability coverage and insurance of personnel. If suitable insurance cannot be obtained that defines the costs to either party, it is

recommended that another means of guarantee be requested. A secure means of insuring the replacement of damaged or lost equipment is to request that a bond be placed with a financial institution in the value of the equipment and include it in the cost for the loaned equipment.

In order to streamline and expedite this process of cooperation and to avoid any potential for later misunderstanding, it is recommended that the management structure of the affected Party and Assisting Party agree on the principles for compensating the potential damage suffered by third parties as early as possible, ideally already during the process of requesting, offering, and accepting the international assistance. It is recommended that both the management structure of the affected Party and assisting Party declare their willingness or non-willingness to cover damage suffered by third parties. (*Annex II.4*)

2.3.2 Medical insurance and medical assistance

Parties, i.e. Requesting Party, Assisting Parties, industry (Government, private sector) shall take the necessary measures to insure against death, illness and injury, their personnel who might participate in response operations.

The management structure of the affected Party will endeavour to offer as far as possible the best possible initial medical care and services to any person from an Assisting Party who is injured or taken ill during his/her participation in response operations.

The management structure of the affected Party will facilitate the repatriation of assisting personnel who are injured or taken ill during response operations.

The costs of hospitalisation and medical assistance rendered within the affected Party to injured or ill personnel of the Assisting Party may be borne by the Requesting Party according to medical insurance. The Requesting Party might decide to include such costs in its claims.

2.3.3 Conditions of work

The management structure of the affected Party should ensure that adequate local facilities and services are provided for administration and management of assisting Party's assets.

2.3.4 Legal framework

One of the greatest potential legal hurdles for acceptance and utilisation of international assistance involves the potential liability and financial risks that could be faced by a responder involved in response activities in a foreign country or foreign waters. Awareness of the laws applicable to the Assisting Party and its responsibilities is a key element in avoiding any possible liability issues (e.g. fines for causing secondary pollution and property damage, disputes regarding the success and termination of a clean-up operation, waste disposal regulations, etc.).

It is the responsibility of the Requesting Country to ensure that solid and systematic solutions, ready to identify relevant legal issues that may constitute obstacles to the overall objective of facilitating the provision of international assistance, do exist, and, if appropriate, to modify the legislation.

It is recommended that the management structure of the affected Party considers granting legal exemptions, in particular regarding:

- responder's immunity (partial or complete);
- product immunity protecting the supplier/manufacturer (partial or complete);
- exempting the requested/accepted equipment from all custom duties, taxes, tariffs, or any governmental fees, and exempting them from all export transit and import restrictions;
- simplifying and minimizing documentation requirements for export, transit and import;
- permitting the re-exportation of goods and equipment used, in the event that the Requesting Country is requested or required by the Assisting Party to return the items; and
- waiving or reducing inspection requirements (where this is difficult, consider using pre-clearance processes where possible to clear equipment more rapidly).

2.4 Financial aspects

In order to make commitments with foreign sources of equipment, response resources and technical specialists, the management structure for cooperation and international assistance should request spending authorisation and funds to draw upon, at either the National or the Field level. In a number of cases, there are greater efficiencies for the spending authority and funds, to be designated at the Field level. Additionally, it is important to clarify in advance the funding authorities and sources to be used during the international assistance process, as an unauthorised commitment of any kind to a foreign source, without spending authority, could ultimately impede the resources required to assist in the spill response. For these reasons, the National and Field levels should clarify and understand their financial roles based on applicable regulations before beginning the international assistance process. The management structures must have a financial section, with a financial officer at the field level.

2.4.1 Financing response measures and assistance

Financing response measures undertaken by the government of the affected country using its own resources or resources locally contracted as well as requested resources provided by foreign assisting parties may require the affected country to pay up front using its own internal funds. Reimbursement from the polluter may or may not take time, or may or may not be achievable depending on how the liability of the polluter and compensation regimes are enacted and enforced in the affected country.

Therefore, due consideration should be given to funding and reimbursement when requesting international assistance.

When a country is responding to a large or complex oil spill that requires international assistance the management structure for cooperation and international assistance should determine to what degree the Responsible Party will fund upfront the resources utilised as part of international assistance, as well as any associated and negotiated maintenance, rental, compensation or replacement costs, and transportation costs. If the affected country bears any of the upfront costs associated with obtaining, transporting, deploying, and returning resources requested through the international assistance process, the management structure for cooperation and international assistance should determine which expenses and to what extent they can fund international assistance resources and associated "out of pocket" costs, as well as by which mechanisms the management structure's costs will be recovered or compensated.

If an affected country is unable to provide "out of pocket" funds for resources from international assistance or other costs, it is recommended that the management structure for cooperation and international assistance and other relevant agencies work with the Responsible Party to determine the Responsible Party's ability to cover international assistance costs. The Assisting Party may require and accept a guarantee of payment from the Requesting Country. Such guarantee may be

obtained from the P&I Club of the ship involved or from the insurer of an offshore unit or a handling facility.

The affected country may have other avenues available to it. It is recommended that the affected country investigates whether such options are available to it prior to an oil spill situation.

2.4.1.1 Financing response measures carried out and assistance provided by Assisting Parties (Assisting Country or private contractors) at the request of the affected country

Both the OPRC Convention and the Prevention and Emergency Protocol (Article 13) contain specific provisions regarding reimbursement of cost of assistance:

The principle is that:

- Unless an agreement concerning the financial arrangements governing actions of Parties to deal with pollution incidents has been concluded on a bilateral or multilateral basis prior to the pollution incident, Parties shall bear the costs of their respective action in dealing with pollution:
 - if the action was taken by one Party at the express request of another Party, the Requesting Party shall reimburse to the Assisting Party the costs of its action. If the request is cancelled, the Requesting Party shall bear the costs already incurred or committed by the Assisting Party;
 - if the action was taken by a Party on its own initiative, that Party shall bear the cost of its action;
 - the principles laid down in subparagraphs above shall apply unless the Parties concerned otherwise agree in any individual case.
- Unless otherwise agreed, the costs of the action taken by a Party at the request of another Party shall be fairly calculated according to the law and current practice of the Assisting Party concerning the reimbursement of such costs.
- The Party requesting assistance and the Assisting Party shall, where appropriate, cooperate in concluding any action in response to a compensation claim. To that end, they shall give due consideration to existing legal regimes. Where the action thus concluded does not permit full compensation for expenses incurred in the assistance operation, the Party requesting assistance may ask the assisting Party to waive reimbursement of the expenses exceeding the sums compensated or to reduce the costs which have been calculated. It may also request a postponement of the reimbursement of such costs. In considering such a request, Assisting Parties shall give due consideration to the needs of developing countries.

These provisions shall not be interpreted as in any way prejudicing the rights of Parties to recover from third parties the costs of actions taken to deal with pollution incidents under other applicable provisions and rules of national and international law applicable to one or to the other Party involved in the assistance.

2.4.1.2 The Responsible Party may accept to pay directly the Assisting Party requested by the Requesting Country

It may be the case, in particular when the experts of the ship's insurer consider that the response resources requested, and actions planned and taken, are fully justified and reasonable, and will contribute efficiently to reduce the impact of the pollution.

When according to the national preparedness and response system it is expected that the polluter will carry out response operations and provide the majority of response resources, the polluter will support the cost of technically reasonable response measures undertaken at the request of the government or undertaken at its own initiative with the agreement of the relevant government authorities.

2.4.1.3 REMPEC assistance

REMPEC will support the initial financing of the sending of experts to provide the assistance mentioned above. In addition, in exceptional circumstances, REMPEC will do its utmost to identify sources of provisional financing to cover the cost of requested assistance.

2.4.2 Reimbursement of costs of response measures and assistance

The "Polluter Pays Principle" is a concept that is generally well-accepted throughout the world, but should be established in formal legislation or policy. Liability for the costs of a pollution incident will generally be set-out in law in relevant national legislation. In practice, national laws require that whoever caused the pollution shall pay for the response and remediation efforts in accordance with the polluter's legal liability, under the conditions of the applicable liability regime.

In case of pollution from a ship, countries may obtain prompt compensation under the international compensation regime to which they are party (1969 CLC / 1992 CLC, Fund Convention and Supplementary Fund Protocol, Bunkers Convention).

In cases where there is no owner, such as a mystery spill, or in cases where the polluter is unable to pay for the response, the government will usually pay for the response and then seek remuneration from a national pollution response fund where available or in accordance with international liability and compensation conventions to which the government is party.

In case of pollution originated from an offshore unit or a handling facility the liability regime applicable is the one the country will impose upon the operators of offshore units and handling facilities. Government shall require that operator of offshore unit and of handling facility have insurance or financial guarantee for covering their liability in case of pollution.

2.4.3 Calculation of costs of response measures and assistance

Under the international liability and compensation regime, reimbursement for actions taken during spills from vessels may be available for reasonable response measures. As a consequence, it is recommended that careful consideration be given to the mobilisation of resources to ensure they are reasonable, if compensation is to be sought subsequently through one of the relevant conventions. The IOPC Funds' claims manual has further information on admissibility of claims and claims criteria (<http://www.iopcfunds.org/publications/>). (*Annex III.1*)

Careful documentation of operational activities and their associated costs during a spill response will assist in resolving disputes over cost recovery and in the preparation of claims for compensation. In

the event of loss or damage to the equipment, insurance claims will need to be substantiated by supporting documentation.

It is important to ensure that careful documentation and explanation of operational activities is provided, and to designate and train personnel to carry out the task of keeping a log of spill-related actions and their associated costs.

It is recommended that daily records be maintained of resources mobilised by the management structure for international assistance (at the central level and at the field level), documenting as a minimum:

- Response measures: detailed records of response measures carried out during the entire operation and of the related costs incurred by parties participating in the response (establish the necessary documentation) must be kept;
- Equipment: date when mobilised, duration of use, location, initial condition, condition during and at the end of its use, operators on duty, consumables used and replacement cost; and
- Personnel: date when mobilised, number of workers on site, hours worked, compensation and attendance.

Whoever has suffered a loss caused by oil pollution damage may submit a claim for compensation, but the management structure for cooperation and international assistance may decide to collate the claims and present them together with the necessary documentation to the responsible party, insurers and / or to the IOPC Funds, or other mechanisms liable for compensation.

2.4.4 Preparation and submission of claims

When taking measures to respond to spills, but also when requesting or offering assistance, both Requesting Countries and Assisting Countries shall take into consideration the process required for the preparation and submission of claims to the IOPC Funds. Summary information concerning preparation, submission, assessment and settlement of claims is given in *Annex III.1* and *Annex III.2*.

Although applying primarily to incidents involving IOPC Funds the information included in these two Annexes also provide guidance useful *mutatis mutandis* to many other jurisdictions, including incidents in non-Fund countries, incidents involving vessels other than tankers, and other incidents causing pollution of the marine environment such as those involving offshore installations or handling facilities.

ANNEXES

Draft Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents

ANNEX I
LISTS, DIRECTORIES, INVENTORIES and GUIDELINES

ANNEX I.1

INTERNATIONAL AND REGIONAL INSTITUTIONS (GOVERNMENTAL, NON-GOVERNMENTAL)

International Governmental Institutions

1. International Maritime Organization (IMO)

Address: 4, Albert Embankment, London, SE1 7SR, United Kingdom
Tel +44 (0)20 7735 7611
Fax +44 (0)20 7587 3210
Email: info@imo.org
Web: <http://www.imo.org/>

2. United Nations Environment Programme / Coordinating Unit for the Mediterranean Action Plan (UNEP/MAP)

Address: 48, VassileosKonstantinou Ave., 11635 Athens, P.O Box: 18019, Greece
Tel: +30 210 7273100
Fax: +30 210 7253196
Email:
Web: <http://web.unep.org/unepmap>

3. Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)

Address: Maritime House, Lascaris Wharf, Valletta, VLT 1921, Malta
Tel: +356 21 337 296 - +356 21 337 297 - +356 21 337 298
Emergency line: +356 79 505 011
Fax: +356 21 33 99 51
General enquiry email: rempec@rempec.org
Emergency email: emergency@rempec.org
Web: <http://www.rempec.org>

4. The UNEP / Office for the Coordination of Humanitarian Affairs (OCHA) Joint Unit (JEU)

Address: Palais des Nations, CH-1211 Geneva 10
Tel:
Emergency line: +41 22 917 2010 (OCHA Duty Officer)
Fax:
Email: ochaunep@un.org
Web: <http://www.unocha.org/unep>

5. International Oil Pollution Compensation Funds (IOPC Funds)

Address: 4, Albert Embankment, London, SE1 7SR, United Kingdom
Tel: +44 (0)20 7592 7100
Fax: +44 (0)20 7592 7111
Email: info@iopcfunds.org (for general enquiries)
claims@iopcfunds.org (for claims-related enquiries)
Web: <http://www.iopcfunds.org/>

6. European Commission (EC)

Emergency Response Coordination Centre (ERCC)
Address: 86, Rue de la Loi 1049 Brussels, Belgium
Tel No : +32 2 29 21 112

Fax.: +32-2 298 66 51

E-mail : echo-ercc@ec.europa.eu

Web: http://ec.europa.eu/echo/what/civil-protection/emergency-response-coordination-centre-ercc_en

European Maritime Safety Agency (EMSA)

Address: Praça Europa 4, Cais do Sodré 1249-206 Lisboa, Portugal

Mobile: +351 911 089 200

Tel No: +351 211 209 415

Fax No: +351 211 209 480

E-mail: MaritimeSupportServices@emsa.europa.eu

Web: <http://www.emsa.europa.eu/>

The **background information** (legal, institutional, relationships, etc.) for each International Governmental Institutions which may be involved in the coordination and/or mutual assistance in case of pollution incident is developed in respective Fiches describing their name, status, obligations/responsibilities (WHO); their role/services, resources (WHAT); and their procedures, conditions and contacts (HOW).

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

International Maritime Organization (IMO)



WHO

Brief presentation:

IMO is a specialized agency of the United Nations and the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and implemented.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

IMO (formerly named 'Inter-Governmental Maritime Consultative Organization (IMCO)' until 1981) was established by means of a convention adopted in Geneva in 1948 and entered into force in 1958. The Organization met for the first time in 1959. IMO currently has 172 Member States and three associate members as of January 2017.

Obligations/responsibilities:

IMO, as the Organization that sets the international regulatory framework for shipping, has promoted the adoption of some 50 conventions and protocols and adopted more than 1000 codes and recommendations concerning maritime safety and security, the prevention of pollution from shipping and other related matters. With regard to the protection of the marine environment, a series of conventions and other instruments, which are periodically updated and amended, have been adopted to address the prevention of pollution, preparedness and response to marine pollution incidents and compensation for pollution damage.

In this connection, the International Convention on Oil Pollution Preparedness Response and Co-operation, (OPRC), 1990, and its associated Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances (OPRC-HNS Protocol), outline a number of obligations for countries in both preparing for and responding to an incidents involving oil and hazardous and noxious substances in the marine environment.

In addition to encouraging and assisting member States in the ratification and implementation of the OPRC Convention and the OPRC-HNS Protocol, article 12 of the OPRC Convention and article 10 of the OPRC-HNS Protocol requests IMO to perform a number of functions, subject to its agreement and the availability of resources, which include the provision and coordination of information services; assistance in identifying sources of financing; and to facilitate the provision of technical assistance and advice upon request by Parties . (See the section below on '**Role and/or Services**' for further details)

REMPEC: The "Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region for the Protection of the Mediterranean Sea" (Barcelona, 1976) agreed to establish a Regional Centre and to entrust IMO with the responsibility, as Co-operating Agency, for the establishment and operation of the aforesaid Regional Centre, with the understanding that the exercise of functions and responsibilities by IMO should not lead to an increase in its budget. Subsequent to this, the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) was established

WHAT

Role and/or Services related to emergency response and international cooperation and assistance:

IMO's principal focus is the creation and implementation of a global regulatory framework for the shipping industry. The following information outlines the IMO's main roles and services related to marine pollution, response and cooperation.

1. Information services

IMO receives, on request, collates and disseminates the information provided by Parties and by other sources regarding marine pollution incidents.

Information to be provided to IMO

National operational contact points responsible for the receipt of pollution incident reports

In accordance with the provisions of Protocol I of MARPOL, the master of a ship involved in a pollution incident shall report, without delay, to the nearest coastal State, and Parties to MARPOL Convention shall make arrangements for an appropriate officer or agency to receive and

process all incident reports. Parties shall notify IMO with complete details of such arrangements for circulation to other Parties and Member States of the Organization (MARPOL, Protocol I, article 8).

Information on oil or HNS pollution incidents

When the severity of an oil or HNS pollution incident so justifies, a Party that receives an oil or HNS pollution incident report or pollution information provided by other sources should provide the IMO directly or, as appropriate, through the relevant regional organization or arrangements with the following information:

- the nature, extent and possible consequences of the incident;
- details of the Party's assessments and any action it has taken, or intends to take, to deal with the incident; and
- further information, as appropriate.

When the severity of an oil or HNS pollution incident so justifies, other States affected by the incident are urged to inform the IMO directly or, as appropriate, through the relevant regional organizations or arrangements of:

- the assessments by other States, affected by the incident, of the extent of the threat to their interests and any action taken or intended (see article 4 and article 5(1), (2) and (3) of the OPRC Convention, article 3(1) of the OPRC-HNS Protocol)

2. The provision of assistance in identifying sources of financing

A Party which has requested assistance in accordance with the provisions of the OPRC Convention or the OPRC-HNS Protocol may request IMO to assist in identifying sources of provisional financing of the cost for such assistance (OPRC, art.7(2), and art.12(1); OPRC-HNS, art.5(2), and art.10(1))

3. Facilitating the provision of technical assistance and advices

Upon the request of States facing major pollution incidents, IMO may facilitate the provision of technical assistance and advice.

4. Backstopping of REMPEC

In cases of marine pollution incidents which require international assistance, IMO will assist REMPEC in carrying out its functions and provide the necessary backstopping that the situation may require.

Resources (where applicable):

1. IMODOCS

<https://docs.imo.org/>

Contains circulars, circular letters, meeting documents, meeting audio, notes verbales, treaties, etc.

2. Global Integrated Shipping Information System (GISIS)

<https://gis.imo.org/Public/Default.aspx>

GISIS has been developed by the IMO Secretariat in compliance with the decisions by IMO Members requesting public access to sets of data collected by the Secretariat and stored in off-line databases. Its aim is to allow on-line access to information supplied to the IMO Secretariat by Maritime Administrations, in compliance with IMO's instruments. The databases are maintained and updated by National Maritime Administrations directly, or by submission to the Secretariat.

3. List of national operational contact points responsible for the receipt, transmission and processing of urgent reports on incidents involving harmful substances, including oil from ships to coastal States

(The most up-to-date contact points can be found by consulting the appropriate module in GISIS at:

<http://www.imo.org/OurWork/Circulars/Pages/CP.aspx>)

This national contact points list is provided as an annex to the MSC-MEPC.6 circular, as amended, which is updated based on the GISIS database on a quarterly basis. The list is used for the following requirements of MARPOL Convention (art. 8), OPRC Convention and OPRC-HNS Protocol

Regulation 37 of MARPOL Annex I requires that the Shipboard Oil Pollution Emergency Plan (SOPEP) shall contain a list of authorities or persons to be contacted in the event of a pollution incident involving such substances. Requirements for oil pollution emergency plans and relevant oil pollution reporting procedures are contained in Articles 3 and 4 of the OPRC Convention.

Regulation 17 of MARPOL Annex II requires that the Shipboard Marine Pollution Emergency Plan (SMPEP) for oil and/or noxious liquid substances shall contain a list of authorities or persons to be contacted in the event of a pollution incident involving such substances. In this context, requirements for emergency plans and reporting for hazardous and noxious substances are also contained in Article 3 of the OPRC-HNS Protocol.

4. IMO Publications

<http://www.imo.org/en/Publications/Pages/Home.aspx>

Sets out those IMO publications available for purchase, such as conventions, codes, guidelines, manuals and model courses

5. Provision of experts

Upon the request of States, and subject to the availability of adequate resources, IMO may provide staff members or external experts to provide technical assistance and advice for responding to major pollution incidents

Procedure:

1. Information to be provided to IMO

See the above “Roles and/or Services” section.

2. Response to enquiries related to OPRC Convention/OPRC-HNS Protocol

Any person or body, that has any enquiries related to OPRC Convention/OPRC-HNS Protocol, can contact the officers responsible for OPRC/OPRC-HNS matters within IMO’s Marine Environment Division.

Conditions:

IMODOCS and GISIS: user registration is necessary for access (free of charge)

List of national operational contact points: no restriction for access (IMO public website)

IMO Publications: IMO publications and materials listed in the catalogue can be purchased from IMO or its authorized distributors

Provision of experts: Upon request, subject to IMO’s agreement and the availability of adequate resources.

Contact:

Officers responsible for OPRC/OPRC-HNS matters
Marine Environment Division

Tel: +44 (0)20 7735 7611 (**IMO switch board**)

Fax: +44 (0)20 7587 3210

E-mail: info@imo.org

Changes or additions to the SOPEP Contact Points

Update the database in GISIS (<https://gis.imo.org/Public/Default.aspx>) - *Contact Points - List of national operational contact points responsible for the receipt, transmission and processing of urgent reports on incidents involving harmful substances, including oil from ships to coastal states*; or in case of emergency (e.g. cannot access to the GISIS database), alternatively send the information on such changes or additions to:

Fax: +44 (0)20 7587 3210

E-mail: SafePol-contacts@imo.org

Post address

International Maritime Organization
4, Albert Embankment
London, United Kingdom
SE1 7SR

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)



WHO

Brief presentation:

REMPEC is one of the components (Regional Activity Centre) of the Mediterranean Action Plan (UNEP/MAP). It is administered by IMO and UNEP. One of the objectives of REMPEC is to develop regional co-operation and to facilitate co-operation among the Mediterranean coastal States in order to respond to pollution incidents which result or may result in a discharge of oil or other hazardous and noxious substances and which require emergency actions or other immediate response.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

REMPEC has been established by Resolution 7 adopted by the conference of the Plenipotentiaries of the coastal States of the Mediterranean Region on the Protection of the Mediterranean Sea at Barcelona on 9 February 1976. Its legal bases are the Prevention and Emergency Protocol and the Offshore Protocol regarding the response to marine pollution incident. Its objectives and functions are defined by the Contracting Parties to the Barcelona Convention.

Obligations/responsibilities:

Prevention and Emergency Protocol Article 12: “Any Party requiring assistance to deal with a pollution incident may call for assistance from other Parties, either directly or through the Regional Centre ...”; and, “where the Parties engaged in an operation to combat pollution cannot agree on the organisation of the operation, the Regional Centre may, with the approval of all the Parties involved, coordinate the activity of the facilities put into operation by these Parties”.

Offshore Protocol Article 16: “In cases of emergency the Contracting Parties shall implement *mutatis mutandis* the Emergency Protocol”
Article 18 “In cases of emergency, a Party requiring assistance may request help from the other Parties, either directly or through the Regional Centre (REMPEC), which shall do their utmost to provide the assistance requested”.

Functions of REMPEC: among the main functions of REMPEC are:

- To assist coastal States of the Mediterranean region, which in cases of emergency so request, in obtaining assistance of the other Parties to the Prevention and Emergency Protocol, or when the possibilities for assistance do not exist within the region, in obtaining international assistance from outside the region;
- To prepare and keep up to date operational arrangements and guidelines, aimed at facilitating co-operation between Mediterranean coastal States in cases of emergency;
- To organize and activate the Mediterranean Assistance Unit for combating accidental marine pollution created by a decision of the Eighth Ordinary Meeting of the Contracting Parties (Antalya, 12 - 15 October 1993) in the conditions described in this decision;
- To collect and disseminate information regarding preparedness and in cases of emergency regarding response actions.”

WHAT

Role and/or Services:

REMPEC has developed and maintains a Regional Information System (RIS) composed of directories and inventories; operational guides and technical documents; and which is complemented by decision support system tools, including the Maritime Integrated Decision Support Information System (MIDSIS-TROCS), the waste management decision support system, the Mediterranean Integrated GIS on Marine Pollution Risk Assessment and Response (MEDGIS-MAR).

REMPEC maintains regular contact with national competent authorities of the Contracting Parties in particular with the national designated OPRC, Mutual assistance and 24 hour Focal Points.

Then, in cases of emergency, REMPEC will:

- Provide requested information and advices on operational, technical, administrative and legal aspects of pollution response;
- Collect and disseminate information on marine pollution events and on follow up actions;
- Facilitate obtaining assistance and if needed and requested co-ordinating the providing of international assistance (clearing mechanism).

In particular REMPEC can assist in:

- helping the command structure in the field in carrying out a detailed assessment of the situation;
- helping the command structure to evaluate the needs for international assistance and to specify, as precisely as possible, the type and quantity of equipment and products needed;
- helping the management structure in identifying from whom to get assistance;
- the evaluation of offers of assistance;
- the coordination of international assistance;
- facilitating relationship with parties involved;
- facilitating communication and exchange of information;
- in exceptional circumstances, by helping in mobilising financing support, in particular through UN financing mechanisms.

Resources (if applicable):

- Providing expert advice on the site of accident by dispatching REMPEC officers or by mobilising the Mediterranean Assistance Unit (MAU);
- With the view to initiate promptly assistance (dispatching REMPEC officers or The MAU) to a Party which so request in case of emergency, a revolving fund has been established.

HOW

Procedure:

Reporting pollution incident

The first communication by the Contracting Parties should be made through the OFFICER-ON-DUTY at REMPEC by:
 a phone call on the **Emergency line**, operational 24/7;
 sending an e-mail at the **Emergency email**.

Once contact has been established by mobile phone or e-mail, further communication, using the **POLREP format**, could also be exchanged using REMPEC's fax number.

(Once REMPEC is mobilized following the above procedure, phone calls can also be made on the office lines.)

Requesting assistance

Request directly to REMPEC of experts/ Mediterranean Assistance Unit, the standard form shall be used).
 Request of equipment and product through REMPEC (facilitating and coordinating role), the standard form shall be used.

Keeping REMPEC regularly informed

Use the Situation Report (SITREP).

Conditions:

REMPEC shall cover the initial costs of the sending of REMPEC officers and /or the Mediterranean Assistance Unit: air ticket, daily subsistence allowance and possibly fees on a pre-arrange basis.

Contact:

<p>Address REMPEC MARITIME HOUSE LASCARIS WHARF VALLETTA VLT 1921 MALTA</p> <p>Website www.rempec.org</p>	<p>Telephone +356 21 337 296/7/8</p> <p>Fax +356 21 339 951</p> <p>Email rempec@rempec.org</p>
<p>In case of emergency only (24H) - Restricted to official use only :</p>	
<p>Emergency email emergency@rempec.org</p>	<p>Emergency line +356 - 79 505 011</p>

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

UNEP / OCHA Joint Unit (JEU)



WHO

Brief presentation: The UNEP / Office for the Coordination of Humanitarian Affairs (OCHA) Joint Unit (JEU) is the United Nations mechanism to mobilise and coordinate emergency assistance to countries affected by environmental emergencies and humanitarian crisis with significant environmental impacts.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

OCHA is the part of the United Nations Secretariat responsible for bringing together humanitarian actors to ensure a coherent response to emergencies. The JEU is housed in OCHA's Emergency Services Branch (ESB) and has full access to OCHA's tools and services to support member states in the coordination of the international response.

Obligations/responsibilities: JEU is recognized as the principal multilateral entity and primary point of contact for mobilizing and coordinating international action in partnership with national and international actors in response to environmental emergencies

Regarding marine pollution incident although other organisations (IMO,REMPEC) and national and regional preparedness and response systems will have the lead role , the assistance of JEU may be requested in particular when human health and environment (sensitive marine ecosystem) are threatened and affected on a major scale.

Upon receipt of an official request for assistance from an affected country the JEU will advise on immediate actions and, if necessary, forward a request for assistance to its network of partners. The JEU provides support specifically on the coordination elements of a response, as well as in assessing and mitigating the possible harmful environmental impacts of a disaster or emergency.

In case of marine pollution incident which may require assistance from JEU, JEU will work in close collaboration with the International Maritime Organization, regional organizations (REMPEC and UNEP/MAP) as well as with other humanitarian and disaster response actors, including the clusters and the World Health Organization.

WHAT

Role and/or Services:

The JEU provides a wide range of services to member states and humanitarian organizations in responding to environmental emergencies, including:

- provision of technical expertise through existing emergency response and preparedness mechanisms;
- maintaining a wide network of contacts and partners providing support on a range of environmental topics;
- developing joint guidelines and tools representing best practice; sharing knowledge and expertise through the Environmental Emergencies Centre (www.eecentre.org);

Resources:

The JEU has access to the resources and response tools of the international humanitarian system. These include the Virtual On-Site Operations Coordination Centre (VOSOCC) (<https://vosocc.unocha.org>), a real time, online coordination platform designed to support information exchange and coordination among international responders in the early phase of major sudden onset disasters. The On-Site Operations Coordination Centre (OSOCC) concept is a rapid response tool for OCHA and the United Nations Disaster Assessment and Coordination teams that works in close cooperation with the affected Government and the assigned national focal points. The Environmental Emergencies Centre (EEC) (www.eecentre.org) is an online preparedness tool designed to strengthen the capacity of national responders to environmental emergencies.

Types of assistance: Depending on the nature of the incident the JEU will endeavour to tailor-fit the expertise needed. The following types of response support can be requested:

- Off-site expert advices
- On-site expert advices
- On site sampling and analysis
- Brokerage with relevant emergency responders

Areas of expertise:

- Release of hazardous and toxic materials
- Impact of hazardous and toxic materials on natural resources and livelihoods
- Water contamination
- Disaster wastes and debris management.

HOW

Procedure: When requesting assistance to an environmental emergency please provide as much information as possible on the event and your needs, using the checklist found in the Environmental Emergencies Guidelines, 2017 (Annex 2) as a guide. Please send your information in an email to the UNEP/OCHA Joint Unit (JEU) (ochaunep@un.org), while also immediately calling the OCHA Duty Officer (available 24/7 at +41 22 917 2010). Based on your needs and requirements, detailed Terms of Reference for support will be developed by the requesting party, with the support of the JEU.

Conditions: Official request from affected state is required.

Contact:

UNEP / OCHA Joint Unit –
OCHA Emergency Services Branch,
Palais des Nations,
CH-1211 Geneva 10,
Switzerland
E-mail: ochaunep@un.org
Tel: +41 22 917 2010 (for emergencies only, OCHA Duty Officer),
www.unocha.org/unep

Mediterranean Guide on Cooperation and Mutual Assistance
in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

**International Oil Pollution Compensation Funds
(IOPC Funds)**



WHO

Brief presentation:

The IOPC Funds are two intergovernmental organisations (the 1992 Fund and the Supplementary Fund) which provide compensation for oil pollution damage resulting from spills of persistent oil from tankers.

The IOPC Funds have been involved in 150 incidents since 1978 and have paid some £600 million in compensation. The 1992 Fund has 114 Member States, 31 of those are also Supplementary Fund Member States.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

Originally established in 1978, the international liability and compensation regime is now based on two IMO Conventions which ensure the sharing of the cost of oil spill incidents at sea between the shipowner and the oil receivers.

The relevant Conventions are:

- the 1992 International Convention on Civil Liability for Oil Pollution Damage (1992 Civil Liability Convention); and
- the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1992 Fund Convention).

A Protocol to the 1992 Fund Convention was adopted in 2003, which established a Supplementary Fund (Supplementary Fund Protocol).

The IOPC Funds are funded by the oil industry and managed by Governments. Its objectives and functions are defined by the Contracting Parties to the 1992 Fund Convention and Supplementary Fund Protocol.

Obligations/responsibilities:

1992 Civil Liability Convention, Article II

The 1992 Civil Liability Convention applies (a) to pollution damage caused:

- (i) in the territory, including the territorial sea, of a Contracting State, and
- (ii) in the exclusive economic zone of a Contracting State, established in accordance with international law, or, if a Contracting State has not established such a zone, in an area beyond and adjacent to the territorial sea of that State determined by that State in accordance with international law and extending not more than 200 nautical miles from the baselines from which the breadth of its territorial sea is measured;

(b) to preventive measures, wherever taken, to prevent or minimize such damage.

1992 Fund Convention, Article 2

The aim of the 1992 Fund is to provide compensation for pollution damage to the extent that the protection afforded by the 1992 Civil Liability Convention is inadequate.

Supplementary Fund Protocol, Article 4

The Supplementary Fund shall pay compensation to any person suffering pollution damage if such person has been unable to obtain full and adequate compensation for an established claim for such damage under the terms of the 1992 Fund Convention, because the total damage exceeds, or there is a risk that it will exceed, the applicable limit of compensation laid down in article 4, paragraph 4, of the 1992 Fund Convention in respect of any one incident.

Role and/or Services:

Under the 1992 Civil Liability Convention, which provides the first tier of compensation, the shipowner has strict liability for any pollution damage caused by the oil, i.e. the owner is liable even if there was no fault on the part of the ship or its crew. However, the shipowner can normally limit his financial liability to an amount that is determined by the tonnage of the ship. This amount is guaranteed by the shipowner's liability insurer.

The 1992 Fund Convention provides a second tier of compensation which is financed by receivers of oil in 1992 Fund Member States after sea transport. An extra layer of compensation is available to Supplementary Fund Member States. The international liability and compensation regime can provide up to 203 million SDR (\$US 285.6 million) to 1992 Fund Member States and 750 million SDR (\$US 1 055 million) to Supplementary Fund Member States.

The 1992 Fund Convention also applies to spills of persistent oil even if the ship from which the oil came cannot be identified, provided that it is shown to the satisfaction of the 1992 Fund, or in the case of dispute to the satisfaction of a competent court, that the oil originated from a ship as defined in the 1992 Fund Convention.

Resources (if applicable):

The 1992 Fund normally prepares claim forms for each incident⁴. The form will be available to download from www.iopcfunds.org or can be requested from the 1992 Fund/shipowner's insurer. Claimants are advised to use the claim form and submit it together with all the documentation necessary to support their claim.

The IOPC Funds has published a Claims Information Pack to assist claimants in a Member State following an oil spill incident. The pack includes the 1992 Fund Claims Manual, which is practical guide to presenting claims against the IOPC Funds, as well as a number of sector-specific guidelines. These documents are available electronically via the Funds' website (www.iopcfunds.org) and hard copies are available from the Secretariat upon request.

Occasionally, when an incident gives rise to a large number of claims, the 1992 Fund and the P&I Club jointly set up a local claims office so that claims may be processed more easily.

It is recommended that authorities in an IOPC Funds Member State affected by an incident involving a tanker carrying persistent oil should contact the IOPC Funds' Secretariat as soon as possible following the incident. Prompt notification will enable the IOPC Funds to consider taking appropriate action that could prove beneficial for the efficient processing of future claims.

⁴ An online claims submission system is under development and expected to be available from 2017.

Procedure:

The 1992 Fund should be notified of any significant oil pollution incident involving a tanker carrying persistent oil as soon as possible to enable it to engage experts and closely monitor the situation.

Since in most cases the 1992 Fund only pays compensation once the shipowner/insurer has paid up to the limit applicable to the ship involved, claims should first be submitted to the shipowner or his P&I Club.

In practice, claims are often channelled through the office of the P&I Club's correspondent closest to the incident location. Because of the close co-operation between the Fund and the insurer, claims, including supporting documentation, need only be sent to either the P&I Club/correspondent or the Fund.

The 1992 Fund and the P&I Clubs try to reach agreement with claimants and pay compensation as promptly as possible. They may make provisional payments before a final agreement can be reached if a claimant would otherwise suffer undue financial hardship. Within one month of receipt of a completed claim form and registration of a claim, the Secretariat will aim to provide claimants with an acknowledgement of receipt of the claim together with an explanation of the assessment procedure which will be followed thereafter. Additionally within six months of registration of the claim, the Secretariat will aim to provide the claimant with an initial view in the form of a letter notifying the claimant.

If it is not possible to reach an agreement on the assessment of the claim, the claimant has the right to bring his or her claim before the competent court in the State in which the damage occurred. However, since the international compensation regime was established in 1978, court actions by claimants have not proved necessary in the majority of incidents involving the 1992 Fund and its predecessor.

Claimants will ultimately lose their right to compensation under the 1992 Fund Convention unless they bring court action against the 1992 Fund within three years of the date on which the damage occurred, or make formal notification to the 1992 Fund of a court action against the shipowner or his insurer within the three-year period. Although damage may occur some time after an incident takes place, court action must in any event be brought within six years of the date of the incident.

Conditions:

Only those affected by pollution damage within a State Party to the 1992 Fund Convention can submit a claim for compensation against the 1992 Fund. The criteria for admissibility is set out in the Claims Manual. Asking the following questions may help a claimant to establish whether or not they should submit a claim.

- Have you already actually suffered the expense, loss or damage?
- Does the expense relate to measures taken following the incident which are reasonable and can be justified?
- Was the expense, loss or damage caused by contamination resulting from the spill?
- Can you reasonably link the cause of the expense, loss or damage covered by the claim to the contamination caused by the spill?
- Can you quantify the loss you have suffered?
- Can you prove the amount of your expense, loss or damage and supply appropriate documents or other evidence?

Contact:

International Oil Pollution Compensation Funds
4 Albert Embankment
London SE1 7SR
United Kingdom

Telephone: +44 (0)20 7592 7100
Telefax: +44 (0)20 7592 7111
E-mail: info@iopcfunds.org
Web: www.iopcfunds.org

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

European Union
DG ECHO - Emergency Response Coordination Centre (ERCC) and
European Maritime Safety Agency (EMSA)



WHO

Brief presentation

European Commission–DG ECHO: The **Union Civil Protection Mechanism (UCPM)** within the **European Commission, Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO)** aims to strengthen the cooperation between the Union and the Member States in the field of civil protection in order to improve the effectiveness of systems for preventing, preparing for and responding to natural and man-made disasters including marine pollution incidents. **The Emergency Response Coordination Centre (ERCC)** within **DG ECHO** is the 24/7 operational hub of the UCPM. More info at http://ec.europa.eu/echo/what/civil-protection/mechanism_en.

The European Maritime Safety Agency (EMSA) provides technical expertise and operational assistance to the European Commission - Union Mechanism (ERCC), EU Member States and operational assistance to 3rd Countries sharing a regional sea basin with the EU in cases of marine pollution incident. More info at <http://www.emsa.europa.eu/>.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

The **European Commission** is an European Union Institution. **EMSA** is one of the 44 European Union decentralized agencies, established in 2003 and it is based in Lisbon, Portugal.

The **European Union (EU)** is a Contracting Party to the Barcelona Convention and its Protocols.

Obligations/responsibilities:

The European Commission through DG ECHO has the responsibility to manage the ERCC, a Common Emergency Communication and Information System (CECIS), establish a European Emergency Response Capacity (EERC) composed of pre-committed resources from Member States (modules⁵) and experts. In case of an emergency, the Commission, through the ERCC, acts as a hub to collect information, circulate it between Member States and facilitate the offers of assistance and promotes consistency in the response to disasters outside the Union.

The affected country may request assistance through the ERCC (cf. below), assistance may also be requested through the United Nations and its agencies, or a relevant international organization.

EMSA shall provide EU Member States and third countries sharing a sea basin with the EU with additional response assets when a request has been presented by the affected State.

WHAT

Role and/or Services (in the context of the Barcelona Convention and its Protocols) :

European Commission–DG ECHO

Information and Coordination The ERCC is the main contact point for the Contracting Parties to the Barcelona Convention and its Protocols for

- (1) requesting assistance from EMSA resources and services (cf. below); and,
- (2) activating the UCPM – extending the request for assistance to all the Participating States of the UCPM⁶.

Resources which can be mobilized:

- Expert teams to support the assessment and facilitate the coordination on site;
- Additional transport resources (the UCPM may finance up to 55% of the transport costs for the assistance provided by MS)
- Modules under the EERC. Currently two modules for marine pollution have been registered:
 - Maritime Incident Response Group for extinguishing fires on board from the Netherlands
 - Shoreline cleaning response team, trainers+ protective equipment for 50 people from Sweden.

⁵Modules are pre-committed resources (equipment and personnel) able to work autonomously, identified by the Member States, the decision to dispatch the modules lies with the State which have committed the resource.

⁶ 28 EU Member States, the former Yugoslav Republic of Macedonia, Iceland, Montenegro, Norway, Serbia and Turkey are participating in the UCPM

EMSA

Resources:

- A network of stand-by oil spill response vessels, with different types of oil-combatting equipment arrangements and dispersants;
- An equipment assistance service, offering dedicated stockpiles of pollution response equipment.

Services

- The MAR-ICE Network, a service for chemical emergencies providing expert information and advice could be made available to 3rd countries. In order to have access to this service, 3rd countries need to request access to DG-ECHO.
- The Agency also provides a satellite-based oil spill monitoring service known as CleanSeaNet. In case of an emergency, the service could be made available to third countries through a request to DG ECHO.

More information on EMSA's pollution response services can be found on the website: <http://emsa.europa.eu/operations/pollution-response-services.html>

and in the MEDGIS MAR http://www.rempec.org/tools.asp?theIDS=2_250&theName=Tools&daChk=1

For more information on the CleanSeaNet service: <http://emsa.europa.eu/operations/earthobservationservices.html>

HOW

Procedure:

Official requests for assistance for EMSA resources/services and/or activation of the Union Civil Protection Mechanism (UCPM) must be made through the ERCC by using the Common Emergency Communication and Information System – CECIS Marine Pollution. The CECIS Marine Pollution is an application installed in the ERCC and is used in case of marine pollution incidents. CECIS link <https://webgate.ec.europa.eu/CECIS>

Alternatively if the country does not have access to the CECIS Marine Pollution, the request can be addressed in writing (e.g. by email) to the ERCC (Tel.: +32 2 29 21112; Fax: +32 2 29 866 51; Email: ECHO-ERCC@ec.europa.eu).

*NB: It is recommended that EMSA is also alerted by putting EMSA Maritime Support Services (MSS) in copy:
Email: MaritimeSupportServices@emsa.europa.eu; Tel.: + 351 211 209 415, Fax: + 351 211 209 480.*

Conditions:

In case of activation of **EMSA's pollution response services (Vessels and Equipment Assistance Service)**, the provisions set in the Incident Response Contract will apply.

The Incident Response Contract is the framework for the provision of the response services to Requesting States during an incident and covers the conditions for the performance of oil recovery operations, including tariffs. The Incident Response Contract Form is to be signed by EMSA service contractor and the Requesting State.

The rates applicable to EU Member States, will also apply to the 3rd countries. For more information please contact: MaritimeSupportServices@emsa.europa.eu

Contact:

<p>Address European Commission Directorate-General for European Civil Protection and Humanitarian Aid Operations ECHO A/1 – Emergency Response Coordination Centre (ERCC) L-86 00/11 B-1049 Brussels/Belgium Website http://ec.europa.eu/echo/what/civil-protection/emergency-response-coordination-centre-ercc_en</p>	<p>Telephone +32 2 29 21112 Fax +32 2 29 866 51 Email ECHO-ERCC@ec.europa.eu</p>
<p>Address EMSA Praça Europa n°4 1249-206 Lisboa/Portugal Website http://emsa.europa.eu/</p>	<p>Telephone + 351 211 209 415 Fax + 351 211 209 480 Email MaritimeSupportServices@emsa.europa.eu</p>

Non-governmental Institutions

7. International Tanker Owners Pollution Federation (ITOPF)

Address: 1 Oliver's Yard 55 City Road, London, EC1Y 1HQ, UK
Tel: +44 (0)20 7566 6999
Emergency: +44 (0) 7623984606 (Alternative: +44 (0)20 7566 6998)
Fax:
Email: central@itopf.com
Web: <http://www.itopf.com/>

8. The global oil and gas industry association for environmental and social issues (IPIECA)

Address: 14th Floor, City Tower, 40 Basinghall Street, London, EC2V 5DE, United Kingdom
Tel: +44 (0)20 7633 2388
Fax: +44 (0)20 7633 2389
Email:
Web: <http://www.ipieca.org/>

9. The European Chemical Industry Council (CEFIC) / Intervention in Chemical transport Emergencies (ICE)

Address: Avenue E. van Nieuwenhuyse, 4 box 1 - 1160 Brussels – Belgium
Tel: +32 2 676 73 78
Fax: +32 2 676 73 31
Email: fle@cefic.be
Web: <http://ice-chem.net>

10. International Salvage Union (ISU)

Address: International Salvage Union, Holland House, 1 - 4 Bury Street, London, EC3A 5AW, England
Mobile: +44 7805 955348
Tel: +44 20 7220 6597
Fax:
Email: isu@marine-salvage.com
Web: <http://www.marine-salvage.com/>

11. International Association of Classification Societies (IACS)

Address: Permanent Secretariat, 6th Floor, 36 Broadway, London SW1H 0BH, UK
Tel: +44 (0)20 7976 0660
Fax: +44 (0)20 7808 1100
Email: permsec@iacs.org.uk
Web: <http://www.iacs.org.uk/>

The **background information** (legal, institutional, relationships, etc.) for each Non-governmental Institutions which may be involved in the coordination and/or mutual assistance in case of pollution incident is developed in respective Fiches describing their name, status, obligations/responsibilities (WHO); their role/services, resources (WHAT); and their procedures, conditions and contacts (HOW).

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

International Tanker Owners Pollution Federation (ITOPF)



WHO

Brief presentation:

ITOPF is the marine industry's primary source of objective technical advice, expertise and information on effective response to ship-source pollution. ITOPF's advice rests on a science-based appreciation of the fate and effects of pollutants in the marine environment and a practical evaluation of response options and claims for compensation. Since the 1970s, ITOPF has been providing services of emergency response to tanker owners (*Members*) and, from 1999, due to the growing awareness of pollution from non-tank vessels this service was formally extended to the owners of other types of ship who were eligible to become *Associates* of ITOPF. Since its establishment in 1968, ITOPF has responded to over 800 marine spills worldwide. This first-hand experience is in turns used during training assignments, the preparation of contingency plans, and contributions to policy discussions and legal texts through its Observer status at the IMO and IOPC Funds. More recently, the pollution potential of substances other than oil, primarily chemicals, and the development of corresponding international conventions, e.g. the HNS Convention, has led to an increase in demand for ITOPF expertise in these areas.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

ITOPF is a mutual trading association which activities are overseen by an international Board of Directors representing its Members, Associates and P&I Insurers.

Obligations/responsibilities:

N/A

WHAT

Role and/or Services:

Spill response

ITOPF is available 24 hours a day, 365 days of the year to attend spills of oil, chemicals and other hazardous substances worldwide.

Claims Analysis & Damage Assessment

ITOPF gives advice on pollution damage caused by spills and assesses the technical merits of claims for compensation.

Training and education

ITOPF runs training courses and seminars worldwide where it shares its technical knowledge and first-hand experiences. Training is often undertaken alongside key governmental partners or industry bodies.

Contingency planning & advice

ITOPF regularly advises governments and industry on the preparation of contingency plans and other matters related to accidental pollution from ships. These activities are an opportunity to pass on messages of good practice outside the pressurised environment of a real incident.

Research and development

ITOPF supports research and development activities through its annual R&D Award and is a source of comprehensive information on marine pollution through its library, technical publications, statistics, films and website.

Resources

ITOPF's London-based team of 35, includes 15 technical staff with a diverse set of skills. It encompasses several different nationalities and six languages (English, French, Italian, Mandarin Chinese, Portuguese and Spanish).

Procedure:

In the case of a spill of oil or HNS, please call on the numbers below for advice and/or mobilisation to site.

Conditions:

ITOPF services are usually provided at no cost to Members (tanker owners), Associates (other shipowners) and their P&I insurers. ITOPF services may also be available to non-Members/-Associates on a fee-paying basis. The decision to provide services to non-Members/-Associates is at the discretion of ITOPF pending the availability of staff and the absence of potential conflict of interests in relation to the proposed activity.

Contact:

Address 1 Oliver's Yard 55 City Road London EC1Y 1HQ UK	Telephone +44 (0)20 7566 6999
Website www.itopf.com	Fax +44 (0)20 7566 6950
	Email central@itopf.com
In case of emergency only (24H) - Restricted to official use only :	
Emergency email Please advise ITOPF of emergencies by phone only	Emergency lines +44 (0) 20 7566 6999 (UK business hours) +44 (0) 76 23984606

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

The Global Oil and Gas Industry Association for Environmental and
Social Issues (IPIECA)

IPIECA

WHO

Brief presentation:

IPIECA develops, shares and promotes good practice and knowledge to help the industry and improve its environmental and social performance. We do this with the understanding that the issues that dominate the sustainable development agenda – climate and energy, environmental and social issues – are too big for individual companies to tackle alone. The industry must work together to achieve improvements that have real impact. IPIECA helps to achieve this goal.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

IPIECA is a not for profit association that provides a forum for encouraging continuous improvement in industry performance. IPIECA is the only global association involving both the upstream and downstream oil and gas industry. IPIECA is an NGO in “Special Consultative Status” with the United Nations and is also the industry’s principal channel of communication with the U.N.

Obligations/responsibilities:

Oil spills can have a long-term environmental and socio-economic impact, and therefore pose a serious risk which needs to be managed; IPIECA has been working for 30 years to harness the oil and gas industry’s collective expertise and technology on oil spill preparedness and response. While prevention is always the goal, the industry gives equally high priority to developing the capability to respond to spills, enabling its members to improve oil spill preparedness and response globally.

IPIECA does not respond to pollution incidents – its mandate is solely to act as a convening organization for the Oil & Gas Industry to establish good practice. It also cooperates with UN system organizations such as IMO and REMPEC to encourage joint activities in support of conventions such as OPRC 1990.

One of IPIECA’s long-standing activities is a partnership with the International Maritime Organization (IMO) through the Global Initiative, which brings together industry and governments to enhance oil spill preparedness and response. The Global Initiative (GI) is an umbrella program under which governments, through the International Maritime Organization (IMO), and the oil industry, through IPIECA, work together to assist countries in developing national structures and capability for oil spill preparedness and response.

WHAT

Role and/or Services:

Develops and publishes good practice guidance; holds periodic workshops on various oil spill response topics; supports regional improvements in oil spill response preparedness through the Global Initiative (GI) program jointly with the IMO.

Resources (if applicable):

HOW

Procedure:

N/A

Conditions:

N/A

Contact:

Tel: +44 (0) 20 7633 2388
Fax: +44 (0) 20 7633 2389

IPIECA | 14th Floor | City Tower | 40 Basinghall Street | London EC2V 5DE

Twitter: @IPIECA | LinkedIn: IPIECA

IPIECA THE GLOBAL OIL AND GAS INDUSTRY ASSOCIATION
FOR ENVIRONMENTAL AND SOCIAL ISSUES

Mediterranean Guide on Cooperation and Mutual Assistance
in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

Intervention in Chemical transport Emergencies (ICE)

WHO

Brief presentation:

Chemical companies that practice Responsible Care® make every effort to transport goods to and from their manufacturing sites and storage locations safely and in full accordance with relevant regulations and codes of practice. In the event of an incident, they commit to provide information, practical help and, if necessary and doable, appropriate equipment to the competent authorities in charge on the emergency response to minimise any adverse effects of the incident. They have set up the ICE (Intervention in Chemical transport Emergencies) scheme to achieve this goal.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

ICE is a co-operative network of national centres in European countries that participate in the scheme on a voluntary basis. It is coordinated by Cefic. In each country where a national scheme has been established, ICE seeks to create a framework for providing assistance in an effective way. It is normally opened to all manufacturers and distributors of chemical products, and administered by the national chemical industry federation which keeps a register of participating members and arranges for financial contribution.

Obligations/responsibilities:

ICE seeks to create a framework for providing assistance in an effective way: (1) by making use of the emergency response schemes of individual chemical companies; (2) by building on existing emergency response schemes, either local, regional or product-related (chlorine, isocyanates, ethylene oxide, etc.); (3) by co-operating with national authorities through national chemical federations; and (4) by promoting mutual assistance within the chemical industry.

Participation in the national ICE schemes is voluntary. To provide relevant information to the authorities in charge of the emergency response, responders in national ICE centres or in companies must meet a number of minimum requirements, either by experience or by training. These requirements have been agreed within the chemical industry and are described in a Cefic publication (see Resources /Sources of information). Before providing assistance or advice in incidents involving their own products, chemical companies should confirm with their insurers that their policies cover any potential claims that may arise from such involvement. Companies which may be involved in giving assistance or advice relating to other manufacturers' products should notify their insurers specifically of this fact and obtain confirmation that their general public liability policy will provide cover for these activities.

The ultimate responsibility for any intervention at the scene of an incident remains with the competent authorities in charge of the emergency response.

Role and/or Services:

National ICE schemes apply to distribution incidents (i.e. those that occur outside the manufacturing fences).

For maritime incidents, Cefic, Cedre and EMSA have created the MAR-ICE network in order to provide information and expert advice on chemicals involved in maritime emergencies. MAR-ICE offers remote product and incident-specific information and advice within 1 hour of the request, and more detailed information shortly thereafter. This service is available 24 hours a day /7 days a week via a dedicated contact point at Cedre that is accessible by the relevant national maritime administrations. To connect to EMSA website, click [here](#).

For on-land incidents, ICE assistance is provided by chemical companies. Depending on their capabilities and resources, they can offer three levels of intervention: Level 1 - remote product information and general advice by telephone or fax; Level 2 - advice from a company expert at the scene of the incident; Level 3 - assistance with personnel/equipment at the scene of the incident. Such a commitment applies firstly to products manufactured by the company itself and is normally incorporated into the company's own distribution emergency response scheme. If the product supplier is not known or cannot be contacted, certain companies may offer assistance on the basis of a prior arrangement with the national ICE scheme. However, in such a case, Level 2 and Level 3 interventions shall not be carried out at the expense of the safety of their own facilities.

The key document in the protocol between the competent national authorities and the chemical industry (represented by the national chemical federation) is the list of participating companies. This document provides contact details of each participant such as address, telephone and fax number, range of products (hazardous products are identified by the four-digit UN number), time availability, intervention equipment and area of intervention (if limited). It normally includes a map, showing the location of the participating companies so that the competent authorities can contact the site nearest to the transport incident.

Resources:

The members of the ICE network are BELINTRA (Belgium), CERET (Spain), CHEMIEFACHBERATUNG (Switzerland), CHEMSAFE (UK), DCRM (The Netherlands), DINS (Slovakia), FINTERC (Finland), KEMIAKUTEN (Sweden), PIBF-RVK (Denmark), RVK (Norway), SET (Italy), SPOT (Poland), TRANSAID (France), TRINS (Czechia), TUIS (Austria /Germany), VERIK (Hungary).

The national centres are manned 24 hours a day by at least one person who, in addition to the local language(s), can also speak English to facilitate communication with the other national centres.

Sources of information

Safety Data Sheets (SDS) are the main source of information. Participating companies therefore ensure that SDS for their own products are accessible at all times at the locations identified as company contacts in the national ICE scheme. To provide initial advice, the national ICE centres have a series of reference books or databases or may have access to a set of SDS.

Cefic has produced a guideline on "[Distribution Emergency Response - Guidelines for use by the chemical industry](#)" (1993). EMSA has produced a brochure on MAR-ICE network. To get access to it, click on: <http://www.cefic.org/Documents/IndustrySupport/Transport-and-Logistics/EMSA-MAR-ICE-Information-service-for-use-in-marine-chemical-emergencies.pdf>.

HOW

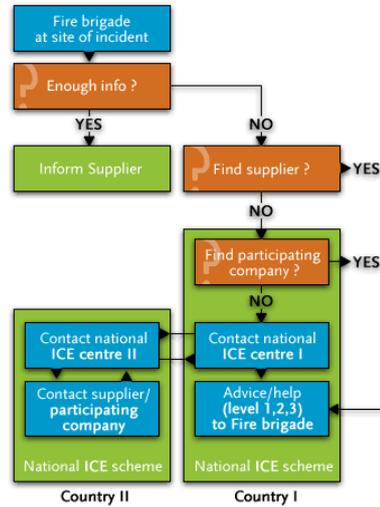
Procedure:

The national ICE centre is the focal point of the scheme for the authorities in charge of the emergency response to on-land transport incidents. They can call it when: (1) the supplier cannot be contacted; (2) an incident happens to international movements necessitating coordination with other countries; (3) mutual assistance needs to be mobilised within the national ICE scheme; and (4) the product or the producing company cannot be readily identified. When called, the national ICE centre provides, in the local language, initial telephone advice for the immediate control of the incident. It promptly alerts the producing company, obtains further information (possibly via other national ICE centres) or mobilises mutual assistance. To do this, the centre has at its disposal appropriate communication equipment, a library of reference books or databases and up-to-date lists of telephone and fax numbers for contacts within the chemical industry. The following chart illustrates the typical flow of response in on-land transport emergencies. However, each country can adapt the operation of a national ICE scheme according to its own specific needs and practices already in place.

Conditions:

Level 1 information is provided free of charge by the national centres participating in ICE. Costs incurred for Levels 2 and 3 interventions are reimbursable.

Contact:



<p>Address CEFIC AVENUE E. VAN NIEUWENHUYSE 4 B-1160 BRUSSELS BELGIUM</p> <p>Website www.ice-chem.net</p>	<p>Telephone +32 2 676 73 78</p> <p>Fax +32 2 676 73 31</p> <p>Email file@cefic.be</p>
<p>In case of emergency only (24H) - Restricted to official use only : n.a.</p>	
<p>Emergency email n.a.</p>	<p>Emergency line n.a.</p>

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

International Salvage Union (ISU)



WHO

Brief presentation:

The International Salvage Union (ISU) is the sole representative organisation for the international marine salvage industry with a membership of 60 salvage companies from 35 different countries. Membership of the ISU is restricted to those companies with a record of successful salvage and pollution prevention. Members are required to have the high level of expertise expected of the professional salvor.

In addition, Associate Membership of the ISU is open to all organisations and professionals with an interest in salvage, including P&I Clubs, other marine insurers, law firms, ports, national response organisations, shipowners and managers, coastal local authorities, environmental organisations, clean-up specialists and others. The ISU has around 80 Affiliated and Associate Members.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

ISU is a company limited by guarantee registered under English law.

ISU has had consultative status at the International Maritime Organisation (IMO) since 1979.

ISU has consultative status at the International Oil Pollution Convention (IOPC) Funds.

Obligations/responsibilities:

One of the ISU's primary objectives is to foster a wider understanding of the salvage industry's contribution to environmental protection and the recovery of property. The ISU also plays an active role in encouraging inter-industry debate concerning the many legal and commercial issues influencing the efficient performance of salvage and pollution prevention services.

ISU is a member of the Lloyd's Salvage Group and SCOPIC Committee.

The International Union of Marine Insurance, INTERTANKO, INTERCARGO, BIMCO, The Baltic Exchange, International Bunker Industry Association, International Maritime Industries' Forum, Association of Average Adjusters, European Tugowners Association, London Shipping Law Centre, International Ship Managers' Association and the American Salvage Association are affiliated to the ISU on a reciprocal basis.

WHAT

Role and/or Services:

To provide representation for the international marine salvage industry at numerous international, national, legal and commercial fora.

Resources (if applicable):

The ISU is managed by a Secretariat based in London.

Procedure:

N/A

Conditions:

N/A

Contact:

Mark Hoddinott
General Manager



International Salvage Union
Holland House, 1-4 Bury Street, London, EC3A 5AW, UK
Phone: +44 20 7220 6597 | Mobile: +44 7805 955348
Email: isu@marine-salvage.com | Website: www.marine-salvage.com

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

International Association of Classification Societies (IACS)



WHO

Brief presentation:

Dedicated to safe ships and clean seas, IACS makes a unique contribution to maritime safety and regulation through technical support, compliance verification and research and development. More than 90% of the world's cargo carrying tonnage is covered by the classification design, construction and through-life compliance Rules and standards set by the twelve Member Societies of IACS.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

Obligations/responsibilities:

IACS is a Technical Association of its Members that develops and agrees minimum technical standards, interpretations to relevant international regulations and other relevant resolutions. All IACS publications are available on the IACS website.

IACS is not involved in the operational and commercial activities of its Members, including appraisal, approval surveying and testing of vessels, materials and equipment and the issuing of classification and statutory certificates where authorized.

Similarly, IACS does not certify companies' products or services including Type Approval. However, IACS Members do.

Each IACS Member incorporates IACS standards into their own Rules. At the same time, each IACS Member remains free to set more stringent requirements in their Rules, if they wish to do so.

WHAT

Role and/or Services:

IACS has no role to play, no services to provide nor any responsibilities in responding to marine pollution incidents and is similarly not able to provide assistance upon request.

Resources (if applicable):

To assist those bodies/organisations that are looking for providers of shore-based emergency response services, IACS has produced Rec.145: Recommendation for the Operation of Shore-Based Emergency Response Services which is available on its website at:
<http://www.iacs.org.uk/publications/publications.aspx?pageid=4§ionid=5>

This publication gives recommendations for the operation of shore-based emergency response services in order to assist in complying with the following regulations and guidelines, as well as any applicable National Authority requirements.

- MARPOL Annex I, Regulation 37 - Shipboard oil pollution emergency plan (SOPEP)
- MARPOL Annex II, Regulation 17 - Shipboard marine pollution emergency plan for noxious liquid substances (SMPEP)
- Oil Pollution Act (OPA 90), CFR 155.240 - Damage stability information for oil tankers and offshore barges
- ISM Code, Regulation 8 - Emergency Preparedness
- SOLAS, Chapter II-1, Part B-1, Regulation 8-1 - System capabilities and operational information after a flooding casualty on passenger ships
- MSC Circular 1400 - Guidelines on Operational Information for Masters of Passenger Ships for Safe Return to Port by Own Power or Under Tow

Procedure:

N/A

Conditions:

Use of the Website Materials materials, including Rec.145, is to be done only in accordance with the IACS [Guidelines](#) and [Terms and Conditions](#).

Contact:

IACS Permanent Secretariat

IACS International Association of Classification Societies Ltd

36 Broadway, London, England SW1H 0BH

TEL: +44 (0)20 7976 0660 FAX: +44(0)20 7808 1100

EMAIL: permsec@iacs.org.uk WEB: www.iacs.org.uk

ANNEX I.2
LISTS OF CONTRACTING PARTIES' FOCAL POINTS⁷

1. Governmental Focal Point⁸

Country	Name, Department or position	Contact details
Albania	Ms Klodiana MARIKA Director of the Biodiversity and Protected Area Ministry of Environment	Blv. ZhanD' Ark Tirana Tel:+355 4 22 67 233 Cell:+355 69 20 92 2 Telefax:
Algeria	Mr Djihed Eddine BELKAS Directeur de l'Environnement et du Développement Durable Ministère des affaires étrangères	Promontoire des Anassers Kouba Alger Tel: +213 21 50 43 18 Cell: Telefax+213 21 50 13 22
Bosnia Herzegovina	Prof. Tarik KUPUSOVIC Special Advisor to the Minister of Physical Planning and Environment, Hydo Engineering Institute	StjepanaTomica 1 71000 Sarajevo Tel:+387 33 212 466/7 Cell:+387 61 158 007 Telefax:+387 33 207 949
Croatia	Mr Mario STIPETIĆ Head of Sector Ministry of Environment and Energy Directorate of Climate Activities, Sustainable Development and Protection of Soil, Air and Sea Sector for Protection of Soil, Air and Sea	Radničkacesta 80 10000 Zagreb Tel:+ +385 1 37 17 204 Cell:+ +385 91 61 06 758 Telefax:+ 385 1 37 17 135
Cyprus	Dr Charalambos HAJIPAKKOS Senior Environment Officer Ministry of Agriculture, Rural Development and Environment	17 Taghmatarhou Poulidou, Nicosia 1411 Tel:+357 22 408 927 Cell: Telefax:+357 22 77 49 45
Egypt	Dr Mona Mohamed KAMAL Chief Executive Officer Egyptian Environment Affairs Agency (EEAA) Ministry of Environment Cabinet of Ministers	30 Misr-Helwan El-Zyrae Road Maadi, Cairo Tel:+20 22 525 64 45 Cell: Telefax:+20 22 525 64 54

⁷Extracted from [REMPEC's Country Profile](#) – Contacts updated by REMPEC upon official notification

⁸**Governmental Focal Point:** Office or officer of either the Ministry of Foreign Affairs or the Ministry of Environment which is usually the same Office or officer fulfilling the role of MAP Focal Point having general responsibility for the implementation of the provisions of the Barcelona Convention and its Protocols and for coordination, at the national level, of MAP activities

France	Mme. Marie-Sophie DUFAU- RICHET Chargée de mission pour les questions internationales, Secrétariat Général de la Mer	69 rue de Varennes, 75007 Paris Tel:+33 1 42 75 66 53 Cell:+33 6 61 53 95 01 Telefax:+33 1 42 75 66 78
Greece	H.E. the Minister of Maritime Affairs and Insular Policy Ministry of Maritime Affairs and Insular Policy	Akti Vasileiadi – Gate E1-E2 (inside port), 18510 Piraeus Tel:+30 213 1371 718 Cell: Telefax: +30 210 422 07 71
Israel	Mr. Ran AMIR Director, Marine and Coastal Environment Division, Ministry of Environmental Protection	15a Pal-Yam st., P.O. Box 811, Haifa 31007 Tel:+972 4 863 35 00 Cell:+972 50 62 33 050 Telefax:+972 4 863 35 20
Italy	Mrs Maria Carmela GIARRATANO General Director Directorate of Nature and Sea Protection Ministry for the Environment, Land and Sea	Via Cristoforo Colombo, 44, 00147 Rome Tel:+39 06 57 22 34 33 Cell: Telefax:+39 06 57 22 34 70
Lebanon	Mr. Georges BERBARI Chief of Service of Regional Departments and Environmental Police, Ministry of Environment	Mid-Town – Lazarieh Building Block A 4 7th Floor (Room 7-49) P.O. Box 11/ 2727, Beirut Tel:+961 (1) 976 555 ext 412 Cell:+961 (3) 029 547 Telefax:+961 (1) 976 512
Libya	Mr. Abdulbaset Hussein ALMIRI Director of Environment Emergency Office Environment General Authority (EGA)	P.O. Box 83618 Tripoli Libya Tel: Cell: +218 91 311 1994 Telefax:+218 21 361 52 45
Malta	Ms Chantal SCIBERRAS Director Multilateral and Global Issues Ministry for Foreign Affairs	Palazzo Parisio Merchant Street Valletta VLT1171 Tel:+356 2204 22 86 Cell: Telefax:+356 21 240 210
Monaco	Mme. Marie-Pierre GRAMAGLIA Conseiller de Gouvernement pour l'Équipement, l'Environnement et de l'Urbanisme	Place de la Visitation MC-98000 Monaco Tel:+377 98 98 85 67 Cell: Telefax:+377 98 98 92 33
Montenegro	Ms Jelena KNEZEVIC Head of Department for Sustainable Development and Tourism	IV Proleterske brigade no. 19 81000 Podgorica Tel:+382 20 446 225 Cell:+382 67 255 604 Telefax:+382 20 446 215

Morocco	Mme. Naoual ZOUBAIR Chef du service Littoral Direction des Programmes et Réalisations Ministère délégué chargé de l'Environnement	9, Avenue Al Araar, secteur 16, Hay Ryad, Rabat Tel:+212 5 37 57 06 01 Cell:+212 662 10 81 54 Telefax:+212 5 37 57 66 45
Slovenia	Mr Aleš GOMBAC Ministry of Infrastructure, Slovenian Maritime Administration, Department for safety of the coastal sea	Ukmarjevtrog 2, 6000 Koper Tel:+386 5 66 32 100 Cell: Telefax:+386 5 66 32 102
Spain	Mr José CONSARNAU GUARDIOLA Subdirector General de Organismos Internacionales Técnicos Dirección General de Política Exterior y Asuntos Multilaterales, Globales y de Seguridad Ministerio de Asuntos Exteriores y de Cooperación	Serrano Galvache No. 26 28071 Madrid Tel:+ +34 91 379 17 35/ 44 Cell: Telefax: +34 91 394 86 49
Syria	Eng. Fathia MOHAMMAD Directorate of Chemicals Safety and Solid Waste Ministry of State for Environmental Affairs	Yousef Alazma Square PO Box 3773 Damascus Tel:+963 11 239 63 91/231 63 71 Cell:+963 93 229 14 50 Telefax:+963 11 231 21 20
Tunisia	M.le Directeur Général, Agence nationale de protection de l'environnement (ANPE)	Centre Urbain Nord , 15 rue 7051 cité Essalem 2080 Tunis B.P. N° 52 Le Bélvédère Tel:+216 71 767 448 Cell:+216 22 560 141 Telefax:+216 71 751 268/751 750
Turkey	Mr Murat TURAN Head of Department for Marine and Coastal Management Ministry of Environment and Urbanization Directorate General of Environmental Management	Mustafa Kemal Mahallesi Eskişehir Devlet Yolu (Dumlupınar Bulvarı) 9. km. No: 278 Çankaya / Ankara Tel:+90 312 586 30 44 Cell: Telefax:+90 312 474 03 35
European Union	Marijana MANCE Policy Officer European Commission Directorate-General for Environment	European Commission B-1049 Brussels/Belgium Avenue de Baulieu 5, office BU 9 04/110 Tel.: +32 2 2982011 E.mail: marijana.mance@ec.europa.eu

2. OPRC Focal Points⁹

Country	Name, Department or position	Contact details
Albania	Mr Elson THANA Specialist, Department of Maritime Transport Polices, Ministry of Transport an	SheshiSkënderbejNr. 5 Tirana Tel:+355 4 23 80 744 Cell:+355 68 68 11 242 Telefax:+355 4 22 25 196
Algeria	M. Raouf HADJ AISSA Sous-Directeur de la Préservation du Littoral, du milieu marin et des zones humides Ministère des Ressources en eau et de l'Environnement	03 Rue CaireKouba Alger Tel:+213 21 43 28 75 Cell:+213 550 82 51 86 Telefax:+213 21 43 28 75
Bosnia Herzegovina	Prof. Tarik KUPUSOVIC Special Advisor to the Minister of Physical Planning and Environment, Hydo Engineering Institute	StjepanaTomica 1, 71000 Sarajevo Tel:+387 33 212 466/7 Cell:+387 61 158 007 Telefax:+387 33 207 949
Croatia	Captain Darko GLAZAR Harbour Master , Ministry of Maritime Affairs, Transport and Infrastructure , Safety of Navigation, Marine Environment and Inland Waters Protection Authority	Senjsko pristanište, 3, 51000 Rijeka Tel:+385 51 214 113 Cell:+385 99 2111 247 Telefax:+385 51 211 660
Cyprus	Director Department of Fisheries and Marine Research, Ministry of Agriculture, Natural Resources and Environment	101 Vithleem Street, Nicosia 1416 Tel:+357 22 807 867 Cell: Telefax:+357 22 781 226;+357 22 77 59 55
Egypt	Mr. Ahmed KasemKasem SHETA Environmental Disasters & Crises Management Director, Egyptian Environment Affairs Agency (EEAA) , Cabinet of Ministers	30 Misr-Helwan Agricultural Road Maadi, Cairo Tel:+20 22 525 64 91-92 Cell:+20 100 382 46 00 Telefax:+20 22 525 64 94

⁹**OPRC Focal Point:** Office or officer of the national authority responsible for preparedness for and response to accidental marine pollution, if possible designated as such in the relative national contingency plans; the responsibility for preparedness for and response to accidental marine pollution varies from country to country and may fall under the responsibilities of, for example, the national authority in charge of maritime affairs or the national authority in charge of environment or the national authority in charge of civil protection

France	Mme. Marie-Sophie DUFAU-RICHET Chargée de mission pour les questions internationales, Secrétariat Général de la Mer	69 rue de Varennes, 75007 Paris Tel:+33 1 42 75 66 53 Cell:+33 6 61 53 95 01 Telefax:+33 1 42 75 66 78
Greece	Captain H.C.G. (eng) Markoulakis STYLIANOS Director of the Marine Environment Protection Directorate Ministry of Maritime Affairs and Insular Policy	Akti Vasileiadi – Gate E1-E2 (inside port), 18510 Piraeus Tel:+30 213 137 1132 Cell:+30 694 433 1880 Telefax:+30 210 422 04 40
Israel	Mr. Ran AMIR Director, Marine and Coastal Environment Division, Ministry of Environmental Protection	15a Pal-Yam st., P.O. Box 811, Haifa 31007 Tel:+972 4 863 35 00 Cell:+972 50 62 33 050 Telefax:+972 4 863 35 20
Italy	Dr. Giuseppe ITALIANO Head of Unit VII “ Marine Protection from Pollutions, General directorate for Nature's Protection and Sea, Ministry of Environment	Via Cristoforo Colombo, 44, 00147 Rome Tel:+39 06 57 22 83 03 Cell:+39 33 16 22 00 14 Telefax:+39 06 57 22 83 90
Lebanon	Mr. Georges BERBARI Chief of Service of Regional Departments and Environmental Police, Ministry of Environment	Mid-Town – Lazarieh Building Block A 4 7th Floor (Room 7-49) P.O. Box 11/ 2727, Beirut Tel:+961 (1) 976 555 ext 412 Cell:+961 (3) 029 547 Telefax:+961 (1) 976 512
Libya	Mr. Khairi Sulliman KROUZ Hse Advisor	Bashir Essadawe Street Tripoli Tel:+218 91 415 43 36 Cell:+218 91 516 38 33 Telefax:+218 21 444 7501
Malta	Captain Richard GABRIELE Head Pollution and Incident Response, Ports and and Yachting Directorate, Authority for Transport in Malta, Malta Transport Centre	Xatt l-Ghassara ta' l-Gheneb, Marsa MRS 1917 Tel:+356 2291 44 20 Cell:+356 9949 43 12 Telefax:+356 2291 44 29
Monaco	M. Patrice CELLARIO Conseiller de Gouvernement pour l'Intérieur, Département de l'Intérieur	Place de la Visitation MC-98000 Monaco Tel:+377 98 98 84 56; +377 98 98 82 35 Cell: Telefax:+377 98 98 82 45

Montenegro	Captain Predrag RATKOVIC Senior Advisor, Head of Sector for Prevention of Sea Pollution from Ships, Maritime Safety Department	Maršala Tita br.7, P.O. Box 14, 85000 Bar Tel:+382 30 313 241 Cell:+382 69 632 930 Telefax:+382 30 313 274
Morocco	Mme. Naoual ZOUBAIR Chef du Service Stratégies d'Intervention, Division Prévention et Stratégies d'Intervention, Direction de la Surveillance et de la Prévention des Risques, Département de l'Environnement, Secrétariat d'Etat chargé de l'eau et de l'environnement	9, Avenue Al Araar, secteur 16, Hay Ryad, Rabat Tel:+212 5 37 57 06 01 Cell:+212 662 10 81 54 Telefax:+212 5 37 57 06 01; +212 5 37 57 18 29
Slovenia	Mr Aleš GOMBAČ Ministry of Infrastructure, Slovenian Maritime Administration, Department for safety of the coastal sea	Ukmarjevtrg 2, 6000 Koper Tel:+386 5 66 32 100 Cell: Telefax:+386 5 66 32 102
Spain	Mr Jose Luis GARCIA LENA Subdirector General de Seguridad, Contaminación e Inspección Marítima Dirección General de la Marina Mercante, Ministerio de Fomento	C/Ruiz de Alarcon, 1 28071 Madrid, Spain Tel:+34 91 597 92 69/70 Cell: Telefax:+34 91 597 92 87/597 92 35
Syria	Admiral Maitham Ibrahim AL YOUSEF General Director of Ports General Directorate of Ports, Ministry of Transport	P.O. Box 505, Al Gazair Street, Lattakia Tel:+963 41 47 33 33/47 90 41/47 25 93/47 38 76 Cell: Telefax:+963 41 47 58 05/47 90 41
Tunisia	M.le Directeur Général, Agence nationale de protection de l'environnement (ANPE)	Centre Urbain Nord , 15 rue 7051 cité Essalem 2080 Tunis B.P. N° 52 Le Bélvédère Tel:+216 71 767 448 Cell:+216 22 560 141 Telefax:+216 71 751 268/751 750
Turkey	Mr. Murat KORÇAK Engineer Marine Environment and Tourism Department Ministry of Transport, Maritime Affairs and Communications of Turkey	Ulastirma, Denizcilik ve Haberleşme Bakanlığı; Deniz ve İcular Duzenleme Genel Müdürlüğü Hakkı Turaylıç Cad. No:5 06338 Emek- Ankara TÜRKİYE Tel:+90 312 203 1000 Ext. 3420 Cell: Telefax:

**European
Union**

Mr. DE LA FUENTE
GARRIGOSA Alfonso
Acting Head of Unit,
DG ECHO A.4 - Civil
Protection Policy Unit
European Commission

86, Rue de la Loi 1049 Brussels, BELGIUM
Tel:+ 32 229-65741
E-mail: Alfonso.DELAFUENTE@ec.europa.eu

3. Mutual assistance Focal Points¹⁰

Country	Name, Department or position	Contact details
Albania	Ms. Klodiana MARIKA Director of the Biodiversity and Protected Area Ministry of Environment Excellence	Blv. ZhanD'Ark Tirana Tel:+355 4 2267 233 Cell:+355 69 20 92 872 Telefax:
Algeria	M. Raouf HADJ AISSA Sous-Directeur de la Préservation du Littoral, du milieu marin et des zones humides Ministère des Ressources en eau et de l'Environnement	03 Rue CaireKouba Alger Tel:+213 21 43 28 75 Cell:+213 550 82 51 86 Telefax:+213 21 43 28 75
Bosnia Herzegovina	UNIT OF BORDER POLICE OF BOSNIA AND HERZEGOVINA	88390 Neum Tel:+387 36 885 212 Cell: Telefax:+387 36 855 218
Croatia	Ministry of the Sea, Transport and Infrastructure Maritime Safety Directorate Deputy Minister	Prisavlje 14, Zagreb Tel:+385 1 6169 250 Cell: Telefax:+385 1 6169 069
Cyprus	Director Department of Fisheries and Marine Research, Ministry of Agriculture, Natural Resources and Environment	101 Vithleem Street, Nicosia 1416 Tel:+357 22 807 867 Cell: Telefax:+357 22 781 226;+357 22 77 59 55
Egypt	Egyptian Environment Affairs Agency (EEAA) Central Operations Room (COR) Cabinet of Ministers Ministry of Environment	30 Misr Helwan El-Zyrae Road Maadi, Cairo P.O. Box 11728 Tel:+ +20 22 525 6491/ 92 Cell:+20 100 382 46 00 Telefax:+ +20 22 525 64 94
France	Mme. Marie-Sophie DUFAU-RICHET Chargée de mission pour les questions internationales, Secrétariat Général de la Mer	69 rue de Varennes, 75007 Paris Tel:+33 1 42 75 66 53 Cell:+33 6 61 53 95 01 Telefax:+33 1 42 75 66 78

¹⁰**Mutual assistance Focal Point:** Competent national authority [or officer] responsible for dealing with matters related to mutual assistance in case of emergency.

Greece	Captain H.C.G. Markoulakis STYLIANOS Director of the Marine Environment Protection Directorate Ministry of Shipping, Maritime Affairs and the Aegean. AktiVasileiadi	Akti Vasileiadi – Gate E1-E2 (inside port), 18510 Piraeus Tel: +30 213 137 1132 Cell:+30 694 433 1880 Telefax: +30 210 422 0440
Israel	Captain Michael Solomon Senior Marine Surveyor / MRCC Manager Shipping and Ports Administration, Ministry of Shipping and Transport	15a Pal-Yam st., P.O. Box 811, P.O. Box 806, Haifa 31007 Tel:+972 4 863 2110 Cell:+972 50 62 12 923 Telefax:+972 4 863 35 20
Italy	Dr. Giuseppe ITALIANO Head of Unit VII “ Marine Protection from Pollutions, General directorate for Nature's Protection and Sea, Ministry of Environment	Via Cristoforo Colombo, 44, 00147 Rome Tel:+39 06 57 22 83 03 Cell:+39 33 16 22 00 14 Telefax:+39 06 57 22 83 90
Lebanon	Mr. Georges BERBARI Chief of Service of Regional Departments and Environmental Police, Ministry of Environment	Mid-Town – Lazarieh Building Block A 4 7th Floor (Room 7-49) P.O. Box 11/ 2727, Beirut Tel:+961 1 976 555 ext 412 Cell:+961 3 029 547 Telefax:+961 1 976 512
Libya		Tel: Cell: Telefax:
Malta	Malta Civil Protection Director	Ta’ Kandja L/O Siggiewi SG 2610 Tel:+356 2393 0000 Cell: Telefax:+356 21462 607
Monaco		Tel: Cell: Telefax:
Montenegro	Captain Vladan RADONIJC Director , Maritime Safety Department	Maršala Tita br.7 ,P.O. Box 14, 85000 Bar Tel:+382 30 313 241 Cell:+382 69 333 252 Telefax:+382 30 313 274
Morocco	Mme. Naoual ZOUBAIR Chef du Service Stratégies d'Intervention, Division Prévention et Stratégies d'Intervention, Direction de la Surveillance et de la Prévention des Risques,	9 Avenue El Araarsecteur, 16 Hay Ryad, Rabat Tel:+212 537 57 06 01 Cell:+212 662 10 81 54 Telefax:+212 537 57 18 29; 537 57 06 01

	Département de l'Environnement, Secrétariat d'Etat chargé de l'eau et de l'environnement	
Slovenia	Mr. Darko BUT Director General Administration of the Republic of Slovenia for Civil Protection and Disaster Relief Ministry of Defence of the Republic of Slovenia	Vojkova cesta 61, SI-1000 Ljubljana Tel:+386 1 471 33 22 Cell: Telefax:+386 1 431 81 17
Spain		Tel: Cell: Telefax:
Syria	Eng. Fathia MOHAMMAD DDirectorate of Chemicals Safety and Solid Waste , Ministry of State for Environmental Affairs	Yousef Alazma Square , P.O. Box 3773, Damascus Tel:+963 11 239 63 91; 231 63 71 Cell:+963 93 229 14 50 Telefax:+963 11 231 21 20
Tunisia	M. le Directeur Général Agence nationale de protection de l'environnement (ANPE)	12, Rue du Cameroun, Le Belvédère, 1002 Tunis Tel:+216 71 767 448 Cell:+216 22 560 141 Telefax:+216 71 751 268/751 750
Turkey	Ministry of Transport, Maritime Affairs and Communications General Directorate for Regulating of Sea and Inland Waters Director General (at present Cemalettin SEVLI)	Ulastirma, Denizcilik veHaberlesmeBakanligi; DenizveIcsularDuzenlemeGenelMüdürlüğüHakkiTurayliç Cad. No:5 06338 Emek- Ankara TÜRKIYE Tel:+90 312 203 10 00 Ext. 2210 Cell: Telefax:+90 312 231 33 06
European Union	Emergency Response Co-ordination Centre (ERCC), DG ECHO - Humanitarian Aid and Civil Protection, European Commission/ European Maritime Safety Agency (EMSA) Maritime Support Services	ERCC: 86, Rue de la Loi 1049 Brussels, BELGIUM/ Phone:+ 32 2 292 1112 Fax:+ 32 2 298 6651 EMSA: Praça Europa, 4 Cais do Sodré 1249-206 LISBOA PORTUGAL Phone: + 351 211 209 415 Mobile:+ 351 911 089 200 Fax: +351 211 209 480

4. 24 hour Focal Points¹¹

Country	Name, Department or position	Contact details
Albania	Mr Paulin NDREU Director of Harbour Masters, General Maritime Directorate	Durres Tel:+355 5 22 20 017 Cell:+355 68 20 24 866 Telefax:+355 5 22 20 017
Algeria	Centre National des Opérations de Surveillance et de Sauvetage en Mer (CNOSS) Ministère de la Défense Nationale – Commandements des Forces Navales	B.P. 8 Amirauté Alger Tel:+213 21 43 01 78 Cell: Telefax:+213 21 43 71 08
Bosnia Herzegovina	Prof. Tarik KUPUSOVIC Special Advisor to the Minister of Physical Planning and Environment, Hydro Engineering Institute	Stjepana Tomica 1, 71000 Sarajevo Tel:+387 33 212 466/7 Cell:+387 61 158 007 Telefax:+387 33 207 949
Croatia	MRCC – Maritime Search and Rescue Co-ordination Centre	Senjsko pristaniste 3, 51000 Rijeka Tel:+385 1 195 Cell: Telefax:+385 51 312 254
Cyprus	Director Department of Fisheries and Marine Research, Ministry of Agriculture, Natural Resources and Environment	101 Vithleem Street, Nicosia 1416 Tel:+357 22 807 867 Cell: Telefax:+357 22 781 226; +357 22 77 59 55
Egypt	Operations' Centre , Maritime Transport Section Ministry of Transport	4, Ptolemy Street, Alexandria, Egypt, Post Box: 21514 Tel:+20 3 487 57 67 Cell: Telefax:+20 3 486 90 08
France	CROSS-MED Centre régional opérationnel de surveillance et de sauvetage en méditerranée	Chemin du Fort Sainte Marguerite, B.P. 70069, 83953 La Garde, Cedex Tel:+33 4 94 61 16 16 Cell: Telefax:+33 4 94 27 11 49
Greece	Operational Centre of H.C.G. ry of Shipping, Maritime Affairs and the Aegean	Akti Vasileiadi Gate E1-E2 (inside port), 18510 Piraeus

¹¹**24 hour Focal Point:** National centre or contact point responsible for receiving reports on marine pollution accidents which is easily contactable on a twenty-four hours basis and capable of processing the said reports and alerting the competent national authorities responsible for initiating the relative response action; [It is expected that this information is consistent with the same information submitted to the International Maritime Organization (IMO) for inclusion in its 'List of National Operational Contact Points Responsible for the Receipt, Transmission and Processing of Urgent Reports on Incidents involving Harmful Substances, including Oil from Ships to Coastal States' (MSC-MEPC.6/Circ.14 – Annex 2) and which is available on the hyperlink : <http://www.imo.org/en/OurWork/Circulars/Pages/CP.aspx>

		Tel: +30 210 419 1626; 411 2500; Cell: Telefax: +30 210 417 3501
Israel	MRCC Haifa Shipping and Ports Administration, Ministry of Transport and Road Safety	15 A Pal-Yam Str., P.O. Box 806, Haifa 31007 Tel:+972 4 863 21 45/ 8632072 / 8632073 / 8632074 / 8632075 Iridium: 0088162347554 Inmarsat: 00870772577926 Cell: Telefax:+972 4 863 21 17 Fax to mail: +972 3 6849867
Italy	Mr. Leonardo QUINTAVALLE Head of Operative Centre for Sea Emergencies of the Ministry for the Environment and Territory and Sea Directorate General Direction for Nature's Protection and Sea, Division VII – Marine Protection from Pollutions	Via Cristoforo Colombo, 44, 00147 Rome Tel:+39 06 57 55 34 67/6/5 Cell:+39 329 381 0317 Telefax:+39 06 57 22 34 72
Lebanon	Eng. Abdel Hafeez KAISSI Director General of Land and Maritime Transport, Ministry of Public Works and Transport, Directorate General of Land and Maritime Transport	Starco Building, 3rd Floor, Beirut Tel:+961 1 371 644/645 Cell:+961 3 312 385 Telefax:+961 1 371 647
Libya	Mr Abuagilla ALI ALSAWEI Naval Operation Officer Libya Coast Guard	Libya - Zawea Tripoli Tel:+218 92 672 68 42 Cell: Telefax:
Malta	Armed Forces of Malta Duty Officer, Operation Centre, AFM	Luqa Barracks, Luqa Tel:+3562249 4202 Cell: Telefax:+356 21 809 860
Monaco	Commandant Principal de Police - M Patrick REYNIER Chef de la Division de la Police Maritime et Aéroportuaire, Département de l'Intérieur Direction de la Sûreté Publique	14 quai Antoine 1 er, MC 98 000 Monaco Tel:+377 93 15 30 16 Cell: Telefax:+377 93 30 22 45; 93 50 65 47
Montenegro	Maritime Rescue Co-ordination Centre (MRCC-BAR) Search and Rescue Sector, Maritime Safety Department	Dobra Voda bb, 85000 Bar Tel:+382 30 313 088 Cell:+382 67 642 179 Telefax:+382 30 313 600
Morocco	Service de la Prévention de la Pollution Direction de la Marine Marchande	Boulevard Félix HouphouëtBoigny, 20000 Casablanca Tel:+212 5 29 02 86 08

		Cell: Telefax:+212 5 22 27 33 40
Slovenia	Emergency Notification Centre of the Republic of Slovenia Administration for Civil Protection and Disaster Relief	Vojkova cesta 61, 1000 Ljubljana Tel:+386 1 471 32 22 Cell: Telefax:+386 1 431 81 17
Spain	Ms. Lourdes OÑA Directora del Centro Nacional de Coordinación de Salvamento (CNCS Madrid) Sociedad de Salvamento y Seguridad Marítima (SASEMAR)	Fruela, 3 28011 Madrid, Spain Tel:+34 91 755 9133 Cell: Telefax: +34 91 526 1440; 755 91 09
Syria	Admiral MaithamIbrahem AL YOUSEF General Director of Ports General Directorate of Ports, Ministry of Transport	P.O. Box 505 ,Al Gazair Street Lattakia Tel:+963 41 47 90 41 Cell:+963 944 362 702 Telefax:+963 41 47 53 05
Tunisia	Service National de Surveillance Côtière (SNCS)	La Base Navale de la Goulette, Tunis Tel:+216 (71) 736 330 Cell: Telefax:+216 (71) 736 804
Turkey	Ministry of Transport, Maritime Affairs and Communications General Directorate for Regulating of Sea and Inland Waters Main Search and Rescue Co-ordination Centre	Gaza MustafaKemalBulvar No 128 06570 Maltepe - Ankara Tel:+90 312 2232 47 83; 232 38 49; 231 91 05 Cell: Telefax:+90 312 232 08 23
European Union	Emergency Response Co-ordination Centre (ERCC)/ European Commission/ European Maritime Safety Agency (EMSA) Maritime Support Services	86, Rue de la Loi 1049 Brussels, BELGIUM/ ERCC: Tel:+322292 1112 Telefax:+32 2 298 6651 EMSA: Praça Europa, 4 Cais do Sodré 1249-206 LISBOA PORTUGAL Tel: + 351 211 209 415 Cell:+ 351 911 089 200 Fax: + 351 211 209 480

ANNEX I.3

**DIRECTORY OF COMPANIES OFFERING SERVICES IN THE
MEDITERRANEAN IN CASE OF EMERGENCY¹²**

ALBANIA

Address
Telephone (24 hours / day)
Mobile
Telefax
Further details

CROATIA

CIAN“ D.O.O. SPLIT

Address 21000 SPLIT, Varazdinska 51
Telephone (24 hours / day) +385 21/540 190
Mobile:
Telefax +385 21/540 199
Further details Director (Mr PetarBojic) / 18 peoples trained and available 24 h for participating in response operations

„CIKLON“ D.O.O. ZADAR

Address 23000 ZADAR, Put Murvice 14
Telephone (24 hours / day) 385 23 / 344 000
Mobile
Telefax +385 23 / 344 001
Further details Director (Ms Jasminka Plenkovic) / 9 peoples trained and available 24 h for participating in response operations

„DEZINSEKCIJA“ D.O.O. RIJEKA

Address 51000 RIJEKA, Brajšina 13
Telephone (24 hours / day) +385 (51) 506 920
Mobile
Telefax +385 (51) 512 769
Further details Director: Mr RankoDujmovic / 10 peoples trained and available 24 h for participating in response operations

«EKOOPERATIVA» D.O.O.

Address 51211 MATULJI, Dalmatinskihbrigada 17
Telephone (24 hours / day) +385 (51) 277-542
Mobile
Telefax +385 (51) 274-534
Further details Providing services of waste management and other services / 11 peoples trained and available 24 h for participating in response operations

„EKO-KEM“ D.O.O. RIJEKA

Address 51000 RIJEKA, Luzine 7d
Telephone (24 hours / day) +385 (51) 226 714
Mobile
Telefax +385 (51) 226 714
Further details Director: Mr Anton Sciran / 4 people trained and available 24 h for participating in response operations

„JADRANSKI NAFTOVOD“ D.D. ZAGREB

¹² Extracted from REMPEC's Country Profiles updated by OPRC Focal Points

Address Terminal Omišalj --- Kancinar 1, 51513 Omišalj
Telephone (24 hours / day) 385 (51) 206-200
Mobile Person in charge: Bruno Jankovic, terminal manager, Mobile: +385 98 479 454; tel: +385 (51) 206 232, fax: +385 (51) 842 273 1 / Contact person: Mr Vladimir Budimir, Mobile: +385 98 474 768, tel: +385 (51) 206 258
Telefax
Further details 7 people trained and available 24 h for participating in response operations

INA – INDUSTRIJA NAFTE“ D.D. ZAGREB

Address Oil refinery Rijeka R ----- M. Barača 26, 51000 Rijeka
Telephone (24 hours / day) +385 (51) 201-011
Mobile
Telefax 385 (51) 201-000
Further details Director: Mr Ivan Krešić

IND EKO“ d.o.o.

Address 51000 RIJEKA, Korzo 40
Telephone (24 hours / day) +385 (51) 336-152, 336-093, 211-758
Mobile
Telefax +385 (51) 336-022
Further details Director: Mr IlijaSmitran (+385 98 260-851) / 30 people trained and available 24 h for participating in response operations

„RIJEKATANK» EKOLOGIJA I ZAŠTITA OKOLIŠA D.O.O. RIJEKA

Address 51000 RIJEKA, Kružna 10
Telephone (24 hours / day) +385 (51) 212-838
Mobile +385 91 125-7102 (Mr ZeljkoGrujicic)
Telefax 385 (51) 211-864
Further details Director: Mr MiloradSmitran/ 30 people trained and available 24 h for participating in response operations

JADRANSKI POMORSKI SERVIS“ D.D. RIJEKA

Address 51000 RIJEKA, Verdijeve 19
Telephone (24 hours / day) +385 (51) 335 000, +385 (51) 331 113
Mobile
Telefax +385 (51) 313 161
Further details Contact person: Mr Tomislav / 25 people trained and available 24 h for participating in response operations
Directory of companies offering services in the Mediterranean in case of emergency Page 4 / 9

CYPRUS

EDT Towage and Salvage Co. Ltd.

Address 124 AyiasParaskevis Street, Yermasoyla, PO Box 4548, 3725 Limassol, Cyprus
Telephone (24 hours / day) +357 55 326 108
Mobile
Telefax +357 55 324 440
Further details OPERATIONAL ARRANGEMENTS ORDER FOR SERVICES SHOULD BE MADE TO :
Same
as above PREFERRED WAY OF COMMUNICATION : fax, telex, phone WORKING
LANGUAGES : Greek, French, English 24-HOUR SERVICE : Yes INTERVENTION (IN THE
MEDITERRANEAN) IN LESS THAN : 24 hrs AREAS: East Mediterranean seas

EGYPT

MARIDIVE & OIL SERVICES s.a.e. ADDRESS :

Address Cairo office: 32, Gol Gamal St., Dokki, 12411, Cairo - Egypt Alexandria office: 10, Ahmed
Yehia St., Gleem, 21411, Alexandria - Egypt
Telephone (24 hours / day) +20 2 3022993 (Cairo) / 3 5802899 (Alexandria)
Mobile

Telefax +20 2 3463380 (Cairo) / 3 5874668 (Alexandria)

Further details OPERATIONAL ARRANGEMENTS ORDER FOR SERVICES SHOULD BE MADE TO : see above PREFERRED WAY OF COMMUNICATION : fax / telephone WORKING

LANGUAGES : Arabic, English 24-HOUR SERVICE : Yes INTERVENTION (IN THE MEDITERRANEAN) IN LESS THAN: 24 hrs AREAS: Eastern part of Mediterranean Sea

FRANCE

FOST

Address Quartier de la Tête Noire; RD 113; 13340 ROGNAC - France

Telephone (24 hours / day) +33 (0)4 42 87 59 37 / +33 (0)1 47 44 82 29

Mobile

Telefax +33 (0)4 42 87 59 38 / +33 (0)1 47 44 62 05

Further details DISPOSITIONS OPERATIONNELLES MOYEN DE COMMUNICATION SOUHAITÉ :

Téléphone LANGUES DE TRAVAIL : Français, Anglais SERVICE 24 HEURES SUR 24: oui

INTERVENTION (EN MÉDITERRANÉE) EN MOINS DE : 24 hrs ZONES DU BASSIN

MÉDITERRANÉEN : Partout

LESABEILLES

Address Chaussée Lamandé, BP 1351, 76065 Le Havre cedex - France

Telephone (24 hours / day) +33 2 35 19 77 85

Mobile

Telefax +33 2 35 41 78 98

Further details DISPOSITIONS OPERATIONNELLES LA DEMANDE DE SERVICES DEVRA ÊTRE FAITE À :

Service des sauvetages (voir coordonnées ci-dessus) MOYEN DE COMMUNICATION

SOUHAITÉ : Téléphone / Fax LANGUES DE TRAVAIL : Français, Anglais SERVICE 24

HEURES SUR 24: Oui INTERVENTION (EN MÉDITERRANÉE) EN MOINS DE : 12 hrs

Directory of companies offering services in the Mediterranean in case of emergency Page 5 / 9

ZONES DU BASSIN MÉDITERRANÉEN OÙ VOTRE SOCIÉTÉ PEUT OFFRIR SES

SERVICES : CONDITIONS SOUS LESQUELLES LES SERVICES PEUVENT ÊTRE FOURNIS :

LLOYD's Open Form TOWHIRE (BIMCO) TOWCON

GRAND PORT MARITIME DE MARSEILLE-FOS

Address 23, Place de la Joliette BP 1965 13226 Marseille cedex 02 - France

Telephone (24 hours / day) +33 4 91 39 40 00 / 4 91 39 44 44

Mobile

Telefax +33 4 91 39 40 44 / 4 91 39 40 38

Further details DISPOSITIONS OPERATIONNELLES LA DEMANDE DE SERVICES DEVRA ÊTRE FAITE À :

M. Joel Zattara - Chef du Service Sécurité Environnement Manutention Auxiliaires du

Navire MOYEN DE COMMUNICATION SOUHAITÉ : Telex / Fax LANGUES DE TRAVAIL :

Français SERVICE 24 HEURES SUR 24: Oui INTERVENTION (EN MÉDITERRANÉE) EN

MOINS DE : 24 hrs ZONES DU BASSIN MÉDITERRANÉEN OÙ VOTRE SOCIÉTÉ PEUT

OFFRIR SES SERVICES : France, Espagne, Italie, Grèce, Pays di Maghreb. CONDITIONS

SOUS LESQUELLES LES SERVICES PEUVENT ÊTRE FOURNIS : La requête d'assistance

internationale sera considérée sur demande et une convention fixant toutes les conditions

sera signée.

SEACOR FISH

Address 23 Rue Notre-Dame des Victoires 75002 Paris France

Telephone (24 hours / day) +33 1 53 40 21 00

Mobile

Telefax 33 1 53 40 21 23

Further details DISPOSITIONS OPERATIONNELLES LA DEMANDE DE SERVICES DEVRA ÊTRE FAITE À :

John Gellert; Jean-Pierre Pruleau LANGUES DE TRAVAIL : Français, Anglais SERVICE 24

HEURES SUR 24: Non INTERVENTION (EN MÉDITERRANÉE) EN MOINS DE : 24 hrs

ZONES DU BASSIN MÉDITERRANÉEN : Zones côtières, entre les frontières espagnoles et

italiennes

STOLT COMEX SEAWAY

Address 467, Chemin du Littoral BP 69 13321 Marseille cedex 16 France
Telephone (24 hours / day) +33 4 91 09 68 09 / 4 91 09 68 15

Mobile

Telefax +33 4 91 09 68 00

Further details DISPOSITIONS OPERATIONNELLES LA DEMANDE DE SERVICES DEVRA ÊTRE FAITE
À :

Direction Générale (Mr. Vincent Chirié, Directeur des opérations) MOYEN DE

COMMUNICATION SOUHAITÉ : Fax LANGUES DE TRAVAIL : Français, Anglais SERVICE
24 HEURES SUR 24: Oui

SYCOPOL

Address Avenue des Pierrelets 45380 Chaingy France

Telephone (24 hours / day) +33 2 38 43 44 97

Mobile

Telefax +33 2 38 43 95 47

Further details DISPOSITIONS OPERATIONNELLES MOYEN DE COMMUNICATION SOUHAITÉ : Fax
ou, en cas d'urgence, Téléphone (au +33 8 36 61 61 36 suivi du code 166547 et laisser

un message) LANGUES DE TRAVAIL : Français, Anglais SERVICE 24 HEURES SUR 24:

Oui INTERVENTION (EN MÉDITERRANÉE) EN MOINS DE : 48 hrs ZONES DU BASSIN

MÉDITERRANÉEN : Partout en Méditerranée CONDITIONS SOUS LESQUELLES LES

SERVICES PEUVENT ÊTRE FOURNIS : Contrat pour service ou équipements à négocier.

Directory of companies offering services in the Mediterranean in case of emergency Page 6 / 9

ISRAEL

MOPS, MAAGAN. GALYAM, EMCO-YAM

Address

Telephone (24 hours / day)

Mobile

Telefax

Further details

ITALY

CRISMANI Group

Address Via Roma 30 34 132 Trieste Italy

Telephone (24 hours / day) +39 040 7606138

Mobile

Telefax +39 040 7606017

Further details gents in the Mediterranean : AGMAR - Ravenna - Italy GENEMAR - Venezia - Italy

INGEMAR - Crotone - Italy OPERATIONAL ARRANGEMENTS ORDER FOR SERVICES

SHOULD BE MADE TO :Crismani Group PREFERRED WAY OF COMMUNICATION : tel. /

fax / telex WORKING LANGUAGES : Italian English 24-HOUR SERVICE : Yes

CONDITIONS ON WHICH SERVICES MAY BE PROVIDED :Usual ship's charters

ECOLMARE s.p.a.

Address Via delle Rose 50 / A 80063 Piano Di Sorrento (Naples) Italy T

Telephone (24 hours / day) +39 81 5321516

Mobile

Telefax : +39 81 5336245

Further details Agents in the Mediterranean :􀂄 ECOLMARE IBERICA Passeig Joan de
Borbon, 92 - 08003 Barcelona - Spain - Tel.: 3 310 28 08 / 27 50 - fax.: 3 319 76 72

􀂄 ECOLMARINE Hellas - 35 - 39 AktiMiaouli - 18535 Piraeus - Greece - Tel.: 1

4292195 - fax.: 1 4292427 - Tlx.: 212616 OPERATIONAL ARRANGEMENTS PREFERRED

WAY OF COMMUNICATION : fax WORKING LANGUAGES : Italian, English 24-HOUR

SERVICE : Yes AREAS OF THE MEDITERRANEAN BASIN WHERE THE COMPANY CAN

OFFER ITS SERVICES : Italy, Spain, Greece CONDITIONS ON WHICH SERVICES MAY

BE PROVIDED : Standard international procedures (World Bank, EU) can be accepted.

Daily rate contract. Each item to be quantified on the basis of the service to offer
Directory of companies offering services in the Mediterranean in case of emergency Page 7 / 9

EUROPEAN BOATMEN'S ASSOCIATION (EBA)

Address Ponte A. Doria 16126 Genoa Italy
Telephone (24 hours / day) +39 010 265110
Mobile
Telefax +39 010 255657

Further details OPERATIONAL ARRANGEMENTS WORKING LANGUAGES : English , Italien 24-HOUR
SERVICE : No The service is provided in the Country where EBA is present, if required by
the national/local responsible Authority as cooperating activity (on a cost-reimbursement
basis)

MALTA

Civil Protection Department, Director

Address CPD Ta' Kandia L/o Siggiewi
Telephone (24 hours / day) +356 21 462 610
Mobile
Telefax +356 21 462 607
Further details

MONACO

Monaco Remorquage Maritime - Héli air Monaco

Address
Telephone (24 hours / day)
Mobile
Telefax
Further details

MONTENEGRO

Specialized private company "HEMOSAN"

Address Popovici 46, 85 000 Bar, MONTENEGRO
Telephone (24 hours / day) +382 (0) 30 346 232
Mobile +382 (0) 67 314 218
Telefax +382 (0) 30 346 234
Further details

SPAIN

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Markleen Terra Phone/Sorbcontrol

Address Polígono Río Gallego, C/ E nº 22 50840 San Mateo de Gállego (Zaragoza) España/Plaza
deVilanoveta. CALLE DEL 'SRabassaires, 9 08812 San Pere d Rives Barcelona
Telephone (24 hours / day) +34 91 976683000/+34 90 208809192
Mobile
Telefax +91 976683001/+34 93 8148175
Further details

TURKEY

UZMAR UZMANLAR DENİZCİLİK TİCARET VE SAN. LTD. ŞTİ.Address CumhuriyetBulvarı

No:87Erdeniř Hamı K.7Pasaport-İzmirTelephone (24 hours / day) +90 232 445 76 00
Mobile
Telefax +90 232 4457900
Further details email: izmir@uzmar.com

ARPAŞ AMBARLI ROMÖRKAJ PİLOTAJ TİC. A.Ş.Address Ambarlı Lim. Tes. Marmara Mah. Limanlar
Cad. No.7 K.5 B. Çekmece- İstanbul Telephone (24 hours / day) +90 212 875 38 10-25
Mobile
Telefax +90 212 875 40 64 / + 90 212 875 42 80
Further details email: arpaskule@arpas-pilotaj.com.tr

GİSAŞ (GEMİ İNŞA SANAYİ A.Ş.)Address TersanelerCaddesi No.24 34944 Tuzla-İstanbul
Telephone (24 hours / day) +90 216 446 00 81
Mobile
Telefax +90 216 446 06 83

ANNEX I.4

**MEDITERRANEAN “PRINCIPLES AND GUIDELINES ON
COOPERATION AND MUTUAL ASSISTANCE”**

**I.4.1. GUIDELINES FOR CO-OPERATION IN COMBATING MARINE OIL POLLUTION
IN THE MEDITERRANEAN** *Adopted by the Fifth Ordinary Meeting of the Contracting Parties to
the Barcelona Convention, Athens, 11 September 1987 (UNEP/IG.74/5)*

**I.4.2. PRINCIPLES AND GUIDELINES CONCERNING COOPERATION AND MUTUAL
ASSISTANCE** *Adopted by the Seventh Meeting of the Contracting Parties to the Barcelona
Convention, Cairo, 11 October 1991 (UNEP(OCA)/MED IG.2/4, Annex IV, Appendices I-VI)*

**I.4.3 GUIDELINES CONCERNING THE EXCHANGE OF LIAISON OFFICERS BETWEEN
THE CONTRACTING PARTIES IN CASE OF RESPONSE OPERATIONS INVOLVING
SEVERAL STATES** *Adopted by the Ninth Ordinary Meeting of the Contracting Parties to the
Barcelona Convention, Barcelona, 5-8 June 1995 (UNEP(OCA)/MED IG.5/16, Annex XII, Appendix
IV)*

**I.4.4. GUIDELINES CONCERNING ARRANGEMENTS WHICH MIGHT BE MADE WITH
A VIEW TO ENSURING, IN CASE OF AN ACCIDENT, LIAISON BETWEEN THE
GOVERNMENTAL AUTHORITIES AND OTHER INTERESTED PARTIES** *Adopted by the
Ninth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Barcelona, 5-8 June
1995 (UNEP(OCA)/MED IG.5/16, Annex XII, Appendix IV)*

I.4.1. GUIDELINES FOR CO-OPERATION IN COMBATING MARINE OIL POLLUTION IN THE MEDITERRANEAN

Adopted by the Fifth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Athens, 11 September 1987 (UNEP/IG.74/5)

The Contracting Parties

- *Recalling* their commitments under the Protocol concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency, hereafter referred to as "the Protocol",
- *Recalling* the need to establish National Contingency Plans for combating oil pollution, Considering that in the light of experience there is a need for Guidelines to facilitate the implementation of the Protocol and in particular mutual co-operation in the Mediterranean,
- *Recognizing* that such co-operation cannot replace the individual action of each Contracting Party, which is essential in the initial hours following an incident to mitigate the effects of pollution,
- *Recalling* the role of the Regional Oil Combating Centre for the Mediterranean Sea hereafter referred to as "the Centre",

Recommend that the following Guidelines be used to the extent possible

1. The Parties to report to the Centre at least all spillages or discharges of oil in excess of 50 cubic meters as soon as they have knowledge of them. Part I (POLWARN) of the Standard Pollution Report (POLREP) will be used for this purpose¹³.
2. The Parties will acquire individually the necessary facilities to combat oil pollution in their territorial waters, including those means needed to provide initial response in case of major pollution incidents. In determining the minimum level of response capabilities, consideration should be given to the National Contingency Plan and in particular to the most vulnerable and high risk areas
3. When in case of an incident the requirements for combating pollution exceed the national capabilities and when a Party requests the assistance of other Parties, this assistance may involve equipment, products and specialized personnel. Such assistance will be requested:
 - from other Contracting Parties either directly or through the Centre;
 - or, when bilateral or multilateral agreements exist, directly by the Authorities of the Party requesting assistance (hereafter referred to as "the Requesting Party") to the Authorities of one or several Parties (hereafter referred to as "the Assisting Party"). The Centre will be systematically informed of all requests for assistance and consequent action taken.
4. Whenever assistance is requested, the Requesting Party will be in full charge of response operations. If response teams are put at the disposal of the Requesting Party it will issue instructions to response team leaders who will then be in charge of looking after the details of the operation.

¹³ "The Meeting discussed the appropriate threshold for reporting on the oil spills: 100 m³ was not deemed appropriate and a reference was made to MARPOL threshold of 50 m³. The Meeting concluded that spills of 50 m³ should be reported, whereas countries could also opt to report on spillages of lower amounts." - UNEP(DEPI)/MED WG.417/17 <https://wedocs.unep.org/rest/bitstreams/9135/retrieve>

5. The Requesting Party will:

- make its request in a clear and precise manner (quantity, type etc) by indicating for which purposes equipment, products and response personnel will be used;
- appoint an authority to receive the equipment, products and/or personnel and to ensure control of operations from the moment equipment, products and personnel arrive in the country and while these are conveyed to and from the scene of operations;
- make arrangements for the rapid entry of equipment, products and personnel prior to their arrival and ensure that customs formalities are facilitated to the maximum extent. Equipment should be admitted on a temporary basis and products should be admitted free of excise and duties;
- supply all that is needed for the correct operation and maintenance of equipment and provide accommodation and food for response teams;
- ensure that, should ships and aircraft be provided, ships are granted all necessary authorizations and aircraft cleared to fly in the national air space. A flight plan or a flight notification will be filed and accepted as an authorization for aircraft to take off, land ashore or at sea outside regular customs airfields;
- return, once response operations are over, all unused products and ensure that returned equipment is in the best possible working order;
- send a report on the effectiveness of equipment, products and personnel provided, to the appropriate Authorities of the Assisting Party. A copy of the report will be sent to the Centre.

6. The Assisting Party will provide:

- a detailed statement and complete list of all equipment, products and personnel within those listed by the Requesting Party it can provide as well as instructions for use of equipment and products;
- equipment that is in good working order and suitable for the requirements of the Requesting Party;
- only products approved for use in its own territory;
- competent specialized personnel, if possible equipped with own kit needed for their action. Non-specialized personnel should not normally be sent out except perhaps in case of a particularly massive oil pollution.

7. In the absence of bilateral or multilateral agreements, the financial conditions for the operation will be agreed between the Assisting and the Requesting Parties.

8. For regional co-operation to work effectively and rapidly in case of emergency, each Party will update annually, the information provided to the Centre in accordance with Article 7 of the Protocol and any other relevant information including:

- the national organization and the competent national authorities in charge of combating marine pollution;
- specific national regulations aimed at preventing accidents likely to cause marine pollution;
- national regulations regarding the use of products and combating techniques;

- bilateral or multilateral agreements on marine pollution signed with other Mediterranean Parties;
 - research programmes, experiments and major exercises on the various aspects of marine pollution response;
 - purchase of major items of equipment.
9. Updates referred in paragraph 8, shall be made preferably by the OPRC Focal Points, through REMPEC's Country Profile (<http://www.rempec.org/country.asp>) for all issues referred above with the exception of updates on equipment which shall be reported on the Mediterranean Integrated Geographical Information System on Marine Pollution Risk Assessment and Response (MEDGIS-MAR - <http://medgismar.rempec.org/#>).

I.4.2. PRINCIPLES AND GUIDELINES CONCERNING COOPERATION AND MUTUAL ASSISTANCE

Adopted by the Seventh Meeting of the Contracting Parties to the Barcelona Convention, Cairo, 11 October 1991 (UNEP(OCA)/MED IG.2/4, Annex IV, Appendices I-VI)

A. Principles and guidelines concerning the role and responsibilities of experts sent on mission by the Centre, following the request of a State in case of emergency, and duties and obligations of States towards them

1. The Contracting Parties to the Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency (Protocol to the Barcelona Convention) may, in case of accidents causing or likely to cause marine pollution, request inter alia assistance in the form of expert advice either from the Regional Centre or from another Contracting Party.
2. A directory of experts and Centres of expertise able to offer this type of assistance in case of emergency has been established and is regularly updated by the OPRC Focal Point of each Contracting Parties through the REMPEC's Country Profile(<http://www.rempec.org/country.asp>).
3. On the request of a State in case of emergency, the Centre can, if the circumstances necessitate it, send an expert with a view to providing national authorities with advice and technical expertise which they may need during the initial period in order to decide which measures to take. This advice and technical expertise may include:
 - assessment of the situation;
 - adapting national response organization to the circumstances of the accident;
 - response methods and techniques;
 - experts, equipment and products which can be requested from other Contracting Parties or from private organizations
4. The role and responsibility of the expert are to help national authorities in taking decisions and, in this respect, s/he only has an advisory role. Every operational decision, as well as its consequences, falls under the complete responsibility of the competent authorities of the requesting State.
5. In all his/her activities related to such an advisory mission, the expert should endeavour to protect the interests of the State which requested his/her services, in particular concerning protection of the environment and of the resources and taking into account economic and financial implications.
6. The State requesting the assistance of an expert should endeavour to specify as precisely as possible, considering the given circumstances, the field or fields of expertise required. The Standard form for request of experts (*Annex II.3*) may be used to this effect.
7. The State requesting the assistance of an expert should make the necessary arrangements concerning immigration procedures and customs clearance for the expert and material (including written or electronically recorded) which the expert may bring with him/her in order to help him/her in executing his/her duties.
8. The authorities of the requesting State, in consultation with the Regional Centre and the expert should also make the necessary arrangements for safe and secured accommodation of the expert and provide him/her with necessary working space and office facilities. The exact address of accommodation and of the office shall be communicated to the Regional Centre and to the expert prior to his/her departure on mission. They should also provide for free access of the expert to

necessary communication facilities (telephone, telex, telefax, internet, radio when it is available) which he/she may need in his/her work.

9. Initial financing (air tickets, daily subsistence allowance, etc.) of the expert's mission will be taken in charge by the Regional Centre

B. Principles and guidelines concerning the sending, receiving and returning of equipment in case of international assistance operation

1. International assistance, by one or more States, in case of accidents resulting in serious marine pollution may necessitate transfer of equipment and products from one country to another.
2. Sending, receiving and returning of such material creates a number of logistic, administrative and legal problems which should be resolved quickly, since a delay in the above chain of actions may considerably reduce the efficiency of the assistance. General arrangements in this regard should be adopted prior to any accident and could be usefully included in the National Contingency Plan. Thus, only the details of application remain to be settled at the time of action.
3. Following the detailed evaluation of the situation, the State requesting assistance should specify, as precisely as possible, the type and quantity of equipment and products needed. The Standard form for request of equipment and products (Annex II.4) may be used to this effect.
4. The State supplying assistance should, in its reply, attach a detailed list of equipment and products available, including necessary technical specifications (dimensions, weights, capacities), precise power requirement (type of fuel, consumption, etc.) and envisaged transport modalities. It should also indicate the equipment needed for handling such material in the port or airport of entry, the number of people required for off-loading operations and the necessary means of transportation of response material to the site of the accident.
5. In order to put such equipment in use as soon as possible, the requesting State will take the necessary measures for immediate customs clearance of all arriving material and, if needed, authorize their use (e.g. authorization to navigate), as well as for the immediate clearing of immigration formalities for personnel needed for operating the equipment. The same arrangements should be implemented when the personnel and the equipment are provided by the ship insurers, the operator of offshore unit, or the operators of sea ports and oil or chemical handling facilities. The Standard form for request of equipment and products (Annex II.4) may be used to this effect.
6. The Requesting State undertakes to return the equipment as soon as the operations are terminated, if requested to do so by the supplier.

C. Principles and guidelines concerning arrangements and operational procedures which could be applied in case of a joint operation

1. Command structure for joint combat operations

The organisational structure in joint operations should contain two main co-ordination and command levels, namely Operational Control ashore and Tactical Command on the scene of operations.

Operational Control should be exercised by the country that has asked for assistance (lead country), which normally is the country within whose zone the operation takes place.

Change of Operational Control and Tactical Command might, when practical and agreed between the Parties concerned, take place when the main body of a combating operation moves from one zone to another.

Liaison officers from participating countries should be integrated in the staff of the Operational Control to secure necessary knowledge of rendered national resources.

The overall Tactical Command is laid upon a designated Supreme On-Scene Commander/Co-ordinator (SOSC) from the lead country;

Strike teams provided by assisting countries should operate under the command of a National On-Scene Commanders/Co-ordinator (NOSC).

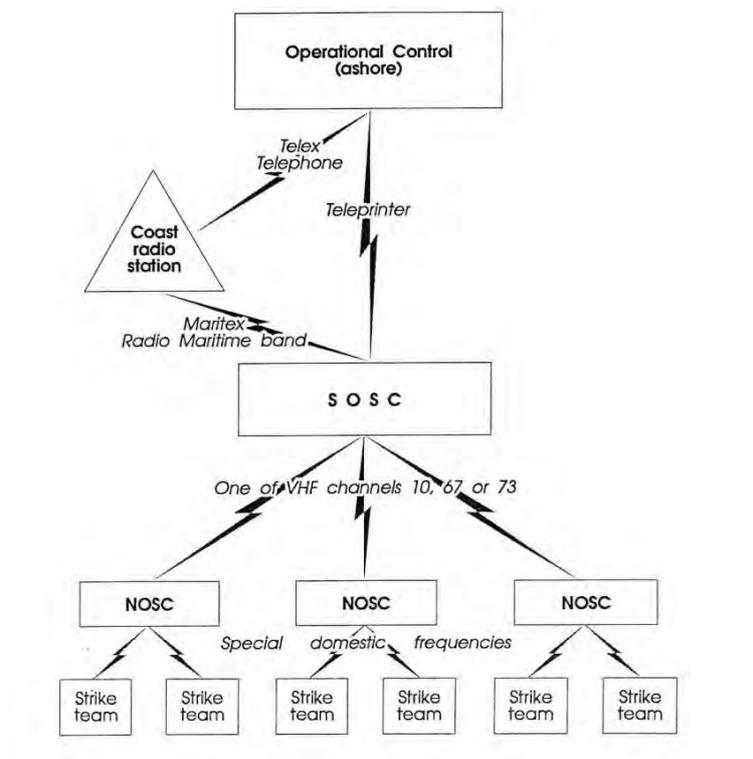
The NOSC operates under the command/co-ordination of the SOSC.

2. Arrangements concerning radio communications in joint operations

In order to avoid disturbance and jamming in a joint operation, there is a strong need for different radio communication frequencies, on the one hand between the Operational Control ashore and the Supreme On-Scene Commander/Co-ordinator (SOSC) and, on the other hand, between the SOSC and participating National On-Scene Commander/Co-ordinators (NOSCs) as well as between the different NOSCs and their respective team units. In accordance with the provisional scheme of radio communications for joint combating operations presented below, the following procedures should be followed:

- Concerning communications between the Operational Control ashore and the SOSC (which is the concern of the lead country of the operation), consideration should be given to the possibility of using wireless communication means;
- communications between the SOSC and the NOSCs should be performed on one or, if needed, more of the international VHF channels 10, 67 and 73;
- the vessels from which the SOSC operates should have at least two VHF stations on board with a stand-by function on channel 16;
- communications between a NOSC and the strike team units should be performed on special domestic (internal) frequencies;
- the working language between OSCs from different countries should be the most appropriate one;
- the broad aspects of the radio communication problems in joint oil combating operations at sea should be presented to the telecommunications authority in each country for information and internal consideration.

PROVISIONAL SCHEME OF RADIO COMMUNICATIONS FOR JOINT COMBATING OPERATIONS



D. Check-list of procedures to be followed and persons to be contacted in case of emergency

This check-list deals with the sequence of actions to be carried out by the competent national authorities responsible under the National Contingency Plan for dealing with matters relating to response to marine pollution incidents, following the receipt of information of a pollution or threat thereof, in order to implement the provisions of the Protocol to the Barcelona Convention concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency.

Although this check-list, which is by no means exhaustive, has been prepared primarily for incidents involving vessels, it should be used where applicable in case of incidents involving offshore units or other oil handling facilities.

1. Initial assessment:

An initial assessment necessitates the gathering of information as listed in "a" below through a number of contacts as described in "b".

a. Information required:

- place, time, nature, extent and cause of the incident;
- identification of vessel;
- identification of owner/operator and his representatives and insurers;
- condition of the vessel;
- identification of the cargo and its state;
- intentions of the master;
- intentions of the salvor, if any;
- intentions of the owner or his representative.

b. Contacts:

- master of the vessel;
- salvor/salvage company, if any;
- shipowner or his representative;
- last port(s) of call;
- next port(s) of call.

2. Notification

Once the Party has finalized its initial assessment and when the severity of the incident so justifies, it should:

- a. inform the relevant bodies within the country in accordance with the National Contingency Plan;
- b. inform all Parties whose interests are affected or likely to be affected by the pollution, as well as REMPEC, and provide them with:
 - i. details of its assessments and any action it has taken, or intends to take, to deal with the incident, and
 - ii. further information as appropriate,

until the action taken to respond to the incident has been concluded or until joint action has been decided by such Parties.

For transmitting such information, use should be made of the pollution reporting system (POLREP) and the list of competent national authorities, as they appear in Annex I.2 of the present Guide and in REMPEC Country Profile - <http://www.rempec.org/country.asp>.

- c. contact the vessel's insurers and, if the incident involves oil:
 - the International Tanker Owners Pollution Federation Ltd. (ITOPF);
 - the IOPC Fund when the Party possibly affected by the pollution is a Party to the Fund Conventions.
- d. Contact the Offshore unit or oil handling facility according to national laws and insurance of operators or their financial guaranty.

3. Response measures

- a. Activation of national pollution response arrangements as stipulated by the National Contingency Plan or otherwise.
- b. Continuous evaluation of the situation by using:
 - expertise available within the country;
 - expertise available from/through REMPEC¹⁴;
 - expertise available from other sources⁸.
- e. Decision on measures and actions appropriate for mitigating the consequences of the pollution incident, such as intervention on the vessel itself or offshore unit/handling facility, combating pollution at sea, protection of sensitive areas, restoration.
- f. Mobilizing the necessary personnel, equipment and products either from national sources or by requesting outside assistance, using standard forms proposed in the Guide (Annex II.3, Annex II.4):
 - directly from other Contracting Parties;
 - from other Contracting Parties through REMPEC;
 - from other sources, including stockpiles owned by oil and shipping industry.

4. Financial matters

- a. Detailed records of the costs incurred by Parties participating in the response during the entire operation should be kept by the Party(ies) directly in charge of the response and by the assisting Parties, if any.
- b. These Parties should designate a body to collate the relevant financial documentation, preferably as stipulated in the contingency plan, and request all those taking part in the response to establish the necessary documentation.
- c. Prepare claims in accordance with the recommendations of applicable compensation schemes.
- d. Present the necessary documentation to the insurers, IOPC Fund or other organizations liable for compensation.
- e. The assisted and assisting Parties should co-operate in concluding any action in response to a compensation claim. Unless the assisted Party(ies) disagree, assisting Parties may present their claims for reimbursement directly to compensating organizations.

¹⁴Such experts will assist national authorities to take decisions, but in no case should take decisions themselves in lieu of the responsible national authorities. (Cf. Recommendation 6 adopted by the Seventh Ordinary Meeting of the Contracting Parties, Cairo, 8-11 October 1991, UNEP(OCA)/MED.IG.2/4 Annex IV).

Note: For all these steps, expertise from other Contracting Parties or from REMPEC may be requested. For matters related to claim, **Annexes III** shall be considered and IOPC Funds contacted or consulted as required.

E. Check-list of principal institutional provisions aimed at facilitating mutual assistance in case of a major marine pollution accident which should be included in National Contingency Plans

A quick intervention and facilitation of mutual assistance in the case of a major marine pollution accident must be planned and organised. To this end, within the National Contingency Plan, special institutional arrangements should be adopted and administrative and financial arrangements should be established, such as:

1. designation of the competent national authority which, once the situation has been assessed, will determine the extent of the required assistance (command structure);
2. designation of a national authority entitled to act on behalf of the State to request or to decide to provide assistance, as well as to deal with the legal and financial aspects of mutual assistance, and arrangements which would enable this authority to be contacted rapidly in case of an urgent request for assistance (management structure for international assistance, preferably the Mutual Assistance Focal Point referred in Annex I.2);
3. financial modalities applicable to mutual assistance, based on Article 13 of the Prevention and Emergency Protocol on "Reimbursement of costs of assistance and on the recommendations adopted by the Seventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Cairo, 8-11 October 1991 (UNEP(OCA)/MED.IG.2/4 Annex IV);
4. roles and obligations of the Party requesting assistance concerning:
 - a. the receipt of equipment;
 - b. costs of board and lodging, possible medical expenses and repatriation of assisting personnel;
 - c. arrangements, in particular concerning customs and immigration, for facilitating the movement of personnel, vessels, aircraft and equipment, based on the provisions of **Annex I.4.1** of the Guide.

I.4.3 GUIDELINES CONCERNING THE EXCHANGE OF LIAISON OFFICERS BETWEEN THE CONTRACTING PARTIES IN CASE OF RESPONSE OPERATIONS INVOLVING SEVERAL STATES

Adopted by the Ninth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Barcelona, 5-8 June 1995 (UNEP(OCA)/MED IG.5/16, Annex XII, Appendix IV)

1. In order to achieve prompt and efficient exchange of information and effective operational command over pollution response operations, the Contracting to the Emergency Protocol to the Barcelona Convention shall endeavour to establish and maintain permanent liaison between the competent national authority of the Party whose territorial sea, coasts and related interests are directly affected by pollution and who has the overall operational command over the response operations, and the competent national authorities of the assisting Parties or Parties taking part in the response operations. Two main cases arise:
 - either pollution occurs in the waters of one Contracting Party and threatens the waters of another; or,
 - the scale of the assistance provided by one Contracting Party to another justifies the presence of a liaison officer from the assisting Contracting Party at the response headquarters of the assisted Contracting Party.
2. With a view to establishing and maintaining such liaison, the Parties may decide to exchange Liaison Officers in all cases when, in the opinion of their respective competent national authorities in charge of response to a pollution incident, the circumstances of the incident and/or the scale of the response measures call for it.
3. The role of such Liaison Officers shall be limited:
 - a. in the first case referred to in paragraph 1, to facilitating mutual information exchange between threatened Contracting Parties with a view to enabling a Contracting Party which might be subsequently affected to prepare its response actions and, when appropriate, to start response operations without waiting for the pollution to reach its waters.
 - b. in the second case referred to in paragraph 1, to transmitting the orders of the authority having overall command over response operations (Supreme On Scene Commander) to the officers in charge of the resources of the assisting Party.
4. Each Contracting Party shall endeavour to include the liaison officers among the staff of its response command and to facilitate the performance of their duties, in particular by arranging access to communication means.
5. In designating their Liaison Officers, the Parties shall take into consideration that the selected persons should have relevant specialist knowledge, a good command of the working language of the other Party and confirmed communication skills, in addition to being able to work efficiently under stress.
6. The Party receiving a Liaison Officer from another Party, shall make the necessary arrangements concerning immigration and custom formalities for his/her entry into the country.

I.4.4. GUIDELINES CONCERNING ARRANGEMENTS WHICH MIGHT BE MADE WITH A VIEW TO ENSURING, IN CASE OF AN ACCIDENT, LIAISON BETWEEN THE GOVERNMENTAL AUTHORITIES AND OTHER INTERESTED PARTIES

Adopted by the Ninth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Barcelona, 5-8 June 1995(UNEP(OCA)/MED IG.5/16, Annex XII, Appendix IV)

1. The competent national authorities of a Contracting Party affected by a marine pollution incident threatening its territorial sea, coasts and related interests shall endeavour to establish and maintain, throughout all phases of the planning and implementation of response activities, liaison with other parties having an interest in the pollution incident (further on referred to as "interested parties"), including, as the case may be:
 - the owners of the ship(s) and the cargo and, in particular, their insurers and their respective technical advisors and experts; **[or**
 - the operator of the offshore unit , in particular, their insurers and their respective technical advisors and experts; or
 - the operator of the oil handling facility, in particular, their insurers and their respective technical advisors and experts;

2. The objective of such liaison shall primarily be to obtain and exchange necessary technical information required for the planning and implementation of appropriate pollution response measures, with a view to increasing the effectiveness of response operations, to reducing the effects of pollution on the environment and resources at risk, and to reducing the overall costs of the pollution response measures, and to consider possible legal and financial implications of taken or planned response actions. This information shall *inter alia* include:
 - a) on the part of the relevant interested parties: information concerning:
 - **Contact** details of the person reporting the incident;
 - **Name** of the ship, offshore unit or oil handling facility vessel and owner;
 - **Date and time** of the incident (specifying local time or GMT/UTC)
 - **Position** (e.g. latitude and longitude or distance and direction from the nearest port or landmark);
 - **Cause of the incident** (e.g. collision, grounding, explosion, fire, etc.) and nature of damage;
 - **Description** and quantity of cargo and bunker fuel on board, in case of pollution from ship;
 - **Estimate** of the quantity spilled or likelihood of spillage;
 - **Status** of the vessel and any planned salvage activities, in case of pollution from ship;
 - **Name of the cargo** owner in case of pollution from ship;
 - **Response measures** taken or planned by these parties,
 - **Resources**, including personnel, equipment and other means, which these parties have available for responding to the incident,
 - **Contingency plans** prepared by them, and the availability of funds through their insurers;

- b) on the part of the competent national authorities of the affected Contracting Party: information concerning the national organization for accidental marine pollution response, national and local contingency plans, available resources including personnel, equipment and other means, arrangements made or planned by the competent national authorities for responding to the pollution incident, and national laws and regulations covering the field of accidental marine pollution, including liability and compensation.
3. In order to ensure the permanent liaison with other parties having an interest in the pollution incident, the competent national authorities of the Contracting Party affected by such an incident shall request other interested parties to designate persons who will be in permanent contact with the competent national authorities in charge of the response operations.
4. The competent national authorities shall ensure that the persons designated by the government to act as counterparts to the contact persons designated by the representatives of other interested parties have a good knowledge of the technical, legal and financial issues related to marine pollution incidents, including liability and compensation schemes.

ANNEX I.5

MEDITERRANEAN ASSISTANCE UNIT FOR COMBATING ACCIDENTAL MARINE POLLUTION

Decision taken by the Eighth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Antalya, 12-15 October 1993 (UNEP(OCA)/MED IG.3/5, Appendix II)

With a view to implementing the Protocol concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency (Barcelona, 16 February 1976),

the Contracting Parties to the Barcelona Convention decided to:

1. **Establish** a Mediterranean Assistance Unit for combating accidental marine pollution which the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) will organize and activate within the limits of the budget allocated to it by the Meeting of Contracting Parties;
2. **Undertake** to make every effort to assist the organization and functioning of the Mediterranean Assistance Unit.

I. General Principles

- 1.1 A Mediterranean Assistance Unit for combating accidental marine pollution shall be formed within the framework of the Protocol on Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Harmful Substances in Cases of Emergency.
- 1.2 The organization and the activation of the Mediterranean Assistance Unit shall be the responsibility of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) which shall assume this responsibility in accordance to the Protocol on Co-operation in Cases of Emergency, the various decisions taken by the Meetings of the Contracting Parties to the Barcelona Convention and in conformity with the provisions of this document.
- 1.3 The primary objective of the Mediterranean Assistance Unit shall be to rapidly provide the services of selected experts to a Contracting Party which, in case of emergency, will request such assistance. By going to the scene of an accident the experts shall provide advice and technical expertise to the authorities with a view to assisting them during the initial phases to decide on the combating measures to take and on the assistance that could be necessary to request. Another role of the Mediterranean Assistance Unit shall be to help the requesting State to implement the provisions for regional co-operation in case of emergency, particularly through the arrangements and procedures adopted by the Meetings of Contracting Parties aimed at facilitating co-operation and mutual assistance.
- 1.4 The Mediterranean Assistance Unit shall be an "expert advice" capability established by the Contracting Parties to the Protocol on co-operation in cases of emergency which could be rapidly mobilized and activated at their request to serve the Mediterranean coastal States.

II Geographical Coverage and Scope

- 2.1 The geographical coverage of the Mediterranean Assistance Unit shall be that of the Protocol on Co-operation in Cases of Emergency.

2.2 The scoperationaemateriae of the Mediterranean Assistance Unit shall be combating accidental marine pollution by oil and other harmful substances. The Assistance Unit shall provide expert services in the following areas, among others:

a) response to pollution by oil

- Crisis management and organization of intervention:
 - . analysis, assessment and forecasting of oil slick behaviour, fate and movement;
 - . response planning and logistics;
 - . response strategy/tactical choices and options.
- Combating methods and techniques at sea:
 - . containment/recovery;
 - . use of dispersants and other treatment products.
- Shore clean-up techniques and methods.
- Treatment and disposal of wastes
- Financial documentation and claims for compensation

b) Response to pollution by harmful substances

- Crisis management and organization of intervention.
- Analysis, assessment and forecasting of fate and behaviour of:
 - . gas clouds
 - . floaters
 - . dissolvers
 - . sinkers
- Recovery of packages at sea
- Response to spilled chemicals depending on their behaviour:
 - . personnel protection;
 - . aquatic toxicity and rehabilitation;
 - . biogeochemical cycling;
- Decontamination
- Treatment and disposal of wastes
- Financial documentation and claims for compensation

III Composition

3.1 The Mediterranean Assistance Unit shall be composed of a selected limited number of highly qualified experts and centres of expertise, for each area of expertise. An expert or centre of expertise can be selected for more than one area of expertise.

3.2 REMPEC shall select the experts and centres of expertise using its own lists of experts and other means of information in its possession as well as in consultation with the competent national authorities and with other organizations which can give useful advice.

- 3.3 The experts and centres of expertise shall be selected for a duration of 2 years, this period being renewable. During this period, the experts and centres of expertise shall respond, in accordance with permanent instructions, to all the requests made in the case that the Mediterranean Assistance Unit is activated. The composition of the Mediterranean Assistance Unit shall be published by REMPEC every two years and updated as necessary depending on the changes that need to be made.

IV Activation

- 4.1 The Mediterranean Assistance Unit shall be activated by REMPEC at the request of the competent national authority in charge of response to accidental marine pollution or at the request of the authority which is in charge of dealing with mutual assistance in the case of an emergency (refer to REMPEC/RIS/B/1) on behalf of the State affected by the accident. The national authorities which request REMPEC to provide them with the assistance of the Mediterranean Assistance Unit, must endeavour to specify as precisely as possible what areas of expertise are required according to the circumstances of the case in order to decide jointly with REMPEC on the composition of the team to be sent to the site.
- 4.2 Depending on the circumstances and in agreement with the requesting State and within the limits of the financial resources available, REMPEC shall determine the duration and decide on the end of the mission of the member(s) of the Mediterranean Assistance Unit. If the situation dictates and if the corresponding financial arrangements have been agreed between the parties concerned, the presence of the Mediterranean Assistance Unit can be prolonged beyond the duration permitted by the financial resources available to REMPEC.

V Organization

- 5.1 In the shortest time possible, REMPEC shall establish permanent arrangements for the provision of prepaid air tickets to all Mediterranean destinations as well as for the issue of a visa when one is required.
- 5.2 The State requiring the assistance of the Mediterranean Assistance Unit, shall take all necessary measures to facilitate the mission of the members of the Assistance Unit. Such necessary measures concern:
- a) the immigration and arrival procedures as well as customs formalities in particular for data processing equipment and the associated documentation or computerized material;
 - b) accommodation and transport;
 - c) the provision of sufficient work space for the expert(s);
 - d) access to communication means.
- 5.3 REMPEC shall cover the initial costs of the mission of the Mediterranean Assistance Unit: air tickets, daily subsistence allowance; and possibly fees on a pre-arranged basis.

REMPEC shall reserve the right, according to the applicable legal regimes, to seek reimbursement for the expenses thus incurred.

- 5.4 In accordance with the request of the competent national authorities of the State and in agreement with them, REMPEC shall determine the terms of reference of the mission of the Mediterranean Assistance Unit and shall give instructions to this effect. In their request, the competent national authorities shall specify the name, function and details of the authority the members of the

Mediterranean Assistance Unit must contact upon arrival. They shall also specify the authority or authorities to whom the members of the Unit must report.

- 5.5 The members of the Mediterranean Assistance Unit shall maintain contact with REMPEC and shall provide REMPEC with daily reports. REMPEC shall give to the Mediterranean Assistance Unit all the support that it might need.
- 5.6 The Mediterranean Assistance Unit shall work in close co-operation with and be at the service of the public authorities responsible for the organization and the management of response. In order to accomplish their duty, members of the Mediterranean Assistance Unit shall have access to available information, shall carry out the necessary investigations in co-operation and with the support of the responsible national authorities and shall participate in meetings as necessary.
- 5.7 The members of the Mediterranean Assistance Unit shall make a daily report containing an assessment of the situation, their analyses and conclusions and their proposals for actions, which they shall submit, to the authorities to whom they are reporting. The proposal for actions can be related to the organization of response, the tactical options, the methods and techniques of response and to experts, equipment and products that can be requested from other Contracting Parties or private entities. A copy of this report shall be sent to REMPEC by telefax. Members of the Assistance Unit shall submit a final report at the end of the mission.
- 5.8 In cases where the competent authorities request international assistance, the members of the Mediterranean Assistance Unit, by their good cognizance of the regional system for co-operation, in liaison with REMPEC, shall assist these authorities.

VI Role and Responsibilities of members of the Mediterranean Assistance Unit

- 6.1 The role and responsibilities of members of the Mediterranean Assistance Unit shall be limited to assisting national authorities in the decision making process. In this regard, their role shall be solely advisory. All decisions related to response operations as well as their consequences shall be the entire responsibility of the competent authority of the requesting State.
- 6.2 In their advice, the members of the Mediterranean Assistance Unit shall endeavour to protect the interests of the requesting State, in particular the protection of the environment and resources, and they shall take into consideration the economic and financial implications.
- 6.3 During their missions, the members of the Mediterranean Assistance Unit have a duty of discretion. Unless otherwise specified, they shall not have direct contact with the general public or the media, this being the responsibility of the national authorities.

VII Duties of the selected experts and centres of expertise

- 7.1 The experts and centres of expertise shall possess a complete and updated version of the Regional Information System. They shall be familiar with this system as well as with the regional arrangements for preparedness and response, specifically the provisions and procedures aimed at facilitating mutual assistance.
- 7.2 The experts and centres of expertise shall endeavour to inform REMPEC of the time they are able to allot so that the Centre can know in advance of their availability to serve as a member(s) of the Mediterranean Assistance Unit. If an expert is no longer available and is not in a position to respond to a request made as a result of the activation of the Mediterranean Assistance Unit, REMPEC should be informed immediately. In this case, REMPEC shall make arrangements to replace the expert.

The MAU is currently composed of:

- The Centre of Documentation, Research and Experimentation on Accidental Water Pollution, based in Brest, France (Cedre);
- The *Federazione Nazionale dell'Industria Chimica*, based in Milan, Italy (Federchimica);
- The Italian National Institute for Environmental Protection and Research, based in Rome, Italy (ISPRA);
- The Mediterranean Operational Network for the Global Ocean Observing System (MONGOOS);
- The Sea Alarm Foundation, based in Brussels, Belgium (SAF);

The **background information** (legal, institutional, relationships, etc.) for each above mentioned institutions which composed currently the MAU is developed in respective Fiches describing their name, status, obligations/responsibilities (WHO); their role/services, resources (WHAT); and their procedures, conditions and contacts (HOW).

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

**Centre of Documentation, Research
and Experimentation on Accidental Water Pollution (Cedre)**



WHO

Brief presentation:

Cedre is competent in the field of oil and chemical spills of marine and inland waters. Its clients and partners, public authorities and industrialists, are from many countries.

It was established in 1979 as part of the measures taken after the oil spill caused by the sinking of the *Amoco Cadiz*, to provide expert advice and services to authorities responsible for the interventions.

Cedre is providing with a technical, scientific and operational assistance 24 hours a day, remotely from its CS and if the situation requires it; can go directly in the event of an accident within the crisis management centers set up by the Authorities or on field, as close as possible to the responders.

As part of its mission to prepare for the response, it provides training in various languages at all levels and conducts drafting of contingency plans, studies and research on products, materials and techniques.

Cedre relies on a team of about 50 persons, mainly scientists specialised in different fields (water, chemistry, biology, oceanography, navigation, oil, oil production, etc.).

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

Cedre has an association status; it shall in particular ensure a public service mission for the benefit of the French authorities; In parallel, it operates in a contractual framework all over the world, for the benefit of industry and foreign authorities.

It is certified by the French State to carry out missions of general interest, expertise and support to sea authorities, seaports, coastal areas, lakes and rivers, and to intervene along with the services of the State in the management of accidental pollution occurring in French waters.

Cedre is managed by a board of directors whose members are from French government departments, local authorities, public research institutions and private industry.

Cedre's scientific and technical orientations are studied in a strategic committee composed of members of the board of directors and other structures involved in spill response or related topics.

Obligations/responsibilities:

For decades, Cedre has intervened for the benefit of public authorities and industrialists on accidental pollution affecting seas and oceans, seaports, coasts, lakes and watercourses, concerning hydrocarbons and all other dangerous substances, excluding radioactive products.

Cedre acts:

- upstream of pollution, through the preparation of structures, organisations, services and teams, through actions:
 - contingency planning, including a risk and means analysis;
 - training courses at Cedre in Brest or on the sites of partners and clients, regardless of the location in the world, of operators, team leaders and managers of crisis management centers, (approx. 1000 persons/year);
 - research: mainly assessing the characteristics, behaviours and impacts of potential pollutants (Oil and HNS) and assessing, improving and adapting the means, materials, products and techniques of control;
 - training and exercises of response and control teams;
 - and information, in particular through the development of technical guides for operators and decision-makers involved in crisis management.
- during pollutions, ensures a 24-hour standby to provide remote advice and / or mobilize its deployable response team anywhere, in a few hours, for services
 - advice, expertise and technical support to crisis management authorities and teams in charge of control operations,
 - laboratory analyses, studies and experiments to characterize the pollutants, their behavior and their evolution, the risks they pose to people and the environment;
 - continuous evaluation of applicable equipment, products, methods and response techniques;
 - operational management of data.
- after pollution control operations, by means of environmental monitoring.

Cedre is in compliance with the ISO 9001: 2008 and 14001: 2004 standards for which it is certified.

Cedre contributes to the Mediterranean Assistance Unit (MAU) by providing technical advice from its offices in Brest or directly on site. In the case of marine pollution, the response of Cedre is activated by REMPEC after reception of a request of assistance from a Contracting Party to the Emergency Protocol or the Prevention and Emergency Protocol to the Barcelona Convention.

WHAT

Role and/or Services:

In the event of an incident, Cedre provides information on the pollutant and on appropriate response techniques. In an emergency, the centre can conduct laboratory testing and study the pollutant's behaviour and weathering, the efficiency of response techniques and the impact of the pollution on the environment, using its experimental tools.

Cedre provides advice on the most appropriate response strategies, techniques and equipment. Its experts can be dispatched on-site to assist the operational command in conducting surveys, contribute to incident management meetings, recommend actions to be taken and define the resources required, provide advice on clean-up site set-up and train responders.

Cedre does not supersede response managers, but rather assists them by providing decision support

Resources (if applicable):

Within a confined 3-hectare site, Cedre's facilities include a 6,000 m² man-made beach and a 1,800 m², 2.5-metre deep water basin where pollutants can be released in order to carry out training and trials without putting the environment at risk.

Its trial hall houses a flume tank, known as the polludrome, and a 5-metre high experimentation column, which is used to study the fate of substances in water. A burn test bench and a chemistry test bench are also available.

Its facilities include a greenhouse for experimentation on living organisms, which contains stock and exposure tanks. Cedre has also installed an ecotoxicology bench and equipment to assess acute ecotoxicity according to OSPAR tests requirements.

The laboratory is fitted with advanced analytical equipment (GC/MS, GC/MS/MS, multifunction autosamplers, GC/FID, HPLC, automated sample preparation systems, etc.). Specialised test systems are available to study the behaviour of oil products and assess the performance and impact of response products (IFP, WSL and MNS dispersant tests, sorbent tests, etc.) ■

HOW

Procedure:

In the framework of the MAU, Cedre can be mobilized through REMPEC's emergency procedure:

The first communication by the Contracting Parties should be made through the OFFICER-ON-DUTY at REMPEC by:

- a phone call on the Emergency line, operational 24/7;
- sending an e-mail at the Emergency email.

Cedre can also be mobilized directly by Contracting Parties, via its emergency number.

Conditions:

In the framework of the MAU, REMPEC shall cover the initial costs of the sending of REMPEC officers and /or the Mediterranean Assistance Unit: air ticket, daily subsistence allowance and possibly fees on a pre-arranged basis.

In case of direct mobilization by a Contracting Party, all costs related to Cedre's assistance will have to be covered by this Party.

Contact:

In the framework of the MAU:

REMPEC's emergency line (24/7): + 356.79 505 011.

Emergency email: emergency@rempec.org

Outside the MAU:

Cedre's emergency line (24/7): +33.2.98.33.10.10

Emergency email (always phone first!): intervention@cedre.fr

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

Federazione Nazionale dell'Industria Chimica (Federchimica)



WHO

Brief presentation:

Federchimica is the Italian Federation of the chemical industry. At the present time 1400 companies, with a total of 90.000 employees, are part of Federchimica. They are grouped into 17 Associations, articulated into 42 product groups. Federchimica is a member of Confindustria (General Confederation of the Italian Industry) and CEFIC (European Chemical Industry Council). The "Servizio Emergenze Trasporti" (S.E.T.) is a voluntary Programme that involves Companies associated to Federchimica and other Companies and Associations with the common purpose to cooperate with Public Authorities in order to give assistance in case of accidents during the transport of chemicals.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

Federchimica it's the Federation of Italian chemical industry. Founded as the Italian Federation of Chemical Industry Associations in 1920, it became Aschimici in 1945 and was transformed into Federchimica in 1984. Federchimica does not have a commercial nature and does not operate for profit.

Obligations/responsibilities:

Federchimica, whose primary objectives are the coordination and the protection of the role of the Italian chemical industry as well as the promotion of its development capacity, has, among others, the following main duties:

- to elaborate guidelines in economic, industrial and trade union matters and also in the areas of environment, innovation and energy policies;
- to promote these policies with Public Authorities, national economic organisations, other entrepreneurial organisations, international organisations to whom the Federation belongs, trade union leaders, environmental and consumer organisations;
- to carry out studies and projects which inspire and legitimise entrepreneurial choice;
- to contribute to the constant promotion of the level of quality of the companies associated, with a particular attention to the organisation of initiatives in the field of innovation;
- prepare, divulge and improve the Accident Prevention Systems and eventually to support the Action Plan of the Public Authorities through "S.E.T." (a service focused on transport emergencies) with efficient and ready interventions.

"S.E.T." activities are ruled by an Agreement Protocol signed on January 9th 1998 with the Civil Protection Department of the Council of Ministers' Premiership, and with the General Management, Civil Protection, Fire-brigades Services Departments of the Ministry of the Interiors.

A new "Memorandum Of Understanding concerning the participation of Federchimica in the Mediterranean Assistance Unit" has been signed between Federchimica and REMPEC.

WHAT

Role and/or Services:

Federchimica, operating through the "S.E.T.", supports the activities of REMPEC concerning the emergencies regarding chemical products in Mediterranean Sea by providing:

- (a) the required expertise and advice when remote technical assistance is requested or/and
- (b) expert personnel belonging to member companies of Federchimica which takes part in the Mediterranean Assistant Unit (MAU) missions.

Federchimica shall also ensure that its expert personnel participating in the MAU missions are fully supported by the necessary means available at the main office of Federchimica to execute their advisory role

Procedure:

After receiving a request for assistance from a Contracting Party, the Head of Office of REMPEC shall take a decision regarding the activation of the MAU and alert Federchimica, through S.E.T..

The Emergency Transport Service S.E.T. shall acknowledge the receipt of the alert message and, after consulting with the Company, member of Federchimica, shall indicate whether and when the required services can be provided.

For deployment onsite the Emergency Transport Service "S.E.T". shall endeavour to immediately establish the direct telephone contact with REMPEC (through the emergency line) and arrangements for sending experts will be proposed.

For remote assistance, the communication procedure will follow the standard ICE communication procedure

Conditions:

N/A

Contact:

<p>Address Federchimica 20149 Milano Via Giovanni da Procida 11 Italy</p> <p>Website www.federchimica.it</p>	<p>Telephone +39 (0)2-345651</p> <p>Fax +39 (0)2 34565.310</p> <p>Email federchimica@federchimica.it</p>
In case of emergency only (24H) – Restricted to official use only	
<p>Servizio Emergenze Trasporti Emergency Email set@set-emergenze.it</p>	<p>Servizio Emergenze Trasporti Emergency line (National Only): 800 180 990 (International) +39 (0)362 51 28 68</p>

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

Italian National Institute for Environmental Protection and Research (ISPRA)



WHO

Brief presentation:

The Italian national institute for environmental protection and research (*Istituto Superiore per la Protezione e la Ricerca Ambientale*), ISPRA, is the public research body supervised by the Italian Ministry of the environment (*Ministero dell'ambiente e della tutela del territorio e del mare*).

Since January 2017, ISPRA is organised with the “*Centro nazionale per le crisi, le emergenze ambientali e il danno*” (National centre for the crisis and the environmental emergencies and the environmental damage). Within this new organisation operates the former *Servizio Emergenze Ambientali in Mare* (SEAM), now “*Area per le emergenze ambientali in mare*” (environmental emergencies at sea area). This unit is devoted, mainly for the Italian Ministry of the environment, to prevention and response activities related to accidental marine pollution providing technical and scientific expertise.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

ISPRA has been established in 2008 (Decree 25 June 2008 no. 112 converted into Law no. 133 with amendments on 21 August 2008) and performs, with the inherent financial resources, equipment and personnel, the duties of the following institutions merged into ISPRA:

- ex-APAT, Italian Environment Protection and Technical Services Agency (article 38 of Legislative Decree no. 300, July 30, 1999, and subsequently amended);
- ex-INFNS, National Institute for Wildlife (Law no. 157 of February 11, 1992, and subsequently amended);
- ex-ICRAM, Central Institute for Scientific and Technological Research applied to the Sea (Decree no. 496, article 1-bis, December 4, 1993, converted into Law no. 61, Article 1, January 21, 1994, with amendments).

Obligations/responsibilities:

In force of a specific agreement and of legislative and administrative obligations, ISPRA provides the Italian Ministry of the environment with technical and scientific support in case of environmental emergencies at sea and in related matters, e.g. prevention and environmental protection in offshore industrial operations. Furthermore, ISPRA is now part of the national system for the environment protection (*Sistema a rete per la protezione ambientale*) with the duty of organising and operate similar environmental capacities of response to accidental pollution distributed in all coastal Italian administrative regions within the regional agencies for the protection of the environment (ARPA).

With respect to the Barcelona Convention Prevention and Emergency Protocol, the Italian Ministry of the environment may request the expertise of ISPRA's dedicated team when remote technical assistance is requested or/and to lead or take part in missions, in particular for providing expert advice on environmental aspects of envisaged response operations.

Role and/or Services:

ISPRA's *Area per le emergenze ambientali in mare* is in charge of:

- providing 24/7 specialised personnel to be mobilized within the dedicated task force of the Italian Ministry of the environment in case of environmental emergency at sea to provide technical-scientific advices to the institutional "decision makers" on operational and technical aspects of pollution response with the aim of minimizing the environmental consequences of an accidental pollution and providing, in case, evidences of the environmental damage;
- elaborating, mostly on the basis of scientific researches, education material, technical advices, guidelines and publications concerning prevention, containment and mitigation of accidental marine pollution, maritime transport of dangerous goods, potentially polluting shipwrecks, submerged sources of pollutants, environmental damage and environmental restoration;
- providing requested information and advices on operational and technical aspects of pollution response within the Mediterranean Assistance Unit of REMPEC;
- providing technical support on pertinent issues to the Italian Ministry of the environment in the working groups and the Italian delegations attending multilateral meetings.

Resources (if applicable):

Coastal oceanographic vessel, Remotely Operated Vehicles, multiparameter probes, sampling and storage devices, SCUBA diving capacities.

HOW

Procedure:

a) Memorandum of Understanding Ispra/Rempec MAU:

ISPRA, when activated by MAU, will receive the alert message from the Head of Office of REMPEC sent to the mobile telephone number + 39 329 2986226 followed by a written message to the following e-mail address

emergenzemare@isprambiente.it

The Head of Office of REMPEC will include as many data as available on the accident and on the assistance required;

ISPRA shall acknowledge the receipt of the alert message, through the emergency email address: emergency@rempec.org and

REMPEC's fax number: + 356 21 33 99 51, as soon as received and not later than:

- one (1) hour after receipt, during the normal working hours;
- six (6) hours after receipt, when the alert message was sent outside the normal working hours, including non-working days and on public holidays.

When acknowledging receipt, ISPRA shall indicate whether and when the required services can be provided.

After acknowledging the receipt of the alert message ISPRA shall endeavor to immediately establish the direct telephone contact with REMPEC for remote assistance and for deployment onsite with a view to finalizing arrangements for the sending of experts to the Party requesting assistance. ISPRA and REMPEC shall confirm the arrangement by signing a Working order.

b) 24/7 Environmental emergency at sea task force to the Italian Ministry of the Environment:

ISPRA provides technical and scientific assistance, including the urgent dispatching of technical personnel on site, when activated by the Italian Ministry of the environment (Division III of DPNM). The dedicated unit (*Area per le emergenze ambientali in mare*) has technical capacities and responsibilities concerning also the provision of advice to the Ministry of environment about the possible use of dispersants to fight an oil spill.

The emergency team on duty receives the alert message/phone call on the mobile telephone number +39- 329 2986226 or at ISPRA's security switchboard H24+39 06 50072883 or +39 06 5018197 or through the emergency email address

emergenzemare@isprambiente.it.

Conditions:

a) MoU ISPRA- REMPEC

b) Specific convention between ISPRA and the Ministry of the environment covering all incurring expenses.

Contact:

Address: Centro nazionale per le crisi, le emergenze ambientali e il danno ISPRA Via Vitaliano Brancati, 60 00144 Roma Website: http://www.isprambiente.gov.it/	Telephone: +39 0650071 ISPRA security switchboard H24: +39 06 50072883 or +39 06 5018197 Email: emergenzemare@isprambiente.it
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Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

Mediterranean Oceanography Network for Global Ocean Observing System (MONGOOS)



WHO

Brief presentation:

MONGOOS was established by the Memorandum of Understanding in 2012 as a merging of Mediterranean Operational Oceanography Network (“MOON”) and MEDGOOS to consolidate the activities related to the production and use of operational oceanography services in furtherance of four principal objectives:

- (a) Improved Fitness for Purpose. Continuously advance the scientific understanding and technological development upon which the Services are based.
- (b) Greater Awareness. Promote the visibility and recognition of the Services with governmental agencies and private companies, encourage their integration at national, regional, European and global levels.
- (c) Increased mainstreaming. Enhance the usability of the Services and their usefulness for policy implementation, societal needs and science.
- (d) Improved Capacity. Support the planning and implementation of international initiatives involving operational oceanography and promote the participation of non-EU Mediterranean countries in producing the Services.

MOON partners and REMPEC signed in 2008 an Emergency Response Collaboration Agreement for the Mediterranean Region with a view to ensuring maximum coordination of the work and activities of REMPEC and MOON in respect of matters of common interest. The agreement was renewed as a collaboration of MONGOOS partners and REMPEC in 2015.

Within the MONGOOS&REMPEC agreement the MONGOOS Emergency Response Office is established to support REMPEC in case of emergencies at sea.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

MONGOOS counts 36 partners from the Mediterranean Countries. Three MONGOOS partners (CMCC, ICTS SOCIB and IASA/AM&WFG) are part of the MONGOOS&REMPEC agreement and all relevant MONGOOS partners contribute by providing information and products.

Obligations/responsibilities:

MONGOOS partners and REMPEC have agreed to collaborate for the following activities:

- (a) utilise the MONGOOS Members’ expertise in the activities which are regularly carried out by REMPEC (e.g. training, organization of workshops, conferences and assistance in contingency planning);
- (b) collaborate in assisting the Mediterranean coastal states, upon request, in emergency situations. In particular, relevant MONGOOS Members will provide the Centre with meteo-oceanographic forecasting data and oil spill drifting predictions for the affected area, for prompt dissemination by REMPEC as appropriate. The MONGOOS Members will further endeavour to identify and establish contact with other relevant oceanographic institutes which could assist REMPEC during the emergency phase;
- (c) collaborate in the development of projects for the prevention of operational pollution from ships in the Mediterranean region. The relevant MONGOOS Members will make available meteo-oceanographic data and oil spill applications (forecasting/hindcasting modelling) to enhance the possibility of identifying the polluting ship;
- (d) collaborate in the development of the MONGOOS Network with a view to enhancing high resolution meteo-oceanographic forecasting data in areas of the Mediterranean where at present there is a lack of data; and
- (e) cooperate in the development of oil risk maps for the Mediterranean region. REMPEC will contribute to fine tuning the development of these maps through its knowledge regarding marine pollution from ships and, where possible, by providing data on the main shipping lanes in the region.

WHAT

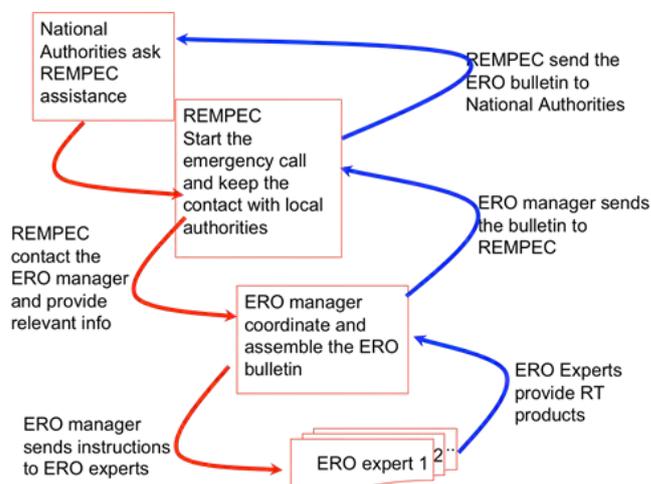
Role and/or Services:

A virtual MONGOOS Emergency Response Office (ERO) is established to serve as the coordinating body for MONGOOS Members to receive, evaluate and disseminate information. The ERO consists of an expert board to which each Party has nominated one expert, and is headed by an ERO Manager nominated by the board (currently Dr. Giovanni Coppini).

Resources (if applicable): N/A

Procedure:

The following procedures describes the steps for the request of support to the ERO of MONGOOS:



- **Phase1:** REMPEC will contact by phone the ERO Manager using the given telephone number and informs him/her that an emergency is ongoing. ERO-Manager can also be contacted using email ero-manager@cmcc.it

- **Phase2:** REMPEC provides by email the relevant information (accident location, accident time...) on the emergency to the ERO Manager.

- **Phase3:** ERO manager acknowledges the reception of the emergency call (via email, telephone call). In this phase ERO-Manager could ask for clarifications on the provided information. Just afterwards the ERO-Manager will activate the ERO Experts by email. In this email the ERO-Manager will also propose which ERO partners should participate to the emergency call on the basis accident location and the characteristics of their systems and products:

1. Forecasting model domains
2. Availability of ancillary data (wind, waves, SST)
3. Availability of satellite oil spill observations

Invited ERO partners will have to acknowledge the participation to the emergency support activities.

- **Phase4:** ERO manager will decide, eventually consulting ERO partners, the technical details needed to run the models and to produce the outputs:

1. Graphical details (palette scale, domain of the figures to be produced...) on the basis of the time of the accident and location;
2. Information needed to run the models that may be not available in the first (Duration of the spill, type of oil ...);
3. Output frequency of oil spill forecast, duration of the forecast;

ERO Manager will send these information (technical sheet) to the ERO partners. The technical sheet contains the preliminary info sheet.

Note: the Technical sheet can be re-issued at any time when new information became available.

- **Phase5:** ERO activated partners will start at this point the simulations and will start to process their data (satellite...). Once available results of the simulation and satellite products will be available will be sent to the ERO Manager.

- **Phase6:** ERO will first issue an ERO Bulletin in few hours with meteo-oceanographic information in the sub-region of interest and with the oil spill forecasts.

- **Phase7:** ERO will continue to follow the emergency case until REMPEC request support, issuing updated bulletins on daily basis.

- **Phase8:** ERO, after each REMPEC call, will prepare a short note on possible improvements of procedures and protocols and lesson learnt. The objective is to improve the procedures step by step. REMPEC and users may be asked to fill an evaluation report including the feedback from the users and estimate of the advantage (timing, kind of information...) of the service.

Conditions:

The services provided under the REMPEC-MONGOOS Collaboration Agreement will be free of charge.

Contact:

ERO manager: Giovanni Coppini
email: giovanni.coppini@cmcc.it
mobile+39-392-3857919

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution

Brief information regarding the following institution concerning its responsibilities, involvement, and role in responding to marine pollution incident; in particular regarding the assistance which may be provided upon request.

Sea Alarm Foundation (SAF)



WHO

Brief presentation:

Sea Alarm Foundation's vision is to establish coastal oiled wildlife response plans and professional response capabilities worldwide. Sea Alarm seeks to achieve its vision by facilitating and motivating strategic alliances among non-governmental organisations (NGOs), governmental organisations and the oil and maritime industries to: be prepared for an oiled wildlife emergency as part of any oil spill response contingency planning; and respond professionally and effectively to oiled wildlife incidents according to best international standards.

Status type: Inter-Governmental | Governmental | Non-Governmental | International | Regional | National

Sea Alarm is a not for profit Non-Government Organisation (NGO) that operates from an office in Brussels, Belgium. Its international Board aims to represent the interests of Wildlife/Nature Conservation/Environmental organisations (NGOs) the Maritime and Oil Industries and Governments in having effective response and preparedness systems in place.

Sea Alarm has been established by Royal Decree (6/CH/15.546/S) and is registered in Belgium as a Foundation for Public Interest (Stichting van Algemeen Nut) under number 0894-810-152.

Obligations/responsibilities:

Sea Alarm is a small non-governmental organisation with a 3-person team that works to improve global preparedness for and response to oiled wildlife incidents. Sea Alarm's personnel have a unique expertise that includes 24/7 wildlife incident assessment and management services, wildlife planning and preparedness development, response network management and alignment, best practice dissemination, design and development of training and exercises. Sea Alarm experts do not handle animals, but as advisers help to create the environment and conditions that all parties, including mobilised hands-on experts, need to make a difference during an incident. Sea Alarm has a longstanding agreement with Oil Spill Response (OSRL) to provide 24/7 response services to OSRL members. Sea Alarm is also a member of the Mediterranean Assistance Unit.

WHAT

Role and/or Services:

Sea Alarm's activities focus on the following fields:

- Encouraging (response) cooperation between experts and expert organizations by forming networks, organizing events, moderating meetings, and initiating and managing projects.
- Developing best practices and guidelines via meetings and research projects
- Promoting and dissemination of best practices and guidelines and their implementation via various media and representation
- Encouraging and assisting the development and implementation of specialized response plans
- Developing and providing training for responders, response teams and managers
- Assisting with the management of wildlife incidents by providing advice, coordination or information services to interested stakeholders.

Response services: Sea Alarm is available 24/7 for response services. These include but are not limited to:

- Providing distant advice on strategy and management
- Identify, mobilise and coordinate expert oiled wildlife response resources and equipment
- Carry out an on-site assessment to identify gaps and needs in on-going response activities
- Providing on-site advice on strategy and management; coaching of officers; set up ops room.
- Establishing contacts with industry resources
- Assist with (ensuring the success of) wildlife claims
- These services are available for industry, governments and NGOs. If called out, Sea Alarm will liaise with coordinating bodies and key individuals who work on-site. Sea Alarm has limited resources to support its own mobilisation and that of other responders.

Preparedness services:

- Maintaining and expanding networks of responders (Europe and worldwide)
 - Developing and disseminating international standards for response and preparedness
 - Assisting governments and NGOs in developing national response and preparedness solutions
 - Developing and providing training and exercises
 - Participating in exercises and meetings
- Communication of news and developments

Resources (if applicable):

- Providing expert advice (together with identified expert partners) on the site of the accident as part of the Mediterranean Assistance Unit (MAU), to enhance the capability of the Contracting Parties in responding to oiled wildlife incidents.
- Sea Alarm will also provide remote assistance if required by REMPEC following a request from the Contracting Party and provide technical advice and any other relevant information.

HOW

Procedure:

Request for assistance

After receiving a request for assistance from a Contracting Party, the Director of REMPEC will take a decision regarding the activation of the MAU and alert Sea Alarm as necessary. The alert message to Sea Alarm should be transmitted by phone using one of the emergency line numbers below.

Together with the alert, REMPEC will provide as much data as available on the accident and on the assistance required. If required, data can also be transmitted by email (see emergency email below). In such a case, Sea Alarm will be informed by phone that data is being transmitted by email.

Sea Alarm will ensure that:

- either its duty officer will pick-up the call and acknowledge immediately the request, or
- any alert message left on its phone box will be acknowledged by the means indicated in the message not later than
 - o one (1) hour after receipt, during the normal working hours
 - o six (6) hours after receipt, when the alert message was sent outside the normal working hours, including on public holidays and other non-working days.

When acknowledging receipt Sea Alarm will indicate whether and when the required services can be provided and give an estimate of the duration of its onsite support depending on the relative priority and its financial resources. REMPEC will confirm Sea Alarm's acknowledgment by e-mail or by fax immediately after receipt and, if direct telephone contact has not yet been established with REMPEC, Sea Alarm will endeavour to immediately establish one with a view to finalizing arrangements for the sending of experts to the Contracting Party requesting assistance.

Conditions:

Sea Alarm will, subject to the necessary financial arrangements being in place, make its expert personnel available to take part in the MAU missions and provide other assistance under this Memorandum in all cases when so requested by REMPEC, except in case when all qualified personnel had already been assigned to other duties. The mobilization of Sea Alarm will be confirmed by execution of a work order setting out the necessary details of the mission, including the type and duration.

Sea Alarm's mobilisation shall be according to the details of the Mou between REMPEC and Sea Alarm (REMPEC/CONT/08/2011).

Contact:

<p>Address SEA ALARM FOUNDATION Rue du Cyprès 7-B10 1000 Brussels BELGIUM</p> <p>Website www.sea-alarm.org</p>	<p>Telephone +32(0)22788744</p> <p>Fax +32(0)25027438</p> <p>Email nijkamp@sea-alarm.org / saskia@sea-alarm.org / pkelway@sea-alarm.org</p>
<p>In case of emergency only (24H) - Restricted to official use only :</p>	
<p>Emergency email As above</p>	<p>Emergency line Priority 1: +32 (0)49 49 000 12 (Hugo Nijkamp mobile) Priority 2: +32 (0)49 96 247 72 (Saskia Sessions mobile) Priority 3: +32 (0)49 74 103 68 (Paul Kelway mobile) Priority 1: +32(0)22788744 (office)</p>

ANNEX II
EMERGENCY PROCEDURES

ANNEX II.1

POLLUTION REPORTING SYSTEM

(POLREP)

1. The pollution reporting system is for use between Contracting Parties to the Emergency Protocol of the Barcelona Convention themselves and between the Contracting Parties and the Regional Centre, for exchanging information when pollution of the sea has occurred or when a threat of such is present.
2. The POLREP is divided into three parts:

.1	Part I or POLWARN (figures 1-5)	POLlution WARNIng	gives first information or warning of the pollution or the threat
.2	Part II or POLINF (figures 40-60)	POLlution INFormation	gives detailed supplementary report as well as situation reports
.3	Part III or POLFAC (figures 80-99)	POLlution FACilities	is used for requesting assistance from other Contracting Parties and for defining operational matters related to the assistance
3. The division into three parts is only for identification purposes. For this reason consecutive figures are not used. This enables the recipient to recognize merely by looking at the figures whether he is dealing with part I (1-5), part II (40-60) or part III (80-99). This method of division shall in no way exclude the use of all figures in a full report or the separate use of single figures from each part or the use of single figures from different parts mixed in one report.
4. Part II is the logical consequence of part I. Having transmitted part I, the Party concerned can inform the other Parties of its assessment of the nature and extent of the incident by using the appropriate figures from part II.
5. Part III is for the request for assistance and related matters exclusively.

6. A summarized list of POLREP is given below.

INTRODUCTORY PART	Address fromto	
	Date Time Group	
	Identification	
	Serial number	
PART I (POLWARN)	1	Date and time
	2	Position
	3	Incident
	4	Outflow
	5	Acknowledge
PART II (POLINF)	40	Date and time
	41	Position
	42	Characteristics of pollution
	43	Source and cause of pollution
	44	Wind direction and speed
	45	Current or tide
	46	Sea state and visibility
	47	Drift of pollution
	48	Forecast
	49	Identity of observer and ships on scene
	50	Action taken
	51	Photographs or samples
	52	Names of other States informed
	53-59	Spare
60	Acknowledge	
PART III (POLFAC)	80	Date and time
	81	Request for assistance
	82	Cost
	83	Pre-arrangements for the delivery
	84	Assistance to where and how
	85	Other States requested
	86	Change of command
	87	Exchange of information
	88-98	Spare
	99	Acknowledge

EXPLANATION OF A POLREP MESSAGE

INTRODUCTORY PART

Contents	Remarks
ADDRESS	Each report should start with an indication of the country whose competent national authority is sending it and of addressee e.g.:
	FROM : ITA (indicates the country which sends the report) TO: GRC (indicates the country to which it is sent) <u>or</u> REMPEC (indicates that the message is sent to the Regional Centre).
DTG (Day Time Group)	The day of the month followed by the time (hour and minute) of drafting the message. Always a 6-figure group which may be followed by month indication. Time should be stated either as GMT, e.g. 092015Z June (i.e. the 9th of the relevant month at 20.15 GMT) or as local time e.g. 092115LT June.
IDENTIFICATION	"POL..." indicates that the report might deal with all aspects of pollution (such as oil as well as other harmful substances).
	".....REP" indicates that this is a report on a pollution incident. It can contain up to 3 main parts:
	<ul style="list-style-type: none"> • Part I (POLWARN) - is an <u>initial notice</u> (a first information or a warning) of a casualty or the presence of oil slicks or <i>harmful substances</i>. This part of the report is numbered from 1 to 5.
	<ul style="list-style-type: none"> • Part II (POLINF) - is a <u>detailed supplementary</u> report to Part I. This part of the report is numbered from 40 to 60.
	<ul style="list-style-type: none"> • Part III (POLFAC) - is for a <u>request for assistance</u> from other Contracting Parties, as well as for defining operational matters related to the assistance. This part of the report is numbered from 80 to 99 (see Annex 6).
	BARCELONA CONVENTION indicates that the message is sent within the framework of the Emergency Protocol of the Barcelona Convention.
	Parts I, II and III can be transmitted all together in one report or separately. Furthermore, single figures from each part can be transmitted separately or combined with figures from the two other parts.
	Figures without additional text shall not appear in the POLREP.
	When Part I is used as warning of a serious threat, the telex should be headed with the traffic priority word "URGENT".
All POLREPs containing ACKNOWLEDGE figures (5, 60 or 99) should be acknowledged as soon as possible by the competent national authority of the country receiving the message.	

	POLREPs should always be terminated by a telex from the reporting State, which indicates that no more operational communication on that particular incident should be expected.																																													
Contents	Remarks																																													
SERIAL NUMBER	It must be possible to identify each POLREP and the person who receives it must be able to check whether all reports of that particular incident have been received. This is done by using nation-identifiers which are as followed for contracting Parties to the Emergency Protocol to the Barcelona Convention:																																													
	<table border="0"> <tr><td>Albania</td><td>ALB</td><td>Lebanon</td><td>LBN</td></tr> <tr><td>Algeria</td><td>DZA</td><td>Libya</td><td>LBY</td></tr> <tr><td>Bosnia &-Herzegovina</td><td>BIH</td><td>Malta</td><td>MLT</td></tr> <tr><td>Croatia</td><td>CRT</td><td>Monaco</td><td>MON</td></tr> <tr><td>Cyprus</td><td>CYP</td><td>Morocco</td><td>MAR</td></tr> <tr><td>Egypt</td><td>EGY</td><td>Slovenia</td><td>SLO</td></tr> <tr><td>EU</td><td>EU</td><td>Spain</td><td>ESP</td></tr> <tr><td>France</td><td>FRA</td><td>Syria</td><td>SYR</td></tr> <tr><td>Greece</td><td>GRC</td><td>Tunisia</td><td>TUN</td></tr> <tr><td>Israel</td><td>ISR</td><td>Turkey</td><td>TUR</td></tr> <tr><td>Italy</td><td>ITA</td><td></td><td></td></tr> </table>	Albania	ALB	Lebanon	LBN	Algeria	DZA	Libya	LBY	Bosnia &-Herzegovina	BIH	Malta	MLT	Croatia	CRT	Monaco	MON	Cyprus	CYP	Morocco	MAR	Egypt	EGY	Slovenia	SLO	EU	EU	Spain	ESP	France	FRA	Syria	SYR	Greece	GRC	Tunisia	TUN	Israel	ISR	Turkey	TUR	Italy	ITA			
	Albania	ALB	Lebanon	LBN																																										
	Algeria	DZA	Libya	LBY																																										
Bosnia &-Herzegovina	BIH	Malta	MLT																																											
Croatia	CRT	Monaco	MON																																											
Cyprus	CYP	Morocco	MAR																																											
Egypt	EGY	Slovenia	SLO																																											
EU	EU	Spain	ESP																																											
France	FRA	Syria	SYR																																											
Greece	GRC	Tunisia	TUN																																											
Israel	ISR	Turkey	TUR																																											
Italy	ITA																																													
Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea	REMPEC																																													
<p>The nation-identifier should be followed by a stroke and the name of the ship or other installation involved in the accident and another stroke followed by the number of the actual report concerning this particular accident.</p> <p>ITA/POLLUX/1 indicates that this is the first report from Israel concerning the accident of MT "POLLUX".</p> <p>ITA/POLLUX/2, in accordance with the described system, indicates the second report on the same incident.</p> <p>The last and final POLREP will show as follows: ISR/POLLUX/5 FINAL, which means that this is the fifth and final report from Israel concerning the incident of MT "POLLUX".</p> <p>When answering a POLREP the serial number used by the transmitting State is to be used as reference in the answer. However, it is not necessary for countries to adhere to the POLREP system in responding to POLREP's.</p>																																														

Part I (POLWARN)

Contents	Remarks
1 DATE AND TIME	The day of the month as well as the time of the day when <u>the incident</u> took place or, if the cause of the pollution is not known, the time of the observation should be stated with 6 figures. Time should be stated as GMT for example, 091900z (i.e. the 9th of the relevant month at 1900 GMT) or as local time for example, 091900lt (i.e. 9th of the relevant month at 1900 local time)
2 POSITION	Indicates the main position of the incident in latitude and longitude in degrees and minutes and may, in addition, give the bearing of and the distance from a location known by the receiver.
3 INCIDENT	The nature of the incident should be stated here, such as BLOWOUT, TANKER GROUNDING, TANKER COLLISION, OIL SLICK, etc.
4 OUTFLOW	The nature of the pollution, such as CRUDE OIL, CHLORINE, DINITROL, PHENOL, etc. as well as the total quantity in tonnes of the outflow and/or the flow rate, as well as the risk of the further outflow. If there is no pollution but a pollution threat, the words NOT YET followed by the substance, for example, NOT YET FUEL OIL, should be stated.
5 ACKNOWLEDGE	When this figure is used the telex should be acknowledged as soon as possible by the competent national authority.

Part II (POLINF)

Contents	Remarks
40 DATE AND TIME	No. 40 relates to the situation described in figures 41 to 60 if it varies from figure 1.
41 POSITION AND/OR EXTENT OF POLLUTION ON/ABOVE/IN THE SEA	Indicates the main position of the pollution in latitude and longitude in degrees and minutes and may in addition give the distance and bearing of some prominent landmark known to the receiver if other than indicated in figure 2. Estimate amount of pollution (e.g. size of polluted areas, number of tonnes of oil spilled if other than indicated in figure 4, or number of containers, drums etc. lost). Indicates length and width of slick given in nautical miles if not indicated in Fig. 2.
42 CHARACTERISTICS OF POLLUTION	Gives type of pollution, e.g. type of oil with viscosity and pour point. <i>(packaged or bulk chemicals, sewage. For chemicals give proper name or United Nations number if known. For all, give also appearance, e.g. liquid, floating solid, liquid oil, semi-liquid sludge, tarry lumps, weathered oil, discolouration of sea, visible vapour. Any markings on drums, containers, etc. should be given.)</i>
43 SOURCES AND CAUSE OF POLLUTION	For example, from vessel or other undertaking. If from vessel, say whether as a result of a deliberate discharge or casualty. If the latter, give brief description. Where possible, give: Type of ship / vessel, Name, Previous names, Flag, Year built, IMO No, Hull type, GT, DWT, Total cargo capacity, Number of tanks, Owner, Manager, P&I Club, Cargo type, Cargo quantity, Voyage, Cargo Owner, Damage, Other information name, type, size, call sign, nationality and port of registration of polluting vessel. If vessel is proceeding on its way, give course, speed and destination.
44 WIND DIRECTION AND SPEED	Indicates wind direction and speed in degrees and m/s. The direction always indicates from where the wind is blowing.
45 CURRENT DIRECTION AND SPEED AND/OR TIDE	Indicates currents direction and speed in degrees and m/s. The direction always indicates the direction in which the current is flowing.
46 SEA STATE AND VISIBILITY	Sea state indicated as wave height in metres. Visibility in nautical miles.
47 DRIFT OF POLLUTION	Indicates drift course and speed of pollution in degrees and knots and tenths of knots. <i>(In case of air pollution (gas cloud) drift speed is indicated in m/s.)</i>
48 FORECAST OF LIKELY EFFECT OF POLLUTION AND ZONES AFFECTED	For example, arrival on beach with estimated timing. Results of mathematical models.

Part II (POLINF)
(Continued)

Contents	Remarks
49 IDENTITY OF OBSERVER /REPORTER IDENTITY OF SHIPS ON SCENE	Indicates who has reported the incident. If a ship, name, home port, flag and call sign must be given. Ships on scene can also be indicated under this item by name, home port, flag and call sign, especially if the polluter cannot be identified and the spill is considered to be of recent origin.
50 MEASURES TAKEN	Any action taken in response to the pollution.
51 PHOTOGRAPHS OR SAMPLES	Indicates if photographs or samples from the pollution have been taken. Telex number of the sampling authority should be given.
52 NAMES OF OTHER STATES AND ORGANIZATIONS INFORMED	
53 - 59	SPARE FOR ANY OTHER RELEVANT INFORMATION (e.g. results of sample or photographic analysis, results of inspection of surveyors, statements of ship's personnel, etc.)
60 ACCUSÉ DE RÉCEPTION	When this figure is used the telex should be acknowledged as soon as possible by the competent national authority.

Part III (POLFAC)

Contents	Remarks
80 DATE AND TIME	No. 80 is related to the situation described below, if it varies from figures 1 and/or 40.
81 REQUEST FOR ASSISTANCE	Type and amount of assistance required in form of: - specified equipment - specified equipment with trained personnel - complete strike teams - personnel with special expertise with indication of country requested.
82 COST	Requirements for cost information to requesting country of delivered assistance.
83 PRE-ARRANGEMENTS FOR DELIVERY OF ASSISTANCE	Information concerning customs clearance, access to territorial waters, etc. in the requesting country.
84 TO WHERE ASSISTANCE SHOULD BE RENDERED AND HOW	Information concerning the delivery of the assistance, e.g. rendezvous at sea with information on frequencies to be used, call sign and name of supreme on-scene commander of the requesting country, or land-based authorities with telephone, telex and fax numbers and contact persons.
85 NAMES OF OTHER STATES AND ORGANIZATIONS	Only to be filled in if not covered by figure 81, e.g. if further assistance is later needed by other States.
86 CHANGE OF COMMAND	When a substantial part of an oil pollution or serious threat of oil pollution moves or has moved into the zone of another Contracting Party, the country which has exercised the supreme command of the operation may request the other country to take over the supreme command.
87 EXCHANGE OF INFORMATION	When a mutual agreement has been reached between two parties on a change of supreme command, the country transferring the supreme command should give a report on all relevant information pertaining to the operation to the country taking over the command.
88 - 98	SPARE FOR ANY OTHER RELEVANT REQUIREMENTS OR INSTRUCTIONS
99 ACKNOWLEDGE	When this figure is used the telex should be acknowledged as soon as possible by the competent national authority.

POLREP
Example No.1
Full report (Parts I, II & III)

Address	From: ITA To: FRA et REMPEC
Date Time Group	181100z June
Identification	POLREP BARCELONA CONVENTION
Serial number	ITA/POLLUX/2 (ITA/POLLUX/1 for REMPEC)

1	Date and time	1	181000z
2	Position	2	43°31'N - 09°54'E
3	Incident	3	Tanker collision
4	Outflow	4	Crude oil, estimated 3,000 tonnes
41	Position and/or extent of pollution on/above/in the sea	41	The oil is forming a slick 0.5 nautical miles to the south-east. Width up to 0.3 nautical miles.
42	Characteristics of pollution	42	Venezuela crude. Viscosity 3,780 cSt at 37.8°C. Rather viscous.
43	Source and cause of pollution	43	Italian tanker POLLUX of Genoa, 22,000 GRT, call sign xxx, in collision with French bulk carrier CASTOR of Marseilles, 30,000 GRT, call sign yyy. Two tanks damaged in POLLUX. No damage in CASTOR.
44	Wind direction and speed	44	90 - 10 m/s.
45	Current direction and speed and/or tide	45	180 - 0,3 knots
46	Sea state and visibility	46	Wave height 2m. 10 nautical miles.
47	Drift of pollution	47	135 – 0.5 knots.
48	Forecast of likely effect of pollution and zones affected	48	Could reach Corsica, FRA, on the 21st of this month.
49	Identity of observer/reporter. Identity of ships on scene	49	CASTOR, figure 43 refers.
50	Action taken	50	3 antipollution Italian ships with high mechanical pick-up capacity en route to the area.
51	Photographs or samples	51	Oil samples have been taken. Telex 123456 XYZ ITA.
52	Names of other States and organizations informed	52	REMPEC
53	[Spare]	53	National Contingency Plan is activated.
81	Request for assistance	81	FRA is requested for 1 surveillance aircraft equipped for remote sensing.
82	Cost	82	FRA is requested for an approximate cost rate per day of assistance rendered.
83	Pre-arrangements for the delivery of assistance	83	FRA aircraft will be allowed to enter Italian airspace for surveillance of the spill and to land in Italian airports for logistics, informing the Commander in Chief on scene.
84	To where assistance should be rendered and how	84	Rendezvous 43°15'N - 09°50'E. Report on VHF channels 16 and 67. Commander in Chief on scene, Comm. Rossi in M/V SAN MARCO, call sign xxx.
99	Acknowledge	85	ACKNOWLEDGE

POLREP
Example No. 2
Abbreviated report (single figures from Part III)

Address	From: FRA To: ITA
Date Time Group	182230z June
Identification	POLREP BARCELONA CONVENTION
Serial number	Your ITA/POLLUX/2 refers
80 Date and Time	80 182020z
82 Cost	82 Total cost per day will be approximately...
84 To where assistance should be rendered and how	84 POLREP BARCELONA CONVENTION ITA/POLLUX/2 will be 190700z

POLREP
Example No. 3
Exercise report

Address	From: ITA To: CRT
Date Time Group	210940z June URGENT
	EXERCISE
Identification	POLREP BARCELONA CONVENTION
Serial number	ITA/xxx/1
1 Date and time	1 210830Z
2 Position	2 44°50'N - 13°02'E
3 Incident	3 Tanker collision
4 Outflow	4 Not yet crude oil
5 Acknowledge	4 Acknowledge

ANNEX II.2

EMPTY STANDARD POLREP FORM

INTRODUCTORY PART

ADDRESS	ORIGINE:
	DESTINATION:
DTG (Day Time Group)	
SERIAL NUMBER	

PART I (POLWARN)

1	DATE AND TIME	
2	POSITION	
3	INCIDENT	
4	OUTFLOW	
5	ACKNOWLEDGE	

PART II (POLINE)

40	DATE AND TIME	
41	POSITION AND/OR EXTENT OF POLLUTION ON/ABOVE/IN THE SEA	
42	CHARACTERISTICS OF POLLUTION	
43	SOURCES AND CAUSE OF POLLUTION	
44	WIND DIRECTION AND SPEED	
45	CURRENT DIRECTION AND SPEED AND/OR TIDE	
46	SEA STATE AND VISIBILITY	
47	DRIFT OF POLLUTION	
48	FORECAST OF LIKELY EFFECT OF POLLUTION AND ZONES AFFECTED	
49	IDENTITY OF OBSERVER/REPORTER IDENTITY OF SHIPS ON SCENE	
50	ACTION TAKEN	
51	PHOTOGRAPHS OR SAMPLES	
52	NAMES OF OTHER STATES AND ORGANIZATIONS INFORMED	
53-59	SPARE FOR ANY OTHER RELEVANT INFORMATION	
60	ACKNOWLEDGE	

Part III (POLFAC)

Contents	Remarks
80 DATE AND TIME	
81 REQUEST FOR ASSISTANCE	
82 COST	
83 PRE-ARRANGEMENTS FOR DELIVERY OF ASSISTANCE	
84 TO WHERE ASSISTANCE SHOULD BE RENDERED AND HOW	
85 NAMES OF OTHER STATES AND ORGANIZATIONS	
86 CHANGE OF COMMAND	
87 EXCHANGE OF INFORMATION	
88 - 98	
99 ACKNOWLEDGE	

ANNEX II.3

STANDARD FORM FOR REQUEST OF MAU EXPERTS

REFERENCE	
INCIDENT NAME	
LOCATION	
DATE/TIME / (UTC)	

To be addressed to the Head of Office of REMPEC

Email: emergency@rempec.org

Fax number: +356 21 33 99 51

(When sending a fax, a notification should first be sent by email or phone)

Emergency number: +356 79 505 011

Formed filled in by:

Name:	
Date:	

Contacts of the authority requesting the assistance

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Contacts

Authority that the experts must contact upon arrival (if different from the authority requesting the assistance) (if different)

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Authority/authorities to whom the experts must report during their mission (if different)

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Authority responsible for the organization and the management of the response (if different):

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Type of expert assistance required: *(tick the appropriate boxes)*

Remote assistance	
On-site assistance	

Areas of expertise required (advisory role only) *(tick the appropriate boxes)*

Response to pollution by oil	Crisis management and organization of intervention:	
	- analysis, assessment and forecasting of oil slick behaviour, fate and movement	
	- response planning and logistics	
	- response strategy/tactical choices and options	
	Combating methods and techniques at sea:	
	- containment/recovery	
	- use of dispersants and other treatment products	
	Shore clean-up techniques and methods	
	Oiled wildlife response	
Response to pollution by harmful substances	Treatment and disposal of wastes	
	Financial documentation and claims for compensation	
	Crisis management and organization of intervention	
	Analysis, assessment and forecasting of fate and behaviour of gas clouds, floaters, dissolvers, sinkers	
	Recovery of packages at sea	
	Response to spilled chemicals depending on their behaviour:	
	- personnel protection	
	- aquatic toxicity and rehabilitation	
	- biogeochemical cycling	
Decontamination		
Oiled wildlife response		
Treatment and disposal of wastes		

IF ON SITE ASSISTANCE IS REQUIRED:

Measures taken by the Requesting State to facilitate the mission of the expert.

Immigration and arrival procedures as well as customs formalities, in particular for data processing equipment and the associated documentation or computerized material
Accommodation (including location) and food, transport (food should be provided to the response team)
The provision of sufficient work space for the expert(s)
Access to communication means
Location where assistance should be provided
Location of closest airport

Costs of assistance

Initial costs covered by REMPEC include: air tickets, daily subsistence allowance and possible fees on a pre-arranged basis (REMPEC shall reserve the right, according to the applicable legal regimes, to seek reimbursement for the expenses thus incurred.)

Signature of the authorized requesting authority

Date

Name and function of the authorized requesting authority

APPENDIX

FIELD STANDARD FORM FOR REQUEST OF MAU EXPERTS

(to be filled by the technical expert in the field command structure)

Form filled in by

Name: *(technical expert)*

Date:

Type of expert assistance required: *(tick the appropriate boxes)*

Remote assistance	
On-site assistance	

Areas of expertise required (advisory role only) *(tick the appropriate boxes)*

Response to pollution by oil	Crisis management and organization of intervention:	
	- analysis, assessment and forecasting of oil slick behaviour, fate and movement	
	- response planning and logistics	
	- response strategy/tactical choices and options	
	Combating methods and techniques at sea:	
	- containment/recovery	
	- use of dispersants and other treatment products	
	Shore clean-up techniques and methods	
	Oiled wildlife response	
Treatment and disposal of wastes		
Financial documentation and claims for compensation		
Response to pollution by harmful substances	Crisis management and organization of intervention	
	Analysis, assessment and forecasting of fate and behaviour of gas clouds, floaters, dissolvers, sinkers	
	Recovery of packages at sea	
	Response to spilled chemicals depending on their behaviour:	
	- personnel protection	
	- aquatic toxicity and rehabilitation	
	- biogeochemical cycling	
	Decontamination	
	Oiled wildlife response	
	Treatment and disposal of wastes	

Approved by on scene commander

On scene commander signature

Date

Name of on scene commander

ANNEX II.4

STANDARD FORM FOR REQUEST OF EQUIPMENT, PRODUCTS AND SPECIALIZED PERSONNEL

REFERENCE	
INCIDENT NAME	
LOCATION	
DATE/TIME / (UTC)	

Address to:

- a) directly to Contracting Party(ies) to the Prevention and Emergency Protocol; or,
- b) through REMPEC to Contracting Party(ies) or other assistance mechanisms; or,
- c) to other resources providers.

Copied to: emergency@rempec.org

From authorized requesting authority

Name and position:	
Date	

Contacts of the authority requesting the assistance

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Authority in charge of the reception/return of the equipment/products provided¹⁵

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Authority who will have the overall operational control

Authority name and full address:	
Name of the person in charge:	
Function:	
Office phone:	
Mobile phone available 24h/24:	
Email address:	

Location where the equipment has to be sent

(Include the name and location of the closest airport/port, as appropriate)

¹⁵ Responsible for the equipment from the arrival in the country, transfer onsite and return

Equipment and products required (tick the appropriate boxes)

Type and quantity of equipment and products needed (as precisely as possible).

Booms

Type	Specifications (e.g. Connection types ¹⁶)	Quantity required	Remarks
Inflatable booms			
Water ballast booms			
Offshore booms			
Harbour booms			
Fire Booms			
Other booms			
Blower			

Sorbent

Type	Quantity required	Remarks
Sheets or pads		
Rolls		
Pillows		
Booms		
Mops		
Bulk Hydrophobic		
Bulk all liquid		
Other		

Skimmer

Type	Quantity required	Remarks
Oleophilic Disc		
Oleophilic mop		
Oleophilic Drum		
Oleophilic brush		
Oleophilic belt		
Non-Oleophilic vacuum/suction		
Non-Oleophilic weir		
Non-Oleophilic belt		
Non-Oleophilic drum		
Other		

Pump

Type	Quantity required	Remarks
Pump alone		
Pump with water injection		
Underwater pumping system		
Cargo transfer pump		
Other		

Storage

Type	Quantity required	Remarks
Floating Storage Units (tanks)		
Floating Storage Units (barge)		
Big Bag on barge		
Open top collapsible containers with supporting frame		
Shoreline recovery pillow tanks		
Other		

¹⁶ ASTM, Universal type 1, Universal type 2, Us Navy, Hinge & Pin or NOFI

Dispersant / Bioremediation agent

Type	Specifications	Quantity required	Remarks
Conventional dispersants (2nd generation)			
Concentrate dispersants (3rd generation)			
Bioremediation agent			
Other			

Dispersant spraying systems

Type	Quantity required	Remarks
Fixed spraying systems for helicopter		
Independent spraying bucket		
Conventional dispersant spraying system for boat		
Systems for spraying conventional dispersants		
Systems for spraying concentrate pre-diluted into sea water		
Systems for spraying neat dispersants		
Portable units for individual use		
Other		

Spraying carrier Type

Type	Specifications	Quantity required	Remarks
Crop spraying aircraft			
Spraying multi-engine aircraft			
POD spraying aircraft			
Large Self Contained spraying system			
Other			

Vessel

Type	Quantity required	Remarks
Response vessel		
Rescue vessel		
Tug boat		
Dinghy		
Egmopol		
Multipurpose vessel		
Offshore supply vessel		
Other		

Aircraft

Type	Specifications	Quantity required	Remarks

Personal Protective Equipment

Type	Specifications	Quantity required	Remarks
Protective clothing			
Respiratory system			
Specialized diving equipment			
Other			

Other Devices

Type	Specifications	Quantity required	Remarks
Subsea location devices			
Subsea recovery device			
Subsea dispersant application device			
Well capping			
Other			

Specialized Personnel

Type	Field of competences	Quantity required	Remarks
Experts	Salvage		
	Diving		
	Naval Architect		
	Health and Safety		
	Chemical		
Tasks	Firefighting		
	Field of competences		
	Supervisors	Shoreline clean-up Chemical Firefighting	
	Team Leader		
	On Scene Coordinator		
Strike team			

Measures taken by the Requesting State to facilitate the transfer and use of the equipment

Facilitation of customs formalities (immediate customs clearance of all arriving material and, if needed, authorize their use; equipment should be admitted on a temporary basis and products should be admitted free of excise and duties)
Immigration and arrival procedures as well as customs formalities (immediate clearing) for specialized personnel and personnel needed for operating the equipment
Supply of all that is needed for the correct operation and maintenance of equipment
For ships requests: ensure that ships are granted all necessary authorizations (e.g. authorization to navigate)
For aircrafts requests: ensure that aircraft are cleared to fly in the national air space. A flight plan or a flight notification has to be filed and accepted as an authorization for aircraft to take off, land ashore or at sea outside regular customs airfields.

Note for the return of equipment/products:

The Requesting State undertakes to return the equipment as soon as the operations are completed, if requested to do so by the supplier.

Return, once response operations are over, all unused products and ensure that returned equipment is in the best possible working order.

Send a report on the effectiveness of equipment, products and personnel provided, to the appropriate Authorities of the Assisting Party. A copy of the report has to be sent to REMPEC.

Signature of the authorized requesting authority

Date

Name and function of the authorized requesting authority

APPENDIX

FIELD STANDARD FORM FOR REQUEST OF EQUIPMENT, PRODUCTS AND SPECIALIZED PERSONNEL

(to be filled by the technical expert in the field command structure)

Form filled in by

Name: *(technical expert)*

Date:

Location where the equipment has to be sent

(Name and exact localisation)

Access information

(Provide information on logistical requirement to carry equipment onsite)

Equipment and products required (tick the appropriate boxes)

(Type and quantity of equipment and products needed (as precisely as possible)).

Booms

Type	Specifications (e.g. Connection types ¹⁷)	Quantity required	Remarks
Inflatable booms			
Water ballast booms			
Offshore booms			
Harbour booms			
Fire Booms			
Other booms			
Blower			

Sorbent

Type	Quantity required	Remarks
Sheets or pads		
Rolls		
Pillows		
Booms		
Mops		
Bulk Hydrophobic		
Bulk all liquid		
Other		

Skimmer

Type	Quantity required	Remarks
Oleophilic Disc		
Oleophilic mop		
Oleophilic Drum		
Oleophilic brush		
Oleophilic belt		
Non-Oleophilic vacuum/suction		
Non-Oleophilic weir		
Non-Oleophilic belt		
Non-Oleophilic drum		
Other		

¹⁷ ASTM, Universal type 1, Universal type 2, Us Navy, Hinge & Pin or NOFI

Pump

Type	Quantity required	Remarks
Pump alone		
Pump with water injection		
Underwater pumping system		
Cargo transfer pump		
Other		

Storage

Type	Quantity required	Remarks
Floating Storage Units (tanks)		
Floating Storage Units (barge)		
Big Bag on barge		
Open top collapsible containers with supporting frame		
Shoreline recovery pillow tanks		
Other		

Dispersant / Bioremediation agent

Type	Specifications	Quantity required	Remarks
Conventional dispersants (2nd generation)			
Concentrate dispersants (3rd generation)			
Bioremediation agent			
Other			

Dispersant spraying systems

Type	Quantity required	Remarks
Fixed spraying systems for helicopter		
Independent spraying bucket		
Conventional dispersant spraying system for boat		
Systems for spraying conventional dispersants		
Systems for spraying concentrate pre-diluted into sea water		
Systems for spraying neat dispersants		
Portable units for individual use		
Other		

Spraying carrier Type

Type	Specifications	Quantity required	Remarks
Crop spraying aircraft			
Spraying multi-engine aircraft			
POD spraying aircraft			
Large Self Contained spraying system			
Other			

Vessel

Type	Quantity required	Remarks
Response vessel		
Rescue vessel		
Tug boat		
Dinghy		
Egmopol		

Multipurpose vessel		
Offshore supply vessel		
Other		

Aircraft

Type	Specifications	Quantity required	Remarks

Personal Protective Equipment

Type	Specifications	Quantity required	Remarks
Protective clothing			
Respiratory system			
Specialized diving equipment			
Other			

Other Devices

Type	Specifications	Quantity required	Remarks
Subsea location devices			
Subsea recovery device			
Subsea dispersant application device			
Well capping			
Other			

Specialized Personnel

Type	Field of competences	Quantity required	Remarks
Experts	Salvage		
	Diving		
	Naval Architect		
	Health and Safety		
	Chemical		
	Firefighting		
Tasks	Field of competences		
	Supervisors	Shoreline clean-up Chemical Firefighting	
	Team Leader		
	On Scene Coordinator		
	Strike team		

Approved by on scene commander

On scene commander signature

Date

Name of on scene commander

ANNEX II.5

STANDARD FORM FOR OFFER OF ASSISTANCE

(From assisting party to requesting country)

REFERENCE	
INCIDENT NAME	
LOCATION	
DATE/TIME / (UTC)	

FROM (ASSISTING PARTY)

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

TO (REQUESTING COUNTRY)

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

DESCRIPTION OF ASSISTANCE OFFERED

Equipment/Product	
Type ¹⁸	
Quantity	
Specifications	
Current location	

Personnel	
Name	
Area of expertise ¹⁹	
Current location	
CV ²⁰	

TRANSPORT

Provided by assisting country	YES/NO
Required from requesting country or other organisation	YES/NO
Specifications	Indicate any special need related to the transport

DESCRIPTION OF DELIVERY POINT (if Assisting Country can provide transport)

Means of transport required	(land, air, maritime)
Transport details	
Final destination	Address, coordinates, landmark
Estimated Time of Arrival	Date and time

¹⁸ Refer to Annex II.4

¹⁹ Refer to Annex II.5

²⁰ Attach CV of expert/personnel

LOGISTICAL INFORMATION

<p><i>Add any relevant logistical information for instance:</i></p> <ul style="list-style-type: none"> • <i>Is in-country warehousing required?</i> • <i>Does equipment require trained personnel to accompany/operate it?</i> • <i>Does release of equipment from current location create compliance problem with minimum standards of equipment for response</i> • <i>Any specific power supply, pumps, or other technical needs to operate this equipment/asset?</i> • <i>Who will provide distribution of resource if needed?</i> • <i>Other considerations?</i> 		
--	--	--

TERMS AND FINANCIAL CONDITIONS

Date of commencement of services/mobilization		
Nature of services/ scope of work		
	YES	NO
The Assisting Party offers its assistance free of charge:		
If the answer to the above question is "YES" specify any particular conditions		
If the answer to the above question is "NO" state in detail below the terms and financial conditions including the cost to be reimbursed:		
Mobilization and demobilization charges		
Equipment rates		
Personnel rates		
Basis of hire (lump sum or daily rate)		
Import/export duties (exemption or no exemption)		
Immigration requirements		
Cleaning and rehabilitation cost		
Invoicing		
Security for payment		
Liability coverage, warranty and insurance		
Health and safety		
Termination		
Other conditions		
Approximate total cost of this deployment for which reimbursement will be requested:		
_____ (US \$/EURO/Other)		
Total costs from Home Base to Staging Area		
_____ (US \$/EURO/Other)		

Authorized Official's Signature

Date

Authorized Official's Name

Title and organization

ANNEX II.6

SAMPLE OF RECEIPT/ACKNOWLEDGE FORM

(From requesting country to party offering assistance)

REFERENCE	
INCIDENT NAME	
LOCATION	
DATE/TIME / (UTC)	

TO PARTY OFFERING ASSISTANCE

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

FROM REQUESTING COUNTRY

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

OFFER

OFFER NAME/DESCRIPTOR	
Received on	Date and time
Received by	
Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	
Estimated date of confirmation	Date and time

Authorized requesting authority's Signature

Date

Authorized requesting authority's Name

Title and function

ANNEX II.7

SAMPLE OF ACCEPTANCE FORM

(From requesting country to party offering assistance)

REFERENCE	
INCIDENT NAME	
LOCATION	
DATE/TIME / (UTC)	
OFFER NAME/DESCRIPTOR	

TO OFFERING PARTY (Government/Organization)

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

FROM REQUESTING COUNTRY

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

OFFER STATUS:

1) ACCEPTED OFFERS

Type of offers	Date required	Location	Transportation specifics

2) DECLINED OFFERS OR ON HOLD

Type of offers	Rational for decline or on hold

TERMS AND CONDITIONS

The terms and conditions as specified in the attached contract are accepted.

Authorized requesting authority's Signature

Date

Authorized requesting authority's Name

Title and function

APPENDIX

**ITEMS TO CONSIDER BY BOTH PARTIES WHEN NEGOCIATING THE TERMS AND
CONDITIONS OF INTERNATIONAL ASSISTANCE**

- Date of commencement of services/mobilization;
- Nature of services/ scope of work;
- Mobilization and demobilization charges
- Equipment rates
- Personnel rates;
- Basis of hire (lump sum or daily rate)
- Import/export duties (exemption or no exemption)
- Immigration
- Disbursements made by the assisting party in connection with the assistance provided
- Cleaning and rehabilitation cost
- Invoicing
- Security for payment. The assisting party may require a guaranty of payment from the requesting country which may obtain such guaranty from the P&I club of the ship involved [and or from the IOPCF if applicable] or from the insurer of an offshore unit or a handling facility.
- Liability coverage, warranty and insurance
- Health and safety
- Termination
- Payment detail

ANNEX II.8

SAMPLE OF DECLINE / ON HOLD FORM

(From requesting country to party offering assistance)

REFERENCE	
INCIDENT NAME	
LOCATION	
DATE/TIME / (UTC)	
OFFER NAME/DESCRIPTOR	

TO OFFERING PARTY (Government/Organization)

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

FROM REQUESTING COUNTRY

Name	
Position	
Name of authority / Company	
Telephone	
Fax	
Email	

OFFER STATUS: DECLINE/ON HOLD

ADDITIONAL INFORMATION

Authorized requesting authority's Signature

Date of Signature

Authorized requesting authority's Name

Title and function

ANNEX II.9

SITUATION REPORT (SITREP)

INCIDENT:	
SITREP No:	
DATE:	TIME* (UTC +1):
FORM filled in by:	
<u>Addressed to :</u> <ul style="list-style-type: none"> • REMPEC • Contracting Parties • Assisting parties • Parties involved 	
1) The development of the situation regarding the pollution incident	
2) The actions taken to combat the pollution	
3) The progress of response operations	
4) Actions planned to be taken	
-response action planned; -need for additional assistance or/ and demobilization of assistance already provided	

Approved by on scene commander or/ and supreme on scene commander

On scene commander/supreme signature

Date

Name of On scene commander/supreme

ANNEX III
CLAIMS

ANNEX III.1

PREPARATION OF CLAIMS

1. Admissibility of the claim

For a claimant to be entitled to compensation, the expense or loss caused by an oil spill must be measurable and quantifiable. The onus rests with the claimant to prove the link of causation, and the claimant must be able to provide appropriate evidence supporting the amount claimed for the expenses or loss. The shipowner's insurer, and the IOPC Funds if involved, usually appoints experts, often on a joint basis, to investigate the technical merits of claims and to make independent assessments of the expenditure or losses.

2. Reasonableness

It is important to note that under the international oil spill compensation regime, the amount claimed should be reasonable. In general, the reasonableness of a claim for preventive measures, including clean-up is assessed in terms of the rates charged, the resources deployed, and the activities claimed. The assessment of claims for pollution damage takes account of the value of the property affected, the economic loss incurred, and costs of reinstatement. These concepts of 'reasonableness' are set out in the IOPC Funds' Claims Manual for the purposes of the 1992 CLC and 1992 Fund Convention.

3. Time bar

Claimants should submit their claim as soon as possible after the damage has occurred or, if for any reason a formal claim cannot be submitted shortly after the incident, the claimant should notify the liable organization of an intention to submit a claim as soon as possible. Under the international oil spill compensation regime, the claimant may lose the right to compensation unless an action is brought against the liable organization in a court within a specified period after the date of the incident or the date on which the damage occurred.

4. Preparation of Claims for Oil Pollution damage

- **Prevention and clean-up**

For many oil spills, significant costs will be incurred in the initial emergency phase of a response as a result of deploying resources to prevent further spills, protect sensitive areas and to recover the oil. Consequently, it is important that an orderly system for logging and filing associated records and expenses incurred is established as quickly as possible after the response commences. Accurate records are vital since reliance on memory for subsequent claims compilation is unrealistic, particularly during a lengthy and fast-moving response.

Daily worksheets should be compiled by supervisory personnel, describing the operations in progress describing the equipment in use, where and how it is being used, the number of personnel employed, how and where they are deployed, and the materials consumed. Recording such information is facilitated by the use of standard electronic worksheets.

Costs for many items used in a response will be calculated as the sum of the period worked and the rate for that period; for example, an aircraft used for surveillance for a number of hours or a worker employed on a beach for some days, are best entered and submitted in electronic format, preferably using spreadsheets. In addition to itemizing costs, a claim should include as much information as possible to explain the reason for the work, such as records of decision, meetings, and records of the activity undertaken to recover and clean-up the oil, such as vessel logs, personnel timesheets, and worksite reports. Early participation of the P&I Club or insurer in the management of the incident and their co-approval of expenditure related to the response is recommended.

Waste transport, storage, treatment, and disposal can often be the most expensive component of a response and accurate recording of volumes and weights handled are important.

In summary, below is a non-exhaustive list of supporting information required:

- Summary of events, including a description of the work carried out in different areas and of the working methods chosen in relation to the circumstances prevailing during the incident.
- Delineation of the area affected, describing the extent of pollution, and identifying those areas most heavily contaminated. This should be presented in the form of a map or chart supported by photographs or video.
- Analytical and/or other evidence linking the oil pollution with the ship involved in the incident (e.g. chemical analysis; wind, tide and current data; observation and plotting of movement of floating oil).

- Dates on which work was carried out (with weekly or daily costs).
- Labour and administrative costs (number and categories of response personnel; regular and overtime rates of pay; days/hours worked).
- Equipment and material costs (types of equipment used; rate of hire; consumable material quantity and cost).
- Transport costs (number and types of vessels, aircraft, vehicles used; number of days/hours operated; rate of hire or operating cost).
- Costs of temporary storage (if applicable) and final disposal of recovered oil and oily material.

- **Property damage**

Claims for damage to property may be made by the public as well as the private sector, such as fishermen, pleasure-boat owners, marina operators, and port authorities. In this case, it may be desirable to arrange, through the shipowner's insurer, to appoint insurance adjusters to whom claimants may be referred. In some incidents, a special telephone number and office have been established to process claims, and the public is advised through the media that this service is available.

Items affected commonly include: hulls of fishing vessels and pleasure craft; fishing gear, such as nets and traps; and mariculture structures, such as fish farms, mussel rafts, and oyster trestles. Property damage claims may also arise as a result of clean-up activity; for example, damage to roads or paths used for access by workers and vehicles.

As a minimum, photographs of the property before and after restoration should be provided in support of a claim. However, for many property damage claims, a survey, usually undertaken jointly with representatives of the organization paying compensation, will be necessary prior to the commencement of work to restore the property. Surveys are necessary to confirm the link of causation to the incident, to corroborate the level of contamination or other damage claimed, and to advise on the appropriate work to be undertaken. In any case, the claim should mention the extent of pollution damage to the property, the description of items destroyed, damaged or needing replacement or repairs (e.g. boat, fishing gear and clothing) including their location. In order to facilitate the assessment, the cost of repair work or replacement of item should be mentioned as well as the age of item to be replaced in order to take into consideration the depreciation.

- **Economic losses**

Contamination of fishing vessels, other fishing gear, mariculture facilities, or tourism assets may prevent their subsequent use. Income lost while the polluted or damaged items are cleaned or replaced may form the basis of a claim for consequential economic loss. In addition to the documentation required to support the property damage, evidence of the ensuing loss of income will also be required. Claims may be accepted for the costs of measures taken to prevent or minimize pure economic loss. Economic losses can include but are not limited to: restriction of fishing activity, closure of coastal industrial and processing installations, or marketing campaigns and loss of income by resort operators (hotel owners and restaurateurs). In many cases, the financial records for previous years may be readily available, although difficulties may arise in distinguishing losses caused by the oil spill from those caused by other unrelated factors such as bad weather or overfishing.

Claims for pure economic loss can also arise even though no damage to property has occurred; for example, if a fishing fleet is unable to depart port. Media reports of an oil spill may also result in a loss of market confidence, which might deter tourists from visiting a coastal area or the public from purchasing seafood perceived to be contaminated by oil. Pure economic losses can more easily be seen on a balance sheet only, rather than as a consequence of damage to property. Therefore, for many economic loss claims, the most important supporting documentation will be copies of company accounts, trading records, invoices, or other financial statements. Although accepted in principle under the international compensation regimes, in some national jurisdictions claims for pure economic loss are inadmissible.

When dealing with artisanal fisheries, formal records may not be available and some other form of assessment may be required. Subsistence or artisanal fishing involves the provision of daily food or seafood for barter that may not include financial transactions. The assessment of claims from such fisheries may be problematic as supporting documentation is often unavailable and only verbal reports of activities can be provided. Experts are available to work with the claimants to determine accurate losses. Also, there could be additional indirect expenditures incurred by the local authorities in providing alternate protein sources for the coastal communities affected by the spillage; this should be documented. Guidelines available from the IOPC Funds may assist in this area.

Supporting information relative to economic claims may include, but are not limited to, the description of the nature of the loss, including demonstration that loss resulted directly from the incident, the comparative figures for profits earned in previous periods, and for the period during which such damage was suffered, and the comparison with similar areas outside the area affected by the spill together with the method of assessment of loss.

More specifically for fisheries, the claims should include the costs of inspecting and monitoring the presence of oil in potentially impacted fisheries areas and the subsistence foods as well as the government costs of monitoring and responding to native food issues.

- **Environmental damage**

Claims for work done to restore damaged resources and encourage natural recovery are acceptable under the International Conventions only if certain criteria are met; for example, the work should significantly accelerate natural recovery. Costs should be itemized to clearly explain the work done.

However, claims based on calculations made according to theoretical models and claims for compensation for loss of function of the environment are inadmissible under the International Conventions, although they are recognized under some national legislation.

- **Other types of claims**

The foregoing are the principal categories of claims which are likely to prove acceptable; however, there may be other categories of claims eligible under national and regional compensation schemes. In all cases, the claim should be presented clearly and in sufficient detail so that it is possible to assess the amount of damage suffered on the basis of the facts and the documentation presented. It should be noted that each item of the claim must be supported by an invoice or by other relevant documentation such as daily worksheets and explanatory notes.

- **Importance of record keeping**

The type of information required to support a claim depends upon the type of loss, in particular, whether the loss is incurred as a result of the cost of responding to the incident or as a result of the effects of the oil on, for example, tourism or fisheries businesses. However, the quality of this documentation and other information required depends to a large extent upon the measures taken to record and preserve this information at the time the loss is incurred. As time passes, and unless records are meticulous, the availability of information to support claims, verify losses, and answer questions is likely to diminish. Settlement of a claim may require time, and if key personnel are no longer available to answer queries during this period, the records may be the sole source of information. Similarly, unless evidence is preserved correctly, substantiation of a subsequent claim may not be possible.

A wide variety of organizations such as salvage companies, government agencies, waste contractors, and wildlife charities may be involved in a response. In addition to utilizing owned resources, each organization may spend large amounts of money to purchase or contract-in goods and services. The resulting trail of expenditure can include hire agreements, contracts, invoices, receipts, and many other individual documents. The reasonable costs of personnel tasked with keeping a record of the measures taken and the costs incurred, may qualify for compensation under the international regime.

5. IOPC Funds Publication

A Claims Information Pack, which includes a Claims Manual, example claim form, and various sector-specific guidelines for presenting claims, has been developed to assist claimants in a Member State following an oil spill incident. A set of publications are available to download from <http://www.iopcfunds.org/publications/>. Hard copies of the information pack are available on request.

ANNEX III.2

SUBMISSION, ASSESSMENT AND SETTLEMENT OF THE CLAIM

1. Who can claim and to whom?

Anyone who has been involved in prevention or clean-up operations, or anyone who has suffered measurable damages to a pollution incident, can submit a claim. Claimants may be private individuals, companies, private organizations, or public bodies, including States or local authorities. For convenience, claims can be grouped together in order to facilitate their assessment by the liable party or organization.

The insurer of the vessel owner's third party liabilities is typically a Protection and Indemnity (P&I) Club. As noted above, under some conventions such as CLC and Bunkers claimants have a right of direct action against the insurer if the vessel owner is unable to pay. Pollution damage claims should be submitted to a vessel's P&I Club and/or the IOPC Fund for large incidents likely to exceed ship limitation. In situations where the shipowner is not known, or cannot pay, claims can be submitted to the International Oil Pollution Convention Funds, when relevant, or a national fund, if available.

Government and publically operated vessels, including warships and other vessels on military duty or charter, usually operate outside established P&I and other commercial insurance.

In the case of pollution damage within the meaning of 92 CLC, caused in a State that is Party to both the 1992 CLC and the 1992 Fund Convention, claims can be submitted to the 1992 Fund. However, the 1992 Fund typically begins to distribute compensation once the shipowner or its insurer has paid up to the limit of its liability, and therefore claims should be sent directly to the shipowner or its insurer who will channel the claim to the 1992 Fund when the limit of its liability has been reached.

2. Information to be provided

Regardless of the type of the claim, the documentation in support should contain the basic following information:

- the name and address of the claimant;
- identity of the ship involved in the incident;
- the date, place, and specific details of the incident;
- the type of loss or pollution damage sustained;
- supporting documents for each claimed item; and
- the amount of compensation claimed including taxes, profit, and any other extra costs where applicable.

3. Assessment and settlement of the claim

After receiving a claim, the owner, shipowner's insurer, and/or the IOPC Funds if involved, will assess the claim in order to determine its admissibility as well as the sum that is considered recoverable. To do so, the owner, the shipowner's insurer and/or the Fund may require the services of technical advisors that may have been present at the scene of the incident.

If the information provided by the claimant is not sufficient to verify the admissibility or the reasonableness of the claim, the Fund/responsible parties' insurer may query some of the claimed costs pending the provision of additional information. While a claim may have been considered admissible in principle, the burden of proving the claim rests upon the claimant, and thus, if the claim is not supported by the documentation submitted or is not technically reasonable, some or all of the costs may be rejected after all the queries have been exhausted.

In most incidents under the International Conventions, agreement on the amount of compensation to be paid is reached on an amicable basis, without the need for legal action and associated costs. If, however, such agreement is not possible, the claimant has the right to bring a claim to the court in the State in which the damage occurred but must do so before the applicable time bar date.

ANNEX IV
GLOSSARY and ACRONYMS

ANNEX IV.1

GLOSSARY

Affected Country	A country that faces a large, complex or significant oil spill that may exceed the response capabilities of existing national, regional, bilateral, multilateral, and other mutual aid agreements.
Assisting Country	A country that accepts a request for international assistance from a requesting State that faces a major pollution emergency by providing external resources to augment the Requesting Country's national capacity for large scale oil spill incidents.
Assisting Party	A party that accepts a request for international assistance from a Requesting Country that faces a major pollution emergency by providing external resources to augment the Requesting Country's national capacity for large scale oil spill incidents.
Command structure	The command structure is responsible for coordinating the actions taken by national means (strike teams, vessels, aircraft) of the Requesting State with those taken by the means of the Assisting Parties (Government, private sector).
Management structure	The management structure is acting as a centralised response point of contact for processing requests, receipt, evaluation and acceptance of international offers of assistance from multiple sources (national governments, REMPEC, the private sector, etc.) and to coordinate deployment logistics of the accepted resources into the affected area.
National Contingency Plan	A country's national blueprint for responding to oil spills and hazardous substance releases. It documents national response capability and is intended to promote overall coordination among the hierarchy of responders and contingency plans.
Offering Party	A party that offers international assistance to an affected or Requesting Country that faces a major pollution emergency.
OPRC Convention (1990)	The International Convention on Oil Pollution Preparedness, Response and Cooperation, adopted in 1990 and entered into force in 1995, whose purpose is to provide a global framework for international cooperation in combating major incidents or threats of marine pollution with the recognition that not one single country can effectively manage a large, complex or significant oil spill response on its own.
Party	A country, nation, state or private entity.
Point of Entry	Entry points such as any type of border crossing (i.e. roads, rivers, ports, railroads, airports) through which incoming resources are admitted into the Requesting Country in response to a large, complex or significant oil spill.

Polluter Pays Principle	National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.
P&I Club	Protection and Indemnity Clubs are non-profit mutual associations insuring commercial vessels' third party liabilities, including oil pollution.
Requesting Country	A country that issues a request for international assistance when facing a major pollution emergency that requires external resources to augment national capacity for large scale oil spill incidents.
Requesting Party	A party that issues a request for international assistance when facing a major pollution emergency that requires external resources to augment their capacity for large scale oil spill incidents.
Response Authority	The agency that is responsible for managing the oil spill response operation.
Responsible Party	An individual or group of people that is legally responsible or liable for the removal costs and damages that result from a discharge or a substantial threat of a discharge of oil from a vessel or facility into navigable waters or adjoining shorelines.
Technical Specialist	An individual who works closely with the response manager and those running the response operations in the field to help identify resource constraints and limited supplies for specifically needed equipment and other.

ANNEX IV.2

ACRONYMS

AIS	Automatic Identification System
bb1	barrel
CLC	International Convention on Civil Liability for Oil Pollution Damage
cm.	centimeters
Cedre	Centre of Documentation, Research and Experimentation on Accidental Water Pollution
DG-ECHO	Directorate-General for European Civil Protection and Humanitarian Aid Operations
EC	European Commission
EMSA	European Maritime Safety Agency
ERCC	Emergency Response Coordination Centre
EU	European Union
Federchimica	<i>Federazione Nazionale dell'Industria Chimica</i>
GPS	global positioning system
HNS	Hazardous and Noxious Substances
HQ	Headquarters
IACS	International Association of Classification Societies
ID	identification
ICE	Intervention in Chemical transport Emergencies
IMO	International Maritime Organization
IOA	International Offers of Assistance
IOPC Funds	International Oil Pollution Compensation Funds
IOGP	International Association of Oil and Gas Producers
IPIECA	The Global Oil and Gas Industry Association for Environmental and Social Issues

ISPRA	Italian Institute for Environmental Protection and Research
ISU	International Salvage Union
ITOPF	International Tanker Owners Pollution Federation
m3	cubic meter
MAP	Mediterranean Action Plan
MAU	Mediterranean Assistance Unit
MEPC	Marine Environment Protection Committee
MONGOOS	Mediterranean Oceanography Network for the Global Ocean Observing System
NGO	non-governmental organization
OCHA	Office for the Coordination of Humanitarian Affairs
OPRC	Oil Pollution Preparedness, Response and Cooperation
OPPR	Oil Pollution Preparedness and Response
OSC	On-Scene Coordinator
POLFAC	POLLutionFACilities
POLINF	POLLutionINFormation
POLREP	POLLutionREPorting system
POLWARN	POLLutionWARNing
RAC	Regional Activity Centre
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
RP	Responsible Party
SAF	Sea Alarm Foundation
SITREP	SITuationREPort
TG	Technical Group
UCPM	Union Civil Protection Mechanism
UNEP	United Nations Environment Programme
UTC	Coordinated Universal Time
VHF	very high frequency

Decision IG.23/12

Updated Guidelines on Management of Dredged Materials

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the 1995 Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea, and in particular article 6(2) thereof requesting that criteria, guidelines and procedures for the wastes or other matter, the dumping of which is allowed under article 4(2) of the 1995 Protocol be drawn up,

Recalling the 1999 Guidelines for the Management of Dredged Material, adopted by the Contracting Parties at their eleventh meeting (COP 11) (Malta, 27-30 October 1999), and acknowledging the progress achieved and lessons learned in their implementation,

Recalling also decision IG.22/20, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), by which the Contracting Parties mandated the update of the 1999 Guidelines,

Noting with concern the increasing trend of the dumping of dredged material into the Mediterranean Sea area over the past ten years, its impact on marine and coastal ecosystems and the threat that dumping of dredged material may pose to achieving or maintaining Good Environmental Status,

Taking into account the recent developments towards the management of dredged materials, in particular under the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter and its Protocol,

Committed to further streamlining the ecological objectives of the Mediterranean Action Plan, in particular those related to pollution, litter, biodiversity, and coast and hydrography and associated Good Environmental Status targets, as well as the relevant provisions of the Regional Plan on Marine Litter Management in the Mediterranean, within the scope of application of the 1995 Protocol,

Having considered the report of the meeting of the focal points for the Programme for the Assessment and Control of Marine Pollution in the Mediterranean in May 2017,

1. *Adopt* the Updated Guidelines on Management of Dredged Materials, set out in the Annex to the present decision, which replace the 1999 Guidelines;

2. *Request* the Contracting Parties to make every effort to ensure their effective implementation, bearing in mind that when assessing the suitability of management options for dredged material, the dumping thereof should be considered, only if no alternative management options are feasible;

3. *Urge* the Contracting Parties to report permits, quantities, location and impacts of dredged material dumped in the Mediterranean Sea area in a timely manner, using the online Barcelona Convention Reporting System;

4. *Request* the Secretariat to facilitate the work of the Contracting Parties for the implementation of the Updated Guidelines on Management of Dredged Materials by further strengthening cooperation and synergies in that area with the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter and its Protocol, and the European Union Marine Strategy Framework Directive; and by sharing information with regional and global agreements and programmes on the progress and achievements of the Mediterranean Action Plan Barcelona Convention system in that area.

Annex

Updated Guidelines on Management of Dredged Materials

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List of Abbreviations / Acronyms

BEP	Best Environmental Practice
Cd	Cadmium
CDF	Confined Disposal Facility
COP	Conference of the Parties
Cu	Copper
Cr	Chromium
DGPS	Differential Global Positioning System
EIA	Environmental Impact Assessment
GES	Good Environmental Status
Hg	Mercury
IMAP	Integrated Monitoring and Assessment Programme
MAP	Mediterranean Action Plan
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
MPA	Marine Protected Area
Ni	Nickel
PAH	Polycyclic Aromatic Hydrocarbons
Pb	Lead
PCBs	Polychlorobiphenyls
Sn	Tin
SPAMI	Specially Protected Areas of Mediterranean Importance
Zn	Zinc

Introduction

1. Dredging activities are an essential part of port and harbour activities. Two main dredging categories can be distinguished:

a) Capital dredging, mainly for navigational purposes, to enlarge or deepen existing channel and port areas, or to create new ones; this type of dredging activity also includes some technical activities on the seabed such as trenches for pipes or cables, tunneling, removal of material unsuitable for foundations, or removal of overburden for aggregate extractions;

b) Maintenance dredging, to ensure that channels, berths or construction works are maintained at their designed dimensions.

2. In addition, other dredging operations such as:

a) Dredging to support coastal protection or management: relocation of sediments for activities such as beach nourishment and construction of levees, dykes, jetties, etc.

b) Environmental dredging: to remove contaminated sediment for the purpose of reducing risks to human health and the environment; construction of confined aquatic disposal cells to hold contaminated sediments.

c) Restoration dredging: to restore or create environmental features or habitats in order to establish ecosystem functions, benefits, and services, e.g. wetlands creation, island habitat construction and nourishment, construction of offshore reefs, and topographic features for fisheries enhancement, etc.;

d) Dredging to support local and regional sediment processes: includes engineering to reduce sedimentation (e.g. construction of sediment traps), retaining sediment within the natural sediment system to support sediment-based habitats, shorelines and infrastructure.

3. All these activities may produce large quantities of material that have to be managed in an environmentally sound manner including their beneficial use, disposal, confinement or treatment. In the case of disposal at sea, it should be ensured that adverse impacts on the marine and coastal ecosystems of the Mediterranean do not occur.

4. It must be also recognised that dredging operations as such may harm the marine environment, especially when they take place in the open sea close to sensitive areas (key habitats, SPAMIs, Marine Protected Areas (MPAs), aquaculture areas, recreational areas, etc.). This is the case in particular when dredging operations have a physical impact (increased turbidity) or lead to the re-suspension or the re-releasing of major pollutants (heavy metals, organic or bacterial pollutants and nutrients).

5. Dredging operations may result in the re-mobilization of pollutants contained in the sediments and their suspension, which may, at certain levels, have an adverse impact on the environment, either at sea during dredging or capping when these sediments are submerged, or on land when these sediments are stored. Dredging can also result in hydromorphological, sedimentologic and hydrographic changes to dredged areas and have a more global impact on disposal sites or onshore management.

6. In the above context, the Contracting Parties are urged to exercise control over dredging operations in parallel with that exercised over dumping. Beneficial uses and use of Best Environmental Practices (BEP) for dredging activities are essential pre-condition for dumping, in order to dispose on land and/or minimise the quantity of material that has to be dredged and the impact of the dredging and dumping activities in the maritime area.

7. On the other hand, un-polluted dredged material can have positive environmental effects and externalities. In fact, dredged materials can be integrated, under certain conditions and subject to the existence of a local market, into treatment systems allowing their exploitation, in particular in building materials. They can also be used for beach nourishment in the fight against erosion of the coastline and thus come as an alternative to other more harmful disposal methods. Finally, in the case of sediment pollution, dredging can be a removal solution that decontaminates the marine environment, but with the risk of transferring the problem to the land or being re-dumped to another sea area.

8. The basic principle of these updated Guidelines is that dumping or re-suspension of dredging sediments in the coastal zone of the Mediterranean should be minimized as much as possible, in order to avoid the deterioration of the Good Environmental Status and/or maintain its good status in relation to a number of relevant MAP ecosystem approach based Ecological Objectives and related Operational Objectives and GES targets (1, 2, 2.1, 2.2, 5.1,5.2, 7.1, 7.2, 7.3, 8.1, 9.1,9.2,9.4,10.2) as adopted in 2013 by COP 18 (Decicion IG.21/3). Therefore **beneficial uses andland management should be primarily and ultimately considered before any decision on dumping at sea.**

9. The updated Guidelines also provide ample information and links related to land disposal and low cost treatment and disposal options¹.

I. SCOPE OF THE APPLICATION OF THE GUIDELINES

10. Several Articles of the Dumping Protocol² provide ground base for the development of the Guidelines. Under Article 4.1 of the Protocol, the dumping of waste and other matter is prohibited. Nevertheless, pursuant to Article 4.2 (a) of the Protocol, this principle may be waived and the dumping of dredged material authorized under certain conditions. Under Article 5, dumping requires a prior special permit from the competent national authorities.

11. Furthermore, in accordance with Article 6 of the Protocol, the permit referred to in Article 5 shall be issued only after careful consideration of the factors set forth in the Annex to the Protocol. Article 6.2 provides that the Contracting Parties shall draw up and adopt criteria, Guidelines and procedures for the dumping of wastes or other matter listed in Article 4.2 so as to prevent, abate and eliminate pollution. In addition, the Protocol recognizes the importance of on land beneficial uses and BEPs as important steps before granting a dumping permit by relevant authorities.

12. In accordance with Article 9 (8) of the Regional Plan on the Management of the Marine Litter in the Mediterranean, the Contracting Parties should apply by the year 2020 the cost effective measures to prevent any marine littering from dredging activities taking into account the relevant Guidelines adopted in the framework of Dumping Protocol of the Barcelona Convention.

13. In this context, the updated Guidelines for the Management of Dredged Materials, provide guidance to the Contracting Parties on the fulfilment of their obligations related to:

- (a) the issue of permits for the dumping of dredged material in accordance with the provisions of the Protocol; and Article 9 (8) of the Regional Plan on the Management of the Marine Litter in the Mediterranean
- (b) monitoring, sampling and assessment methods consistent with IMAP Decision
- (c) transmission to the Secretariat of reliable data on the inputs of contaminants by the dumping of dredged material and other harmful impacts on marine and coastal ecosystems, in line with reporting under the MAP Barcelona Convention.

¹In this respect advice is available from a number of international organisations, including the Permanent International Association of Navigation Congresses (PIANC) 1986: Disposal of Dredged Material at Sea (LDC/SG9/2/1). Through its Environmental Policy Framework and close links with industry in developing Cleaner Industrial Production Technologies, the United National Industrial Development Organisation (UNIDO) is able to offer expert advice and training to enhance capabilities to develop an integrated management plan for dredged material.

²Amended text of 1995

- (d) good dredging, best available practices and equipment
- (e) data as regards thresholds and contaminant concentrations in the dredged material

14. The updated Guidelines are designed to allow Contracting Parties to manage dredged material without polluting the marine environment. In accordance with Article 4.2 (a) of the Dumping Protocol, these updated Guidelines relate specifically to the dumping of dredged material from ships and aircraft. They do not concern either dredging operations or the disposal of dredged material by methods other than dumping.

15. The updated Guidelines are presented in two parts. Part A deals with the assessment and management of dredged material, while part B provides guidance on the design and conduct of monitoring of marine dumping sites.

16. The updated Guidelines commences with a guidance on the conditions under which permits might be issued. Sections 2, 6 and 8 address the relevant considerations related to the characteristics, composition of the dredged material and priority is given to beneficial uses and low cost treatment of dredged material (part A). In case dumping at sea is to be considered, guidance on the monitoring of the dumping site is provided in part B. The references provide extensive information, among others, on analytical techniques and normalization procedures which could be used by national authorities to implement these updated Guidelines. In addition, the updated Guidelines have two Appendixes on:

- a) Analytical requirements for the assessment of dredged materials
- b) Contaminant action levels and thresholds

II. DEFINITION OF TERMS

17. For the purpose of these updated Guidelines the following definition of terms apply:

Action levels	Guidance values used to trigger action
Benthic	Relating to, or occurring at the bottom of a body of water.
Bioaccumulation	Accumulation of environmental contaminants in living tissue.
Bioassay	Tests in which organisms are exposed to dredged materials to determine their biological effects or toxicity.
Biological testing	Testing via bioassays.
Biota	Living organisms.
Capital dredging	Capital dredging includes geological material dredged from previously unexposed layers beneath the seabed and surface material from areas not recently dredged.
Clay	Sedimentary mineral particles 0.2 to 2.0 μm in size, usually with a negative charge (anion); the size and charge have profound implications for sediment chemistry and other physical interactions.
Contaminated Dredged Material	Dredged material not meeting national assessment criteria (e.g.exceeding upper action levels).
Dredged material Management	An overarching term describing a variety of handling methods of dredged materials including, inter alia: dumping (deliberate disposal),

	re-use, beneficial use, re-location, placement, confinement and treatment.
Eco-toxicological Testing	Biological testing via bioassays.
Fractions	Categories of sediments using grain size.
Harbour	Harbours include enclosed and semi-enclosed docks, docks entrances, marinas, wharves and unloading jetties
Maintenance Dredging	Maintenance dredging is the dredging required to maintain berths and navigation channels at advertised depth. It includes material dredged from recently deposited by sedimentation processes in harbour or sea areas
National Action List	List or inventory of dredged material contaminants that Contracting Parties might consider in the permitting process and decision. The Action List is used as a screening mechanism for assessing properties and constituents of dredged material with a set of levels for specific substances. It should be used for dredged material management decisions, including the identification and development of source control measures
National Action Levels	Levels for a particular contaminant concentration below which there would be little concern (lower NALs), or above which there would be concern due to increased risk or increased probability of effects (upper NALs). The levels should reflect experience gained relating to the potential effects on human health or the marine environment. Action List levels should be developed on a national or regional basis and might be set on the basis of concentration limits, biological responses, environmental quality standards, flux considerations or other reference values. They should be derived from studies of sediments that have similar geochemical properties to those from the ones to be dredged and/or to those of the receiving system. Thus, depending upon natural variation in sediment geochemistry, it may be necessary to develop individual sets of criteria for each area in which dredging or deposit is conducted.
Sediment	Naturally occurring material that is produced through the processes of weathering and erosion of rocks, and is subsequently transported by the action of fluids such as wind, water, or ice, and/or by the force of gravity acting on the particle itself.
Σ PAH9	anthracene; benzo[a]anthracene; benzo[ghi]perylene; benzo[a]pyrene; chrysene; fluoranthene; indeno[1,2,3-cd] pyrene; pyrene; phenanthrene
Σ PAH16	acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[ghi]perylene, chrysene, dibenz(ah)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd) pyrene, naphthalene, phenanthrene and pyrene

III. CONDITIONS UNDER WHICH PERMITS FOR DUMPING OF DREDGED MATERIAL MAY BE ISSUED

PART A ASSESSMENT AND MANAGEMENT OF DREDGED MATERIAL

1. Characterization of dredged material

18. For the purpose of these updated Guidelines, the following definition[s] apply[ies]: "dredged material" means any sedimentary formation (clay, silt, sand, gravel, rocks, and any indigenous parent rock material) removed from areas that are normally or regularly covered by sea water, by using dredging or other excavation equipment; For any other relevant definition, the text of Art. 3 of the Dumping Protocol, applies.

2. Assessment of the characteristics and composition of the dredged material

a) Physical characterization

19. For all dredged material to be dumped at sea, the following information should be obtained:

- (a) quantity of dredged material (gross wet tonnage);
- (b) method of dredging (mechanical dredging, hydraulic dredging, pneumatic dredging, and application of BEP's);
- (c) rough preliminary determination of sediment characteristics (i.e. clay/silt/sand/gravel/rock).

b) Chemical and biological characterization

20. In order to assess the capacity of the site to receive dredged material, both the total amount of material and the anticipated or actual loading rate at the dumping site should be taken into consideration. Chemical and biological characterization is also needed to fully assess the potential impact. Information may be available from existing sources, for example from field observations on the impact of similar material at similar sites, or from previous test data on similar material tested not more than five years previously, and from knowledge of local discharges or other sources of pollution, supported by a selective analysis. In such cases, it may be unnecessary to measure again the potential effects of similar material in the vicinity.

21. Chemical, and as appropriate biological, characterization will be necessary as a first step in order to estimate gross loading of contaminants, especially for new dredging operations. The requirements for the elements and compounds to be analyzed are set out in Section 5. The purpose of testing under this section is to establish whether the dumping at sea of dredged material containing contaminants might cause undesirable effects, especially the possibility of chronic or acute toxic effects on marine organisms or human health, whether or not arising from their bioaccumulation in marine organisms and especially in food species.

22. The following biological test procedures might not be necessary if the previous physical and chemical characterization of the dredged material and of the receiving area, and the available biological information, allows an assessment of the environmental impact on an adequate scientific basis.

23. However, suitable biological test procedures should be applied if:

- (a) the previous analysis of the material shows the presence of contaminants in quantities exceeding the upper reference threshold in paragraph 34 (a) below or of substances whose biological effects are not understood,
- (b) there is concern for the antagonistic or synergistic effects of more than one substance,

(c) there is any doubt as to the exact composition or properties of the material, it is necessary to apply suitable biological test procedures.

24. These procedures, which should involve bio-indicators species may include the following:

- (a) acute toxicity tests;
- (b) chronic toxicity tests capable of evaluating long-term sub-lethal effects, such as bioassays covering an entire life cycle;
- (c) tests to determine the potential for bioaccumulation of the substance of concern;
- (d) tests to determine the potential for alteration of the substance of concern.

25. Substances in dredged material may undergo physical, chemical and biochemical changes when deposited in the marine environment. The susceptibility of dredged material to such changes should be considered in the light of the eventual fate and potential effects of the dredged material. This may be reflected in the impact hypothesis and also in the monitoring programme.

c) Exemptions

26. Dredged material may be exempted from the testing referred to in paragraphs 20 to 24 of these Guidelines if it meets one of the criteria listed below; in such cases, the provisions of the Parts B and C of the Annex to the Protocol (see Sections 6, 7 and 8 below) should be taken into account, after an initial sampling and testing proving that they are not contaminated.

- (a) It is composed of previously undisturbed geological material;
- (b) It is composed almost exclusively of sand, gravel or rock;
- (c) It is suitable for beneficial uses and is composed predominantly of sand, gravel or shell, with particle sizes compatible with information included in section 6-part A of these updated Guidelines.

27. In the case of Capital dredging projects national authorities may, taking into account the nature of the material to be dumped at sea, exempt part of that material from the provisions of these Guidelines, after representative sampling. However, Capital dredging in areas which may contain contaminated sediments should be subject to characterization in accordance with these Guidelines, notably paragraph 21.

3. Disposal of dredged material

28. In the vast majority of cases, dumping harms the natural environment so before taking any decision to grant a dumping permit other methods of management should be considered. In particular, all possible beneficial uses of dredged material should be primarily and ultimately assessed and (see section 6) considered before granting dumping at sea permit.

4. Decision making process

a) General Introduction

29. In case where, after exploring all possibilities of beneficial use of dredged materials according to section 6 of part A of these updated Guidelines, dumping operations at sea should be considered, it is recommended to select proper dumping sites to maintain GES for the Mediterranean Sea and to minimise the impact on commercial areas, MPA's, SPAMI's, key habitats, estuaries, and recreational fishery areas. This approach is a major consideration in resource protection and is covered in greater detail in Part C of the Annex to the Dumping Protocol.

30. In order to define the conditions under which permits for the dumping of dredged material may be issued, the Contracting Parties should develop on a national and/or regional basis, as appropriate, a

decision-making process (Fig .1) for evaluating the properties of the material and its constituents, having regard to the protection of human health and the marine environment.

b) Criteria for Decision Making Process

31. The decision-making process, for dumping at sea of dredged materials, is based on a set of criteria developed on a national and/or regional basis, as appropriate, which meet the provisions of Articles 4, 5, and 6 of the Protocol and are applicable to specific substances. These criteria should take into consideration the experience acquired on the potential effects on human health and the marine environment.

32. These criteria may be described in the following terms:

- (a) physical, chemical and geochemical characteristics (e.g. sediment quality criteria);
- (b) application of beneficial use decision-making approach as mentioned in section 6 of part A of these Guidelines;
- (c) biological effects of the products of the dumping activity (impact on marine ecosystems and estuary systems);
- (d) reference data linked to particular methods of dumping and to dumping sites;
- (e) environmental effects that are specific to dumping of dredged material and are considered undesirable outside and/or in close proximity to the designated dumping sites;
- (f) the contribution of dumping to already-existing local contaminant fluxes (flux criteria);
- (g) mitigation measures during dumping operations

33. Criteria should be derived from studies of sediments that have similar geochemical properties to those to be dredged and/or to those of the receiving system. Depending upon the natural variation in sediment geochemistry, it may be deemed necessary to develop individual sets of criteria for each area in which dredging or dumping is conducted.

34. The decision-making process, with respect to the background natural baseline reference levels and to some specified contaminants or biological responses and with the aim to maintain GES as adopted in 2013, may lay down a national upper and a lower reference threshold and action level, giving rise to three possibilities:

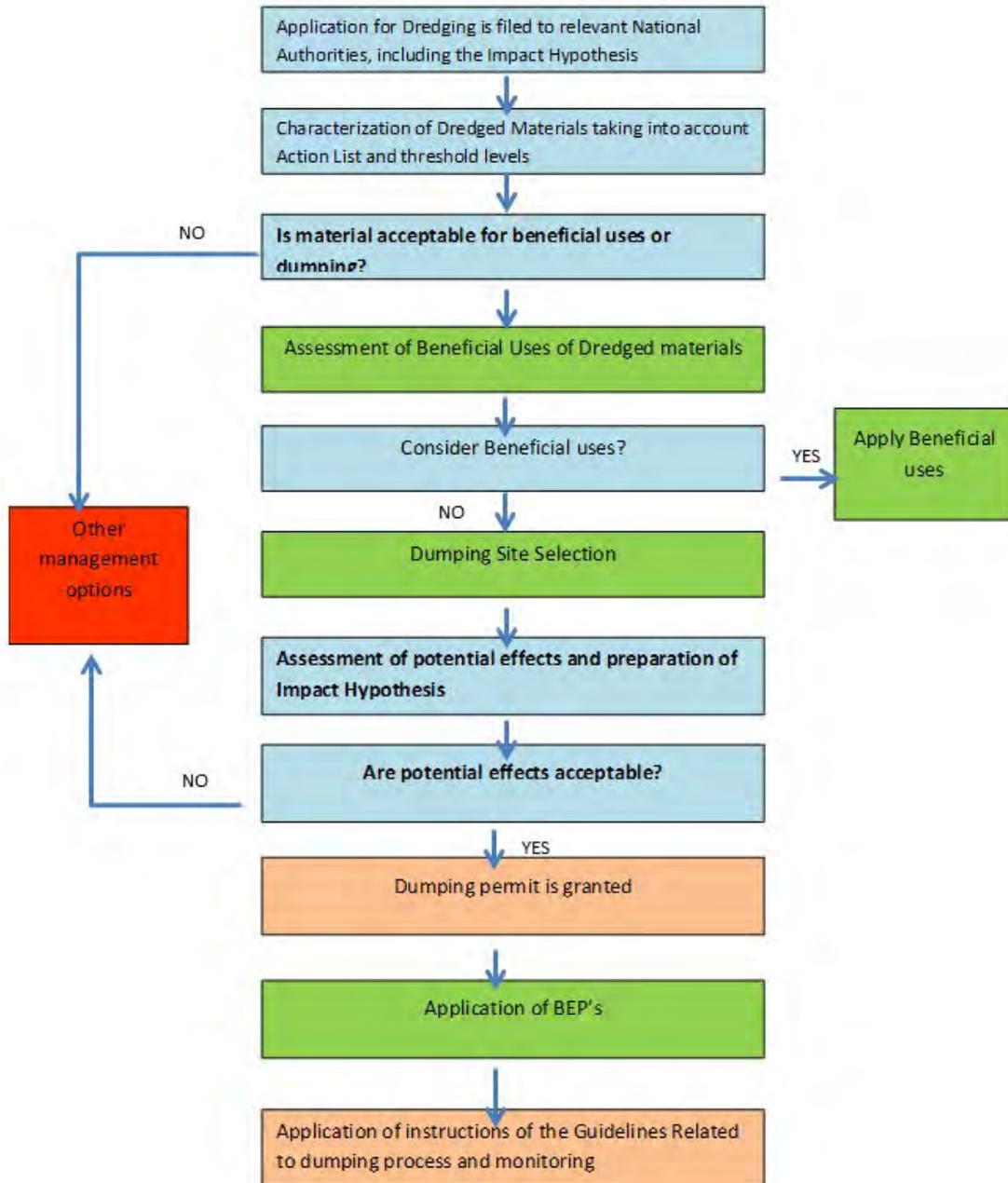
- (a) material which contains specified contaminants or which causes biological responses in excess of the relevant upper threshold should generally be considered as unsuitable for dumping at sea, subject to confinement or/and treatment;
- (b) material which contains specified contaminants or which causes biological responses below the relevant lower threshold should generally be considered of low environmental concern for dumping at sea;
- (c) material of intermediate quality should be subject to more detailed assessment before suitability for dumping at sea can be determined.

35. Data related to threshold levels from Mediterranean countries are provided in Appendix 2 to the updated Guidelines for information purposes with the view to guide as appropriate the competent national authorities in the process of setting national threshold level values. It is recommended to review this Appendix on a regular basis to take into account global, regional and national relevant developments and adjust it accordingly

36. When the criteria and the associated regulatory limits cannot be met (case (a) above), a Contracting Party should not issue a permit unless detailed consideration in accordance with Part C of the Annex to the Protocol indicates that dumping at sea is, nonetheless, the least detrimental option, compared with other management techniques. If such a conclusion is reached, the Contracting Party should:

- (a) implement a programme for the reduction at source of pollution entering the dredged area, where there is a source that can be reduced by such a programme, with a view to meeting the established criteria;
- (b) take all practical steps to mitigate the impact of the dumping operation on the marine environment including, for example, the use of confinement (capping or CDF) or treatment methods;
- (c) prepare a detailed marine environment impact hypothesis;
- (d) initiate monitoring (follow-up activity) designed to verify any predicted adverse effects of dumping, in particular with respect to the marine environment impact hypothesis;
- (e) issue a specific permit for each specific operation;
- (f) report to the Organisation on the dumping which has been carried out, outlining the reasons for which the dumping permit was issued.

Figure 1. Decision making process of the Updated Guidelines



c) Additional Criteria for Decision Making Process

37. Additional criteria for evaluating the need for dumping and alternatives to dumping are provided herewith to assist the national authorities in the decision making process. They are therefore to be evaluated, if applicable, for each proposed dumping on an individual basis using information included in these updated Guidelines.

38. The need for dumping at sea is to be determined by evaluation of the following factors:

- (a) Amount of dredged material;
- (b) Degree of treatment -useful and feasible- for the dredged materials to be dumped and whether or not it has been or will be treated to this degree before dumping;
- (c) The relative environmental risks, impact and cost for dumping as opposed to other feasible alternatives as mentioned in section 6 of part A of these updated Guidelines.
- (d) Irreversible or irretrievable consequences of the use of alternatives to dumping.

d) Beneficial Use

39. A need for dumping is considered to have been demonstrated when a thorough evaluation of the factors listed above has been made, and the relevant authorities, as the case may be, have determined that the following conditions exist, where applicable:

- (a) There are no practicable improvements which can be made in process technology or in overall possible treatment to reduce the adverse impacts of the dredged materials on the marine ecosystems;
- (b) There are no practicable beneficial use alternatives which have less adverse environmental impacts or potential risk than dumping.
- (c) Treatment alternatives or improvements in processes and alternative methods of disposal are practicable when they are available at reasonable incremental cost and energy expenditures, which need to be competitive with the costs of dumping, taking into account the environmental benefits derived from such activity, including the relative adverse environmental impacts associated with the use of alternatives to dumping.

e) Aesthetic, Recreational and Economic Values

40. Impacts of the Proposed Dredging or Dumping operations on Aesthetic, Recreational and Economic Values are determined on an individual basis, taking into account the uses and activities in the area and using the following considerations:

- (a) Potential for affecting recreational use and values of sea waters, inshore waters, beaches, or shorelines;
- (b) Potential for affecting the recreational and commercial values of living marine resources;
- (c) Nature and extent of present and potential recreational and commercial use of areas which might be affected by the proposed dumping;
- (d) Existing water quality, and nature and extent of disposal activities, in the areas which might be affected by the proposed dumping;
- (e) Applicable GES's values and its targets and assessment criteria;
- (f) Macroscopic [or organoleptic] characteristics of the materials (e.g. color, suspended particulates) which result in an unacceptable aesthetic nuisance in recreational areas;
- (g) Presence in the material of pathogenic organisms which may cause a public health hazard either directly or through contamination of fisheries or shellfisheries;
- (h) Presence in the material of toxic chemical constituents released in volumes which may affect humans directly;
- (i) Presence in the material of chemical constituents/heavy metals which may be bioaccumulated or persistent and may have an adverse effect on humans directly or through food chain interactions; (reference to Appendix 2 of these updated Guidelines)

(j) Presence in the material of any constituents which might significantly affect living marine resources of recreational or commercial value.

41. For all proposed dumping, full consideration will be given to such non-quantifiable aspects of aesthetic, recreational and economic impact, such as:

- (a) Public consultation of the proposed dumping and dredging sites;
- (b) Consequences of not authorizing the dumping including without limitation, on aesthetic, recreational and economic values with respect to the municipalities and industries involved.

5. Guidelines on dredged material sampling and analysis

a) Sampling for the purpose of issuing a dumping permit

42. For dredged material which requires detailed analysis (i.e. which is not exempted under paragraph 26 above), the following Guidelines indicate how sufficient analytical information may be obtained for the purpose of issuing a permit. Judgment and knowledge of local conditions will be essential in the application of these Guidelines to any particular operation (see paragraphs 52 and 53).

43. An in situ survey of the area to be dredged should be carried out. The distribution and depth of sampling should reflect the size of the area to be dredged, the amount to be dredged and the expected variability in the horizontal and vertical distribution of contaminants. In order to evaluate the number of samples to be analyzed, different approaches might be retained.

44. The table that follows gives an indication of the number of sample sites to be used in relation to the number of m³ to be dredged in order to obtain representative results, assuming a reasonably uniform sediment in the area to be dredged.

Amount dredged (m ³ in situ)	Number of stations
Up to 25000	3
from 25 000 to 100 000	4-6
from 100 000 to 500 000	7-15
from 500 000 to 2 000 000	16-30
> 2 000 000	extra 10 per million m ³

45. Core samples should be taken where the depth of dredging and the expected vertical distribution of contaminants warrant; otherwise a grab sample is considered appropriate. Sampling from the dredger is not acceptable.

46. Normally, the samples from each sampling site should be analyzed separately. However, if the sediment is clearly homogeneous with respect to sediment features (grain-size fractions and organic matter load) and expected level of contamination, it may be possible to analyze composite samples from adjacent locations, two or more at a time, provided care has been taken to ensure that the results give a justified mean value for the contaminants. The original samples should be retained until the procedure for the issue of a permit has been completed, in case the results indicate that further analysis is necessary.

b) Sampling in the case of the renewal of a dumping permit

47. If a survey indicates that the material is essentially below the lower reference threshold in paragraph 34 (b) above and no new events of pollution have taken place indicating that the quality of the material has deteriorated, surveys need not be repeated.

48. If the dredging activity involves material with a contaminant content between the upper and lower reference thresholds in paragraph 34 (a) and (b) above, it may be possible, on the basis of the

initial survey, to reduce either the number of sampling stations or the number of parameters to be measured. However, sufficient information must be provided to confirm the initial analysis for the purpose of issuing a permit. If such a reduced sampling programme does not confirm the earlier analysis, the full survey should be repeated.

49. However, in areas where there is a tendency for sediments to show high levels of contamination, or where contaminant distribution changes rapidly in response to varying environmental factors, analysis of the relevant contaminants should be frequent and linked to the permit renewal procedure.

c) Provision of Input Data

50. The sampling scheme described above provides information for the purpose of issuing permits. However, the scheme can at the same time provide a suitable basis for estimating of total inputs and, for the time being in the current situation, can be considered the most accurate approach available for this purpose. In this context it is assumed that materials exempt from analysis represent insignificant inputs of contaminants and therefore it is not necessary to calculate or to report contaminant loads.

d) Parameters and methods

51. Since contaminants concentrate mainly in the fine fraction (< 2 mm) and even more specifically in the clay fraction (> 2 µm), analysis should normally be carried out on the non-coarse fraction sample (< 2 mm). It will also be necessary, in order to assess the likely impact of contaminant levels to provide information on:

- (a) grain size fractions (% sand, silt, clay);
- (b) load of organic matter;
- (c) dry matter (% solids).

52. In those cases where analysis is required, it should be mandatory for primary metal substances and arsenic. With respect to organochlorines, polychlorobiphenyls (PCBs) should be analysed on a case-by-case basis in non-exempt sediments because they remain a significant persistent environmental contaminant. Other organohalogens should also be measured if they are likely to be present as a result of local inputs as indicated in the Action List Threshold Levels contained in Appendix 2 of the updated Guidelines.

53. In addition, the authority responsible for issuing permits should carefully consider specific local inputs, including the likelihood of contamination by PCB, PAH and TBT, as indicated in Appendix 1 to the updated Guidelines. The authority should make provision for the analysis of these substances as necessary.

54. In applying paragraphs 52 and 53, the following should be taken into account:

- (a) potential routes by which contaminants could reasonably have been introduced into the sediments;
- (b) probability of contamination from agricultural and urban surface run-off;
- (c) spills of contaminants in the area to be dredged, in particular as a result of port activities;
- (d) industrial and municipal waste discharges (past and present);

55. Further guidance on the selection of determinants and methods of contaminant analysis under local conditions, and on procedures to be used for harmonization and quality assessment purposes, will be found in the Appendix 1 to the updated Guidelines as adopted, and updated periodically, by the Contracting Parties.

56. National relevant authorities are the ultimate responsible for the application of national normalized and standardized methods for sampling and analysis of determinants. References include information that could be consider in this matter.

6. Considerations before taking any decision to grant a dumping permit

6.1 Dredging Operations

57. Dredging operations may result in the re-mobilization of contaminants contained in the sediments and their suspension, which may, at certain levels, have an adverse impact on the environment, either at sea during dredging or clapping when these sediments are settled, or on land when these sediments are stored. Dredging can also result in hydromorphological and hydrographic changes to dredged areas and have a more global impact on disposal sites or onshore management.

58. On the other hand, dredging can have positive environmental effects and externalities. In fact, dredged materials can be integrated, under certain conditions and subject to the existence of a local market, into treatment systems allowing their exploitation, in particular in building materials. They can also be used to beaches nourishment in the fight against erosion of the coastline, and thus come as an alternative to more structural solutions. Finally, in the case of sediment pollution, dredging can be a removal solution that decontaminates the marine environment, but transfers the problem to the land.

59. It is important, while assessing the value of sediment as a resource, to consider opportunities for beneficial uses of dredged material, taking into account the physical, chemical and biological characteristics of the material. Generally, a characterization carried out in accordance with part A of these updated Guidelines will be sufficient to match a material to possible beneficial uses in water, at the shoreline and on land.

6.2 Physical Classifications of Dredged materials

a) Rock

60. Rock may vary from soft marl via weak rocks (for example, sandstone and coral) to hard rocks (such as granite and basalt). Rock may also vary in size from large to small, depending on the dredging equipment used and the type of material. Rock may also result from blasting, cutting, or ripping and is seldom of only one material type. Whether the rock can be used economically depends on its quantity and size. Rock is a valuable construction material and may be used for both terrestrial and aquatic projects. Usually, dredged rock is not contaminated.

b) Gravel and Sand

61. Gravel and sand (granular) are generally considered the most valuable materials derived from a dredging project. Gravel and sand are suitable for most engineering uses without processing. Some additional processing (such as freshwater washing) may be needed for certain agricultural or product uses. Granular material can be used for beach nourishment, parks, turtle nesting beaches, bird nesting islands, wetlands restoration and establishment, and many other applications. Granular material is usually not contaminated.

c) Consolidated Clay

62. Consolidated clay varies from hard to soft clay and is material obtained from capital dredging. The material may occur as lumps or as a homogeneous mixture of water and clay, depending on the material type and the dredging equipment used. If the water content is high, dredged clay may have to be dewatered before being transported. Possible uses of consolidated clay range from forming industrial products, such as bricks and ceramics, to building erosion control structures, such as dikes and berms. Consolidated clay is not usually contaminated.

d) Silt/Soft Clay

63. Silt and soft clay are the most common materials acquired from maintenance dredging in rivers, canals, and ports. These materials are most suitable for agricultural purposes (such as topsoil) and all forms of wildlife habitat development. Depending on national regulations and laws, mildly contaminated silt and soft clay may be used for some engineered uses or product uses such as bricks, tiles, and ceramics and cap layer for aquatical confinement of polluted material. Because of the high water content, silt and soft clay must be dewatered for any product use. Dewatering can require months or years and, depending on the draining process used, can require temporary storage.

e) Mixture (rock/sand/silt/soft clay)

64. Capital dredged material usually occurs in layers as deposited from some past hydraulic process and may require the use of different dredging methods. Maintenance dredged material is usually a mixture of materials such as boulders, lumps of clay, gravel, organic matter, and shells, with varying densities. Even though engineered and product uses will be somewhat restricted because of the mixture, mixed material may be used for a wide range of beneficial uses, such as land reclamation, habitat improvement, and landfill capping, filling materials in harbour facilities.

6.3 *Beneficial uses*

65. « Beneficial use of sediments includes making use of opportunities for retaining clean sediment within natural sediment processes and cycles that support aquatic, estuarine, and marine systems. »

(a) In water:

- *Habitat restoration and development* using direct placement of dredged sediments for enhancement or restoration of ecosystem habitat associated with wetlands, other nearshore habitats, coastal features, offshore reefs, fisheries enhancement, etc.
- *Sustainable relocation* by retaining sediment within the natural sediment system to support sediment-based habitats, shorelines and infrastructure.

(b) At the shoreline:

- *Beach Nourishment*
- *Shoreline Stabilization and Protection*

(c) On land:

- Engineered Capping of soils or waste materials, e.g. landfill covers or remediation of former mining sites. (This form of beneficial use also applies to capping of contaminated sediments in aquatic environments.)
- Aquaculture, Agriculture, Forestry, and Horticulture involving direct placement of dredged material to create or maintain an aquaculture facility, replace eroded topsoil, elevate an area for improved site use, or otherwise enhance the physical and chemical characteristics of land.
- Recreational Development through direct placement of dredged material for the foundation of parks and recreational facilities; for example, waterside parks providing such amenities as swimming, camping, or boating.
- Commercial Land Development (also known as reclamation) using direct placement of dredged sediments to support commercial or industrial development activities, including

"brownfield" redevelopment, as well as marine port, airport, and residential developments. These activities typically occur near navigational channels by expanding the land footprint or providing bank stabilization material.

◦Commercial Product Development involving the use of dredged material to create marketable products such as construction materials, e.g. bricks, aggregate, cement, top soil, etc.

66. Operational feasibility, that is, the availability of suitable material in the required amount at a particular time, is a crucial aspect of many beneficial uses.

a) Beach Nourishments

67. The influences of waves and tidal currents keep beach material in continuous motion. Where the prevailing wave direction is at an angle to the beach of less than 90 degrees, some material will be moved along the beach or foreshore or even offshore in a process called littoral transport. This movement is most rapid under storm conditions. If the moved material is not replaced, the beach and eventually the shoreline will erode. If lost beach material is not replaced naturally, beach nourishment may be necessary to enhance the beach profile and moderate the wave climate at the shoreline. In addition to the improvement of beaches for coast protection, improvement may also be required for recreation beaches. Recreation beaches may be improved or new beaches may be created. Dredging can supply the required large quantities of sand and gravel-sized material for beach nourishment. A life span of 10 years is a common design target for many beach nourishment schemes but a shorter life may be acceptable, particularly where the cost of nourishment material is low.

Recommended materials: Gravel and Sand.

b) Berm Creation

68. Dredged material may be used for creating berms or embankments to modify shoreline wave climate and thus improve beach stability. The berm may also be designed to alter wave direction and modify the rate or direction of local sediment transport. Generally, the berm is aligned roughly parallel to the beach, but the optimum alignment at a specific site will be determined by the direction of the most destructive wave climate.

69. The formation of berms may provide a particularly attractive use for a wide range of dredged material. Because the berm is generally a submerged formation, most or all of the formation usually can be created by the bottom discharge of dredged material from hoppers. Berms may gradually erode and be dispersed, but the dispersed material will probably benefit the local coastal regime, either through beach feeding or by increasing foreshore levels.

70. Modification of the wave climate by berms may also improve recreational opportunities for surfing, swimming, sailing, and other activities. Care must be taken in placement of the berm to avoid interference with other users such as fisheries, ports, harbours, outfalls, and intakes.

Recommended Sediment Types: rock, gravel and sand, consolidated clay and mixture

c) Cover material for capping sites

71. Capping involves the placement of clean dredged material over a deposit of contaminated dredged material in open-water or upland locations as a means of isolating the contaminated sediment from the surrounding environment. Open-water caps provide a wave- and current-resistant layer on top of previously deposited contaminated materials. Sand, clay, or mixed materials may be used for open-water capping, whereas clay is usually most suitable for upland locations.

d) Land Creation

72. Land creation using dredged material includes filling, raising, and protecting an area that is otherwise periodically or permanently submerged. The creation of coastal land may also involve constructing a perimeter enclosure for protection against erosion by waves and currents. This may not be necessary in estuarine waters or in other sheltered coastal locations that have a small tidal range. Coarse or fine dredged material may be used in land creation. The suitability of a particular dredged material for land creation will depend largely on the intended use of the land. Material from maintenance dredging is usually silt or sand, while material from capital dredging may be of almost any kind or may be mixed. Sometimes the fine-grained material may be separated from the coarse material and the two resulting materials used in different ways.

73. Fine material will require a long time to drain and consolidate; therefore, the strength achieved may be low. Land created using these fine-grained materials may be limited to recreational uses, such as parks, or uses where the imposed loads will be small. If land must be created rapidly, material from capital dredging are primarily used. Where longer development times are acceptable, materials from maintenance dredging may also be used. Land created for industrial development or to accommodate roads or railways normally requires only sand or coarser material. Often the constraints of time and the availability of suitable material limit the use of dredged material in land creation. Such constraints may be overcome by long-term planning, which provides for land creation over extended periods. Land creation may also be constrained by compelling environmental considerations.

Recommended Sediment Types: rock, gravel and sand, consolidated clay, silt/soft clay, mixture

e) Land Improvement

74. Dredged material may be used for land improvement when the quality of existing land is not adequate for a planned use or where the elevation of the land is too low to prevent occasional flooding. As with land creation, the suitability of a particular dredged material for land improvement will depend largely on the intended use of the improved land.

75. Proven methods have been developed for land improvement by filling with the fine material, such as silts and clays, produced by maintenance dredging. Various dewatering techniques may be utilized, such as: subdividing the placement area to allow filling to a limited depth on a rotational basis; reworking the filled area with low ground-pressure agricultural or earth-moving equipment; and mixing coarse-grained material with the fine-grained upper layer.

76. Dredged material of fluvial origin is primarily eroded top soils and organic matter that may be used on land of poor agricultural quality to improve the soil structure. Even material dredged from a saline environment may, after treatment, be suitable for use as topsoil. Mildly contaminated soils can be used for non-consumptive land uses. Land improved using fine material is generally of lower strength than land improved using coarse-grained material. Potential applications include dairy and arable farming, recreation areas, playing fields, golf course, parks, light residential development or light commercial storage areas.

Recommended Sediment Types: rock, gravel and sand, consolidated clay, silt/soft clay, mixture.

f) Replacement Fill

77. Dredged material may be used as a replacement fill when the physical qualities are superior to soils near the dredging site. In industrial fill sites, peat and clayish soils are usually removed and replaced by sand or other granular dredged material to improve physical properties needed to meet building requirements. Weak soils may be replaced with sand from construction of tunnels, bridges, fairways, and ports. Fine-grained soils do not have the necessary physical properties for industrial fill

in most civil works projects; however, green areas or parks may be suitable applications. Some examples of replacement fills include:

- (a) Filling holes in the landscape left from gravel or clay mining.
- (b) Removal of soft layers so that an area is reclaimed with dredged sand.
- (c) Trenching peat or soft clay and filling with sand to get a more stable layer of soil; for example, for abutments, tunnels, roads, and railways.
- (d) Filling obsolete canals and docks to improve the use of the land.

Recommended Sediment Types: rock, gravel and sand, mixture

g) Aquaculture

78. Aquaculture of coastal fish, shellfish, and other species is a rapidly expanding worldwide industry. The expansion of aquaculture has led to a shortage of suitable sites in many areas, especially coastal sites. Lack of access, legal constraints, competing land uses, and high land costs have limited aquaculture development for many locations. One way these constraints may be overcome is to use maintenance dredged material containment areas for aquaculture.

79. Aquaculture is a promising beneficial use because aquaculture ponds and dredged material containment areas share many design characteristics. Common features include perimeter levees to retain water, construction on relatively impervious soils, and control structures for water discharge and drainage. Both types of facilities have similar regulatory and permitting requirements for construction and operation, and both types of facilities include locations adjacent to waterways in coastal areas, often on large tracts of land and near transportation routes and major markets.

Recommended Sediment Types: Consolidated clay; Silt/soft clay; Mixture

h) Shore Protection

80. Shore protection methods include dike construction as well as beach nourishment and underwater berms, which were discussed earlier. Dike construction may use dredged material in the form of a pumped sand, directly dredged clay material, or rock. Rock produced by dredging may be used as riprap slope protection, armor stone, groins, or breakwater core material. Dredging does not usually produce large quantities of rock, but where it does, a range of useful engineering applications exists.

Recommended Sediment Types: rock, gravel and sand, consolidated clay.

i) Construction Materials

81. Some dredged material can be used as construction material. In some parts of the world, dredging to obtain construction material is a common practice. Because of the growing demand for construction materials and dwindling inland resources, this may be an important beneficial use. In many cases, dredged material consists of a mixture of sand and clay fractions, which requires some type of separation process. Dewatering may also be required because of high water content.

82. Depending on the sediment type and processing requirements, dredged material may be used as: concrete aggregates (sand and gravel); backfill material or in the production of bituminous mixtures and mortar (sand); raw material for brick manufacturing (clay with less than 30 per cent sand); ceramics, such as tile (clay) pellets for insulation or lightweight backfill or aggregate (clay); raw material for the production of riprap or blocks for the protection of dikes and slopes against erosion (rock, mixture); and raw material for the production of compressed blocks for security walls at military installations and for gated communities and home subdivisions.

Recommended Sediment Types: rock, gravel, sand, silt, clay, mixture

j) Decorative Landscaping Products

83. Dredged material can be blended with recycled residual materials such as glass, gypsum, plastic bottles, and automobile interiors, etc. to manufacture statues, figures, garden benches, stepping patio pavers, plant vases, artificial rocks and water fountains. These products can be used to landscape gardens, backyards, swimming pool environments, monument stones, miniature golf courses, highway rest areas, tourist welcoming centers, zoos, and theme parks such as Disney World.

Recommended Sediment Types: sand, silt, clay, mixtures

k) Topsoil

84. Maintenance dredging in harbours, access channels, and rivers produce mixtures of sand silt, clay and organic matter that can be excellent ingredients for topsoil. Some dredged materials may be excellent topsoil as they are. Other dredged material may require blending with other residual materials such as organic matter (yard waste, wastepaper, storm debris, etc.) and bio-solids (human sewage sludge or animal manure) to manufacture enhanced fertile topsoil. The dredged material may be used to improve soil structure for agricultural purposes. For production of food, uncontaminated material must be used. For other uses, the allowed contaminant level will depend on the use of the topsoil. In some cases, suitable material may be placed in a thin layer directly by pumping. After dewatering, the material is suitable topsoil for seeding and planting.

85. Dewatering may require several years, depending on the granular texture of the dredged material and is influenced by additional substances or by the type of dewatering process. Dredged material from coastal or tidal areas will require special attention to salinity, since most agricultural species cannot tolerate and grow in salty soil. Salinity may be reduced naturally by rain or by the dewatering process. Other uses of topsoil might include using dredged material to cap poor soils or to cover a fill of coarse material (e.g., urban or industrial waste sites). Dredged material can also be used in the manufacture of blended artificial topsoil products. The blended topsoil can be used for athletic fields such as sport fields and ball fields, home landscaping, golf courses, parks, brownfield redevelopment, etc. Required topsoil specifications for a specific use can be met through blending appropriate materials together in specific amounts.

Recommended Sediment Types: sand, silt, clay, mixtures

l) Fish and Wildlife Habitats

86. Dredged material can be used beneficially to enhance or create various wildlife habitats. This may be either incidental to the project purpose or planned. For example, nesting meadows and habitat for large and small mammals and songbirds have been developed on upland or floodplain (seasonally flooded) dredged material placement sites. Numerous examples are available where dredged material has been used to create nesting islands for water birds and waterfowl.

87. Many technical and legal considerations are necessary for the creation of nesting islands. An island can be built where none existed, and vegetation states (bare ground versus sparse herb cover versus tree/shrub habitat) can be managed using periodic dredged material applications. The types of dredged material can be manipulated to provide proper substrates for nests; in that view, softer silts and clays can be capped with sand, shell, and cobbles. The placement of the dredged material can be manipulated to provide the most acceptable habitat characteristics.

88. Upland wildlife habitats are typically dredged material containment areas that are no longer used or have long periods between maintenance dredged material placement. This allows native vegetation to grow and provide food and cover for wildlife. Site management is minimal, but can be intensified to provide special food crops, overwintering waterfowl feeding areas, and numerous other natural resource opportunities.

Recommended Sediment Types: rock, gravel and sand, consolidated clay, silt/soft clay, mixture

m) Fisheries Improvement

89. Appropriate placement of dredged material can improve ecological functions of fishery habitat. Fishery resource improvement can be demonstrated in several ways. Bottom relief created by mounding of dredged material may provide refuge habitat for fish. Fine-grained sediment transport can be stabilized by planting seagrasses or capping with shell or other coarse dredged material. The seagrasses or shell caps additionally improve fishery habitat.

Recommended Sediment Types: rock, gravel and sand, consolidated clay, silt/soft clay, mixture

n) Wetland Restoration

90. Dredged material has been extensively used to restore and establish wetlands. Where proper sites can be located, wetlands restoration is a relatively common and technically feasible use of dredged material. Wetlands restoration or rehabilitation using dredged material is usually a more acceptable alternative to creation of a new wetland. Many of the natural wetlands in the Mediterranean region are degraded or impacted, or have been destroyed, and the recovery of these wetlands is more important than the creation of new ones. Most former wetlands still have hydric soils, even though the hydrologic characteristics of the site may have been altered. When a new wetland is created, hydric soil conditions, appropriate hydrologic conditions, and wetland vegetation must all be introduced to the site. Creation of a new wetland would also mean replacing one habitat type with another, which is not always desirable. Long-term planning, design, maintenance, and management are necessary to maintain a created wetland.

91. Wetland restoration using dredged material can be accomplished in several ways. For example, dredged material can be applied in thin layers to bring degraded wetlands up to an intertidal elevation, as has been done extensively in the Mediterranean. Dewatered dredged material can be used in wind and wave barriers to allow native vegetation to regrow and restore the viability of a wetland. Dredged material sediment can be used to stabilize eroding natural wetland shorelines or nourish subsiding wetlands. Dewatered dredged material can also be used to construct erosion barriers and other structures that aid in restoring a degraded or impacted wetland.

Recommended Sediment Types: consolidated clay, silt/soft clay, mixture

6.5 *Decision process for beneficial uses*

a) *Contaminant Status of Materials*

92. Evaluating the contaminant status of the dredged material is the first step to determine if the material is acceptable for beneficial use. In general, highly contaminated sediments will not normally be suitable for most proposed beneficial use applications and particularly for proposed wildlife habitat development projects. However, after appropriate examination, testing, and treatment, the material may be classified as suitable. Dredged material from ongoing activities (maintenance dredging) should be re-evaluated periodically to ensure that the sediment contamination level has not worsened since the last dredging cycle. These updated Guidelines provide information related to the assessment of the level of contamination of dredged materials.

b) *Site Selection*

93. Selecting a placement site and choosing a beneficial use are interdependent decision processes. Dredged material may have multiple beneficial use options and there may be several different potential placement sites. Often, the characteristics of the sediments determine or limit the types of

sites that may be selected and the beneficial uses that can be achieved. Once a potential use and site have been identified, various implications should be assessed such as technical feasibility, environmental acceptability, cost/benefits, and legal constraints.

c) *Technical Feasibility*

94. The technical feasibility of implementing a particular beneficial use at a designated site must be evaluated. Various constraints must be considered, such as pumping distance, water depth, access, etc. If technical feasibility constraints will not allow the proposed beneficial use and/or selected site, then alternate beneficial uses or disposal options must be pursued.

d) *Environmental Acceptability*

95. Before any substantial work can be undertaken, the environmental impact prior, during, and subsequent to construction of the proposed project must be investigated. An Environmental Impact Assessment (EIA) and/or impacts hypothesis should be performed on all projects. The chosen beneficial use options may be pursued if it is concluded that the environmental effects will not be significantly harmful. Permission to undertake the dredged material placement may be denied if the proposed work is likely to have any significant adverse environmental effects.

e) *Cost/Benefit*

96. After one or more potential beneficial use options have been identified and the engineering methods have been defined, estimated costs and benefits should be analysed. The costs are usually estimated by standard methods. Options for beneficial use may lower the cost for disposal of dredged material in many instances, but increase costs in other scenarios. Costs are frequently lower when distances from dredging site to placement site are reduced. In cases with higher costs, the increase may be more than offset by the value of the benefits. Although difficult to quantify, intangible benefits should always be taken into account when assessing overall costs and benefits. These benefits may include improved habitat, aesthetic enhancement, a more viable local community, and other benefits.

f) *Legal Constraints*

97. Early and concentrated coordination between relevant authorities, e.g. local interest groups, and environmental protection agencies is mandatory. Some beneficial use options or sites selected may be prohibited or rendered inappropriate by law or regulation.

6.6. Characteristics of the dumping site and method of deposit

98. The selection of a site for dumping at sea does not only involve the consideration of environmental parameters, but also economic and operational feasibility.

99. In order to be able to assess a new dumping site, basic information on the characteristics of the dumping site have to be considered by national authorities at a very early stage of the decision-making process.

100. For the purpose of studying the impact, this information should include the geographical coordinates of the dumping area (latitude, longitude), the distance to the nearest coastline as well as proximity of the dumping area to the following:

- a) recreational areas;
- b) spawning, recruitment and nursery areas of fish, crustaceans and molluscs;
- c) known migration routes of fish or marine mammals;
- d) commercial and sport fishing areas;
- e) mariculture areas;
- f) areas of natural beauty or significant cultural or historical importance;
- g) areas of special scientific, biological or ecological importance;
- h) shipping lanes;
- i) military exclusion zones;
- j) engineering uses of the seafloor (e.g. potential or ongoing seabed mining, undersea cables, desalination or energy production sites).

101. The dumping of dredged material should not interfere with nor devalue legitimate commercial and economic uses of the marine environment. The selection of dumping sites should take into account the nature and extent of both commercial and recreational fishing, as well as the presence of aquaculture areas, spawning, nursery and feeding areas.

102. In selecting dumping sites, the habitats of rare, vulnerable or endangered species must be avoided, taking into account the preservation of the biodiversity.

103. In view of uncertainties regarding in the diffusion of marine contaminants giving rise to transboundary pollution, dumping of dredged material in the open sea should be prohibited.

104. For dredged materials, the only data to be considered for this purpose should include information on:

- disposal method (e.g. vessels, hopper discharge; and other controlled methods);
- dredging method (e.g. hydraulic or mechanical), having regard to Best Environmental Practice (BEP).

105. For the evaluation of dispersal characteristics, the use of mathematical diffusion models requires the collection of certain meteorological, hydrodynamic and oceanographic data. In addition, data on the speed of the vessel dumping the material and the rate of dumping should also be made available.

106. The basic assessment of a site, whether a new or existing includes the consideration of possible effects that might arise due to the increase in certain constituents or to interaction (e.g. synergistic effects) with other substances introduced in the area, either through other dumping, input from rivers, discharges from coastal areas, exploitation areas, maritime transport, or through the atmosphere.

107. The existing stress on biological communities as a result of such activities should be evaluated before any new or additional dumping operations are conducted.

108. The possible future uses of resources and amenities in the sea receiving area should be kept in mind.

109. Information from baseline and monitoring studies at existing dumping sites will be important in the evaluation of any new dumping activity at the same site or nearby.

6.7. General considerations and conditions: Nature, prevention and minimization of the impact of disposal of dredged material

110. Particular attention should be given to dredged material contaminated by hydrocarbons and containing substances that have a tendency to float following re-suspension in the water column. Such materials should not be dumped in a manner or at a location which may interfere with fishing, shipping, amenities or other legitimate uses of the sea.

111. In addition to toxicological effects and bioaccumulation of the constituents of dredged material, other potential impacts on marine life should be considered, such as:

- a) alteration of the sensorial and physiological capacities and the behaviour of fish in particular in respect of natural predators;
- b) nutrient enrichment;
- c) oxygen depletion;
- d) increased turbidity;
- e) modification of the sediment composition and blanketing of the sea floor.

Physical impact

112. All dredged materials, whether or not contaminated, have a significant physical impact at the point of disposal. This impact includes covering of the seabed and a localised increase in the levels of suspended solids.

113. The physical impact may also extend to zones outside the dumping zone as such, resulting from the forward movement of the dumped material due to wave and tidal action and residual current movements, especially in the case of fine fractions.

114. In relatively enclosed waters, oxygen-consuming sediments (e.g. organic carbon-rich) could adversely affect the oxygen regime of receiving systems. In the same way, dumping of sediments with high levels of nutrients may significantly affect the nutrient fluxes and, subsequently, in extreme cases, contribute significantly to the eutrophication of the receiving zone.

Chemical impact

115. The chemical impact of dredged material disposal on the marine water quality and the marine biota, is mainly from the dispersion of pollutants in association with suspended particles, and the release of pollutants from the dumpsite sediments.

116. The binding capacity of contaminants may vary considerably. Contaminant mobility is dependent upon several factors among which are chemical form of contaminant, contaminant partitioning, type of matrix, physical state of the system (e.g. pH, TE), waterflow, suspended matter (organic matter), physico-chemical state of the system, type of interactive processes, such as sorption/desorption - or precipitation/dissolution - mechanisms, and biological activities.

Bacteriological impact

117. Bacteriologically, dredging activities and dumping of dredged material may involve a resuspension, of sedimentary microorganisms, particularly faecal bacteria, which are trapped in the sediment. Studies carried out show that, in particular on dredging sites, there is a significant correlation between turbidity and concentrations of germs tested (faecal coliforms, faecal streptococci).

Biological impact

118. The immediate biological consequence of this physical impact includes smothering of benthic flora and fauna in the dumping area.

119. Nevertheless, in some instances, after dumping activities stop, there may be a modification of the ecosystem, in particular when the physical characteristics of the sediments in the dredged material are very different to those in the receiving zone.

120. In certain special circumstances, disposal may interfere with migration of fish or crustaceans (e.g. if dumping is in the coastal migration path of crabs).

121. In other respects, the chemical pollution impact resulting from the dispersion of pollutants associated with suspended matter, and from the contaminants "relargage" from the sediments which are accumulated on the dumping site, can induce a change in the composition, biodiversity and abundance of benthic communities.

Economic impact

122. An important consequence of the physical presence of dumping of dredged material is interference with fishing activities and, in some instances, with navigation and recreation. The former concerns both the smothering of areas that may be used for fishing and interference with fixed fishing gear; shoaling following dumping can lead to navigational hazards and clay or silt deposition may be harmful in recreational areas. These problems can be aggravated if the spoil is contaminated with bulky harbour debris such as wooden beams, scrap metal, pieces of cable etc. that according the Regional Plan for the Marine Litter Management in the Mediterranean should be retired prior disposal at sea.

Approaches to management

123. This section deals only with management techniques to minimise the physical effects of disposal of dredged material. Measures to control the contamination of dredged materials are covered in other sections of these Guidelines.

124. The key to management lies in careful site selection and assessment of the conflict between marine resources, the marine environment and activities. These notes are intended to supplement these considerations.

125. To avoid excessive use of the seabed, the number of sites should be limited as far as possible and each site should be used to the maximum extent possible without interfering with navigation (sand shoals formation).

126. All measures should be taken to allow recolonization to take place once deposition stops.

127. Effects can be reduced by ensuring as far as possible that the sediments in the dredged material and receiving area are similar. Locally, the biological impact may be further reduced if the sedimentation area is naturally subject to physical disturbance (horizontal and vertical currents). Where this is not possible, and the materials are clean and fine, a deliberately dispersive style of dumping should be utilised so as to limit blanketing to a small site.

128. With capital and maintenance dredging, the material may be different in character to the sediments at the receiving site and re-colonisation may be affected. Where bulky material such as rock and clay are deposited, there may be interference with fishing activity, even in the long term.

129. Temporal restrictions on dumping activities may have to be imposed (for example tidal and seasonal restrictions). Interference with fish or crustacean migration or spawning or with seasonal fishing activities may be avoided by imposing a calendar for dumping operations. Trench digging and refilling activities may also interfere with migratory patterns and similar restriction measures are needed.

130. Where appropriate, disposal vessels should be equipped with accurate positioning systems for example, satellite systems. Disposal vessels should be inspected and operations controlled regularly to ensure that the conditions of the dumping permit are being observed and that the crew is aware of its responsibilities under the permit. Ships' records and automatic monitoring and display devices (e.g.

black-boxes), where these have been fitted, should be inspected to ensure that dumping is taking place at the specified dumping site.

131. Where solid waste is a problem, it may be necessary to specify that the disposal vessel (or dredger) is fitted with a grid to facilitate removal for disposal (or recovery) on land, rather than being dumped at sea.

132. Monitoring is an essential component of management action (see Part B).

7. Confined disposal

133. Confined disposal means that the dredged material is placed in an engineered containment structure, that is, within dikes or bunds, or in natural or constructed pits, or borrow pits. This isolates the material from surrounding waters or soils during and after disposal. Other terms used in the literature for this type of disposal include “confined disposal facility” (CDF), “diked disposal site” and “containment area”. CDFs may be constructed in open waters (known as island CDFs), at near-shore sites or on land. The function of CDFs is to retain the dredged material solids whilst releasing the carrier water. For facilities receiving contaminated material, an additional objective is to provide the efficient isolation of contaminants from the surrounding area. To achieve this, depending on the degree of intended isolation, CDFs may be equipped with a complex system of control measures such as surface covers and liners, treatment of effluent, surface runoff and leachate.

8. Treatment technologies

a) Definition

134. Treatment is defined as the processing of contaminated dredged material to reduce its quantity or to reduce the contamination. Treatment generally refers to removed dredged material, since treatment in situ is not usually an option. The quality of the sediment defines whether a treatment is feasible or not. In most cases the content of heavy metal and organic contaminants is primarily related to grain size. In general the finer the particles and the higher the content of organic matter are in the sediment, the higher the potential for contamination is. It is important to find realistic solutions for treating dredged material based on site- specific conditions and type of dredged material.

b) Treatment technologies

135. The main treatment technologies available include separation, dewatering, thermal immobilisation and bioremediation. Simple technologies such as sand separation, ripening and stabilisation can be applied if the material is not heavily contaminated. More advanced technologies such as immobilisation may be required to treat heavily contaminated sediments. Technology is available for all kinds of treatment processes, however treatment costs should be considered within the cost- benefit analysis of each case, in particular when there is contamination, which requires stabilization or removal that increases its costs.

More detailed information on treatment technologies can be found at www.PIANC.org

9. Best Environmental Practices for dredging and dredged material management

Introduction

136. A dredger is a piece of equipment which can dig, transport and dump a certain amount of underwater laying soil in a certain time. Dredging equipment can be divided in Mechanical and Hydraulic Dredgers, depending on the way that the soil is excavated.

(a) Digging

Hydraulic digging make use of the erosive working of a water flow. For instance, a water flow generated by a dredge pump is lead via suction mouth over a sand bed. The flow will erode the sand bed and forms a sand-water mixture before it enters the suction pipe. Hydraulic digging is mostly done with special water jets. Hydraulic digging is mostly done in cohesionless soils such as silt, sand and gravel. Mechanical dredges are characterized by the use of some form of bucket to excavate and raise the bottom material. Mechanical dredges may be classified into two subgroups by how their buckets are connected to the dredge: wire rope-connected (clamshell or dragline) and structurally connected (a backhoe). Mechanical diggings apply to cohesive soils.

(b) Transport

The transport of the dredged soil can be also done hydraulically or mechanically, either continuously or discontinuously.

(c) Deposition

Deposition of soil can be done in simple ways by opening the grab, turning the bucket or opening the bottom doors in a ship. Hydraulic deposition happens when the mixture is flowing over the reclamation area. The sand will settle while the water flows back to sea or river.

137. Dredgers can have the afore-mentioned three functions integrated or separated. The choice of the dredger for executing a dredging operation depends not only on the above-mentioned functions but also from other conditions such as the accessibility to the site, weather and wave conditions, anchoring conditions, required accuracy etc.

More detailed information on dredgers can be found at

<http://www.dredging.org/media/ceda/org/documents/resources/otheronline/vlasblom1-introduction-to-dredging-equipment.pdf>

Best Environmental Practices

138. The applicability of BEPs is generally varying according to the particular circumstances of each dredging operation and it is clear that different approaches may then be appropriate. Generally, the objectives of BEPs are to:

- (a) Minimize the impacts of dredging operation on the marine ecosystems
- (b) Keep volume of dredged material minimal
- (c) Optimize dredging operations management through accurate survey systems
- (d) Improve sediment quality

139. Optimization of the quantities for deposit:

A. Minimize the impacts of dredging

Minimizing the impacts in reducing the increase in turbidity and minimizing oxygen depletion

Proposed BEP:

- (a) use excavation tools /dredger heads appropriate to minimize turbidity
- (b) use silt screens/shields
- (c) minimize overflow by e.g. recirculation of overflow water
- (d) use specially designed dredgers to dredge contaminated sediments
- (e) avoid the use of dredgers which introduce large amounts of suspended sediments into the water column where this may lead to problems with oxygen depletion or contamination e.g. agitation dredgers
- (f) avoid periods when dredging induced turbidity will lead to unacceptable reductions in oxygen levels due to high temperatures.

B. Keep volume of dredged material minimal

To this aim, operators would consider the following:

a. Minimize need for dredging such as:

i. *in fluid mud areas: introduce the concept of Navigable depth based on:*

- (a) physical and chemical evaluation of the sediment (including rheometry and densitometry)
- (b) full scale trials

Proposed BEP:

Dredging only the amount of material required for maintaining a particular density level to allow navigation. This may require e.g. continuous underway measurement of sediment density by using a nuclear transmission gauge or measurement of shear forces.

ii. *in areas with sandy waves.*

Proposed BEP:

Selective dredging of sand waves and other mobile sand structures

iii. *hydraulic engineering*

Proposed BEP:

Use of hydraulic structures to reduce sedimentation

iv. *accurate monitoring of dredged depths at an appropriate frequency*

Proposed BEP:

Accurate positioning systems e.g.:

- (a) microwave systems
- (b) radio wave technology
- (c) differential Global Positioning System (DGPS)
- (d) apply rapid survey equipment
- (e) continuous measurement systems
- (f) echo sounders
- (g) swath/multi beam systems

C. Optimization of dredging operations management through accurate survey systems

i. *availability of survey data on board*

Proposed BEP:

- (a) online visualization of updated bathymetric charts, including topographic data, coastlines, deposit areas, dredge position, dredge head position
- (b) tidal information

ii. *process evaluation*

Proposed BEP:

- (a) visualization/evaluation of dredged tracks/profiles/zones
- (b) dredging intensity chart
- (c) in case of muddy material, sand and gravel: establish optimum overflow time by analysis of load diagrams

iii. *Improve dredging process, through*

i. *effective dredging process control*

Proposed BEP:

- (a) Continuous on-line measurements and presentation e.g. of area, heading, speed of the dredgers and position of the suction head/buckets/cutter/backhoe/grab/ wheel/...
- (b) measurement of mixture velocity and concentration
- (c) measurement of macro production (load diagram)
- (d) hopper-measurement system monitoring the filling process

ii. *output improving techniques*

Proposed BEP:

- (a) best suited suction head/cutters wheel/ backhoe/buckets
- (b) submerged dredge-pumps
- (c) degassing installations

iii. *selective dredging techniques*

Proposed BEP:

- (a) selective dredging to e.g. separate contaminated material

D.Improve sediment quality

Improvement of sediment quality through anin situ operation before dredging and after deposit and improvement of physical aspects (cohesion, consistency, density) of dredged material

Proposed BEP in situ before dredging:

- (a) where relevant, increase sediment density by physical means e.g. vibration or mechanical separation

Proposed BEP during the dredging process:

- (a) hydro cyclones for separation of granulometric fractions
- (b) flotation
- (c) dewatering (under development) (consider potential problems with process water and associated contaminants e.g. re- circulation will reduce problems)

PART B MONITORING OF DREDGED MATERIAL DUMPING OPERATIONS

1. Definition

140. In the context of assessing and regulating the environmental and human health impacts of dredged material dumping operations, monitoring is defined as all measures whose purpose is to determine, from the repeated measurement of a contaminant or an effect, whether direct or indirect, of the introduction of this contaminant into the marine environment, the spatial and temporal modifications undergone by the receiving zone as a result of the activity under consideration.

141. It should be noted that the provisions of Part B cover all dredged material operations at sea.

2. Rationale

142. Monitoring of dredged material dumping operations is generally undertaken for the following reasons:

- (a) to establish whether the dumping permit conditions have been respected - compliance monitoring - and consequently have, as intended, prevented adverse effects on the receiving area as a consequence of dumping;
- (b) to improve the basis on which permit applications are assessed by improving knowledge of the field effects of major discharges which cannot be directly estimated by a laboratory evaluation or from the literature;
- (c) to provide the necessary evidence to demonstrate that within the framework of the Protocol the monitoring measures applied are sufficient to ensure that the dispersive and assimilative capacities of the marine environment are not exceeded, and so dumping operations do not cause damage to the environment and deteriorate GES.

3. Objectives

143. The purposes of monitoring are to determine contaminant levels in all sediments above the lower reference threshold in paragraph 34 (b) of the Guidelines and in bio-indicator organisms, and the biological effects and consequences for the marine environment of the dumping of dredged material and, ultimately, to help managers to combat exposure of organisms to dredged materials and associated contaminants.

144. Whenever possible, the monitoring programme should be aligned with the current MEDPOL monitoring programmes for the Ecological Objectives 5, 8, 9, and 10, in line with the Integrated Monitoring and Assessment Programme (IMAP) of the Mediterranean Sea and Coast and Related Assessment Criteria set out in Decision IG. 22/7 of the COP 19.

4. Strategy

145. Monitoring operations are expensive since they require considerable resources both to carry out measurement and sampling programmes at sea and the subsequent analytical work on the samples. In order to approach the monitoring programme in a resource-effective manner, it is essential that the programme has clearly defined objectives, that the measurements made can meet those objectives, and that the results are reviewed at regular intervals in relation to the objectives.

146. Since the effects of dredged material dumping are likely to be similar in many areas, there appears to be little justification for monitoring all sites, particularly those receiving small quantities of dredged material. It would be more effective to carry out more detailed investigations at a few carefully chosen sites based on risk-based approach e.g. those subject to large inputs of dredged material) in order to obtain a better understanding of the processes and effects involved.

147. This is particularly the case for zones which present the same physical, chemical and biological characteristics, or nearly the same characteristics, for which there is strong presumptive evidence that the effects of dredged material dumping are similar, and it is very difficult to justify monitoring of all sites on scientific and economic grounds, particularly for those receiving small quantities of dredged material (e.g. less than 25,000 tons per year).

5. Impact Hypothesis

148. In order to establish such objectives, it is first necessary to derive an impact hypothesis describing predicted effects on the physical, chemical and biological characteristics both of the dumping zone and of the surrounding zones. The impact hypothesis forms the basis for defining the field monitoring programme.

149. The aim of an impact hypothesis is to provide, on the basis of the available information, a concise scientific analysis of the potential effects of the proposed operation on human health, living resources, marine life, amenities and other legitimate uses of the sea. For this purpose, an impact hypothesis should incorporate information on the characteristics of the dredged material and on conditions at the proposed dumping site. It should encompass both temporal and spatial scales of potential effects.

150. One of the main requirements of the impact hypothesis is to produce criteria which describe the specific environmental effects of dumping activities, taking into account the fact that such effects have to be avoided outside the designated dredging and dumping zones (see Part A, Section 4).

6. Preliminary Evaluation

151. The preliminary evaluation should be as comprehensive as possible. The primary areas of potential impact should be identified as well as those considered to have the most serious consequences for human health and the environment. Alterations to the physical environment, risks to human health, devaluation of marine resources, and interference with other legitimate uses of the sea are often seen as priorities in this regard.

152. The expected consequences of dumping could be described in terms of the habitats, processes, species, communities and uses affected by the dumping in line with GES definitions and targets. The precise nature of the predicted change, response, or interference (effect) could then be described. The GES and the effect should be described (quantified) together in sufficient detail to eliminate any doubt as to the parameters to be measured during post-operational field monitoring. In the latter context, it might be essential to determine "where" and "when" the impacts can be expected.

7. Reference Baseline

153. In order to develop an impact hypothesis, it may be necessary to conduct a baseline survey and checking the GES's values which describe not only the environmental characteristics, but also the variability of the environment. It may also be helpful to develop sediment transport, hydrodynamic and other mathematical models, to determine the possible effects of dumping.

154. Where either physical or chemical effects at the seabed are expected, it will be necessary to examine the benthic community structure in areas where the dredged material disperses. In the case of chemical effects, it may also be necessary to examine the chemical quality of the sediments and the biota (including fish), in particular the major pollutant contents.

155. In order to assess the impact of the proposed activity on the surrounding environment, it will be necessary to compare the physical, chemical and biological quality of the affected areas with reference sites located away from dredged material dumping pathways and with similar physical and biological

characteristics with the affected areas. Such areas can be identified during the early stages of the impact assessment.

8. Impact Hypothesis Verification: Defining the Monitoring Programme

156. The measurement programme should be designed to ascertain that physical, chemical and biological changes in the receiving environment are within baseline survey values and don't affect adversely the achievement or maintenance of GES.

157. The measurement programme should be designed to determine:

- (a) whether the zone of impact differs from that projected; and,
- (b) whether the extent of changes outside the zone of direct impact is within the scale predicted.

158. The first question can be answered by designing a sequence of measurements in space and time that circumscribe the projected zone of impact to ensure that the projected spatial scale of change is not exceeded.

159. The second question can be answered by making physical, chemical and biological measurements that provide information on the extent of change that occurs outside the zone of impact, after the dumping operation takes place (verification of a null hypothesis). Then, before any programme is drawn up and any measurements are made, the following questions should be addressed:

- (a) what testable hypothesis can be derived from the impact hypothesis?
- (b) what exactly should be measured to test these impact hypotheses?
- (c) in what compartment or at which locations can measurements most effectively be made?
- (d) for how long should measurements continue to be made to meet the original aim?
- (e) what should be the temporal and spatial scale of the measurements made?
- (f) how should the data be processed and interpreted?

160. It is recommended that the choice of contaminants to be monitored should depend primarily on the ultimate purposes of monitoring. It is definitely not necessary to monitor regularly all contaminants at all sites and it should not be necessary to use more than one substrate or effect to meet each aim.

9. Monitoring

161. The dumping of dredged material has its primary impact at the seabed. Thus although a consideration of water column effects cannot be discounted in the early stages of monitoring planning, it is often possible to restrict subsequent monitoring to the seabed.

162. Where it is considered that effects will be largely physical, monitoring may be based on remote methods such as side-scan sonar, to identify changes in the characteristics of the seabed, and bathymetric techniques (e.g. echo sounding) to identify areas of dredged material accumulation. Both these techniques will require a certain amount of sediment sampling to establish ground-truth. In addition, multispectral scanning can be used for monitoring the dispersion of suspended material (plumes, etc.) during the disposal operations.

163. Tracers may also be proved useful in following the dispersal of the dredged material and assessing any minor accumulation of material not detected by bathymetric surveys. Where, in relation to the impact hypothesis, either physical or chemical effects at the seabed is expected, it will be necessary to examine the benthic community structure in areas where the dredged material disperses. In the case of chemical effects, it may also be necessary to analyse the possible bio accumulation of pollutants (including fish).

164. The spatial extent of sampling will need to take into account the size of the area designated for dumping, the mobility of the dumped dredged material and water movements which determine the direction and extent of sediment transport. It should be possible to limit sampling within the dumping site itself if effects in this area are considered to be acceptable and their detailed definition unnecessary. However, some sampling should be carried out to aid the identification of the type of effect which may be expected in other areas and for scientific purposes.

165. The frequency of surveying will depend on a number of factors. Where a dumping operation has been going on for several years, it may be possible to establish the effect at a steady state of input and repeated surveys would only be necessary if changes are made to the operation (quantities or type of dredged material dumped, method of disposal, etc.). If it is decided to monitor the recovery of an area which is no longer used for dumping dredged material, more frequent measurements might be needed.

10. Notification

The Contracting Parties should inform the Organization of their monitoring activities. Concise reports on monitoring activities should be prepared and transmitted to the Organization as soon as they are available, in conformity with Article 26 of the Barcelona Convention and the Integrated Monitoring and Assessment Programme adopted by COP 19 (Decision IG22/7).

11. Feedback

166. Information gained from field monitoring (and/or other related research) can be used to:

- (a) modify or, in the best of cases, terminate the field monitoring programme;
- (b) modify or revoke the permit;
- (c) serve as a basis to improve the permitting system refine the basis on which applications for permits are assessed.

Appendix 1
Analytical Requirements for the Assessment of Dredged Material

Analytical Requirements for the Assessment of Dredged Material

1. This Appendix amplifies the analytical requirements set out in paragraphs 51-53 of the Updated Guidelines on Management of Dredged Material.

2. Evaluations of dredged material are most efficiently conducted following a tiered process that begins with collecting existing relevant information, sediment chemistry data, and results from simple screening approaches. The evaluation then progresses, as needed, to more detailed assessments where information from multiple lines of evidence is collected to reach conclusions about contaminant exposure, effects and, ultimately, the risks posed by the disposal of dredged material into the sea (PIANC 2006). The term line of evidence is commonly used to refer to broadly-defined categories of information, physical, chemical and biological data, e.g. sediment chemistry, toxicity test data, and benthic community survey results.

The recommended sequence of tiers is as follows:

- the physical properties;
- the chemical properties;
- the biological properties and effects.

3. At each tier it will have to be determined whether there is sufficient information to allow a management decision to be taken or whether further analysis is required. Further information determined by local circumstances can be added at each tier.

4. As a preliminary to the tiered analysis scheme, information required under Part A Section 2 (paragraph 19) of the Guidelines will be available. In the absence of appreciable pollution sources and if the visual determination of sediment characteristics leads to the conclusion that the dredged material meets one of the exemption criteria under paragraphs 26-27 of the Guidelines, the material will not require further analysis.

5. It is important that, at each stage, the assessment procedure takes account of the method of analysis.

6. Analysis should be carried out on the non-coarse fraction sediment (less than 2 mm).

Tier I: PHYSICAL PROPERTIES

7. In addition to the preliminary assessment of the characteristics of the sediments required by paragraph 19 of these Guidelines, the basic physical characteristics required are the amount of material, particle size distribution, other geotechnical attributes and mineralogical source and color of the sediment.

It is strongly recommended that the following determinations be carried out:

- grain size analysis
- percentage of solids (dry matter)
- density/specific gravity
- organic matter (as total organic carbon)

Tier II: CHEMICAL PROPERTIES

Primary group list:

8. In all cases where chemical analysis is required, the concentrations of the following trace elements should be determined:

Arsenic (As)
Cadmium (Cd)
Chromium (Cr)
Copper (Cu)
Lead (Pb)
Mercury (Hg)
Nickel (Ni)
Zinc (Zn)

9. In certain cases, the analysis may also include other pollutants. In the case of mercury, special attention should be paid to speciation.

10. When examining the toxicity of contaminated dredged sediment, the analysis should be carried out also on the water phase. Lastly, the total organic carbon should be measured.

11. With regard to organic pollutants, the sum of PCB congeners IUPAC numbers 28, 52, 101, 118, 138, 153 and 180, should be analyzed. If local circumstances so require, the analysis should be extended to other congeners.

12. The polycyclic aromatic hydrocarbons (PAH) (sum of 16PAH or sum of 9 as a subgroup including at least the following, but not limited to: anthracene; benzo[a]anthracene; benzo[ghi]perylene; benzo[a]pyrene; chrysene; fluoranthene; indeno[1,2,3-cd]pyrene; pyrene; phenanthrene)) and the tri-butyl tin compounds (TBT) and their degradation products should also be measured.

As a minimum requirement, national action levels need to be established for the primary list above.

13. The measurement of PCB, PAH and TBT will not be necessary when:

- sufficient information from previous investigations indicates the absence of contamination;
- there are no known sources (point or diffuse) of contamination nor historic inputs;
- the sediments are predominantly coarse; and
- the levels of total organic carbon are low.

Secondary group list:

14. Based upon local information on sources of contamination (point or diffuse sources) or historic inputs, other determinants may need to be measured for instance:

Other chlorobiphenyls
organophosphorus pesticides;
organochlorine pesticides;
polychlorinated dibenzodioxins (PCDD);
polychlorinated dibenzofurans (PCDF);
Petroleum hydrocarbons C10, C40
Phthalates (DEHP and optionally - DBP/BBP)
Tri-phenyl tin (TPhT)
Other anti-fouling agents

In deciding which additional individual organic contaminants to determine, reference should be made to existing priority substance lists, such as those prepared by the EU (as applicable).

Tier III: BIOLOGICAL PROPERTIES AND EFFECTS

15. In a significant number of cases the physical and chemical properties do not allow the biological impact to be measured directly. Moreover, they do not adequately identify all the physical disturbances nor constituents associated with sediments present in the dredged material.

16. If the potential impact of the dredged material to be dumped cannot be adequately assessed on the basis of chemical and physical characteristics, biological measurements should be made.

1. Toxicity bioassays

17. The primary purpose of the biological bioassays is to provide direct measures of effects of all sediment constituents acting together, taking into account their bioavailability. For ranking and classifying the acute toxicity of harbour sediments prior to maintenance dredging, short term bioassays may often suffice as screening tool:

- To evaluate the effects of the dredged material, bioassays for acute toxicity can be carried out with pore water, on elutriate or the whole sediment. In general, a set of 2-4 bioassays is recommended with organisms from different taxonomic groups (e. g. crustaceans, molluscs, polychaetes, bacteria, echinoderms), using species that are considered appropriately sensitive and ecologically relevant and methods have been standardized and validated;
- In most bioassays, survival of the test species is used as an endpoint. Chronic bioassays with sub-lethal endpoint (growth, reproduction, etc.) covering a significant part of the test species life cycle may provide a more accurate prediction of potential impacts of dredging operations, thus are recommended.

18. The outcome of sediment bioassays can be unduly influenced by factors other than sediment associated chemicals. Confounding factors like ammonia, hydrogen sulphide, grain size, oxygen content and pH should therefore be determined during the bioassays.

19. Guidance on the selection of appropriate test organisms, use and interpretation of sediment bioassays is given by e.g. EPA/CE (1991/1994) and IADC/CEDA (1997) or PIANC (2006) while guidance on sampling of sediments for toxicological testing is given by e.g. ASTM (1994).

2. Biomarkers

20. Biomarkers may provide early warning of more subtle (biochemical) effects at low and sustained levels of contamination. Most biomarkers are still under development but some are already applicable for routine application on dredged material (e.g. one which measures the presence of dioxin-like compounds - Murk et al., 1997) or organisms collected in the field (e.g. DNA strand/breaks in flat fish).

3. Microcosm experiments

21. There are short-term microcosm tests available to measure the toxicant tolerance of the community e.g. Pollution Induced Community Tolerance (PICT) (Gustavson and Wangberg, 1995).

4. Mesocosm experiments

22. Because of the costs and time involved these experiments cannot be used for issuing permits but are useful in cases where the extrapolation of laboratory testing to field conditions is complicated or when environmental conditions are very variable and hinder the identification of toxic effects as such. The results of these experiments would be then available for future decisions on permits.

5. Field observations of benthic communities

23. In situ monitoring of benthic communities (fish, benthic invertebrates) in the area of the disposal site can provide important indications of the condition of marine sediments. Field observations give an insight into the combined impact of physical disturbance and chemical contamination. Guidelines on the monitoring of benthic communities are provided by e.g. the Paris Convention, 1992, ICES.

6. Other biological properties

24. Where appropriate, other biological measurements can be applied in order to determine, for example, the potential for bioaccumulation and for tainting.

SUPPLEMENTARY INFORMATION

25. The need for this information will be determined by local circumstances and may form an essential part of the management decision. Appropriate data might include: redox potential, sediment oxygen demand, total nitrogen, total phosphorus, iron, manganese, mineralogical information or parameters for normalising trace metal data (e.g. aluminium, lithium, scandium).

Appendix 2
Contaminant Action Levels and Thresholds

Lower and Upper threshold levels adopted by Italy
IMO- LC/SG 40/INF.30,17 February 2017,

	L1	L2
Trace elements	[mg kg-1] dry weight	
Arsenic	12	20
Cadmium	0.3	0.8
Chromium	50	150
Chromium VI	2	2
Copper	40	52
Mercury	0.3	0.8
Nickel	30	75
Lead	30	70
Zinc	100	150
Organic contaminants	[µg kg-1] dry weight	
Organotin compounds	5 (TBT)	72 (MBT, DBT, TBT)
Σ PCB*	8	60
Σ 2,4'-4,4' DDD	0.8	7.8
Σ 2,4'-4,4' DDE	1.8	3.7
Σ 2,4'-4,4' DDT	1.0	4.8
Chlordane	2.3	4.8
Aldrin	0.2	10
Dieldrin	0.7	4.3
Endrin	2.7	10
a-HCH	0.2	10
b-HCH	0.2	10
γ-HCH (Lindane)	0.2	1.0
Heptachlor epoxide	0.6	2.7
HCB	0.4	50
Petroleum Hydrocarbon C>12	Not available	50000
ΣPAHs16	900	4000
Anthracene	24	245
Benzo[a]anthracene	75	500
Benzo[a]pyrene	30	100
Benzo[b]fluoranthene	40	500
Benzo[k]fluoranthene	20	500
Benzo[g, h,i]perylene	55	100
Crysene	108	846
Indenopyrene	70	100
Phenantrene	87	544
Fluorene	21	144
Fluoranthene	110	1494
Naphtalene	35	391
Pyrene	153	1398
T.E. PCDD, PCDF and Dioxin	2 x 10-3	1 x 10-2
Like PCBs		
Sum of CB: 28, 52, 77, 81, 101, 118, 126, 128, 138, 153, 156, 169, 180.		

Chemical Levels L1 and L2 are elaborated by specifically developed weighted criteria, which allow abandoning the pass-to-fail approach. The chemical classification is based on the development of a Chemical Hazard Quotient (HQ_C) which considers the typology and number of parameters exceeding limits of L1 and L2, the magnitude of such exceedances and type of contaminant (priority or priority hazardous substances, according to Annex II of Directive 2008/105/EC). The sediment quality classification is the integration of chemical and ecotoxicological Hazard Quotients. In general, above

L2, dumping at sea is never allowed.

Lower and Upper threshold levels adopted by Spain

ACTION LEVELS (DW)			
CONTAMINANT	N.A. A (Action level A) Limit for disposal at sea in restricted areas	N.A. B (Action level B) Limit for disposal at sea in case that bioassays are not conducted	N.A. C (Action level C) Limit for conducting bioassays
Hg (mg/kg)	0.35	0.71	2.84
Cd (mg/kg)	1.20	2.40	9.60
Pb (mg/kg)	80	218	600
Cu (mg/kg)	70	168	675
Zn (mg/kg)	205	410	1640
Cr (mg/kg)	140	340	1000
Ni (mg/kg)	30	63	234
As (mg/kg)	35	70	280
Σ 7 PCBs (mg/kg) (1)	0.05	0.18	0.54
Σ 9 PAHs (mg/kg) (2)	1.88	3.76	18.80
TBT (3) (mg Sn/kg)	0.05	0.20	1.0

(1) Sum of IUPAC congeners 28, 52, 101, 118, 138, 153 and 180.

(2) Sum of Anthracene, Benzo(a)anthracene, Benzo(ghi)perylene, Benzo(a)pyrene, Chrysene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Pyrene and Phenanthrene).

(3) TBT and their degradation products (DBT and MBT).

According to the chemical (and biological characterization if it is done) the dredged material is classified in 3 classes:

- Class A: The concentration of all pollutants below action level A.
- Class B: The concentration of all pollutants below action level B or action level C (only in the case that biological characterization is conducted and the results indicate a negative toxicity).
- Class C: The concentration of one or more pollutants is above action level C or action level B in the case that biological characterization is conducted and the results indicate a positive toxicity). This material is not allowed to be dumped and sub be subject to confinement, treatment or management on land.

Lower and Upper threshold levels adopted by France

When, pursuant to the nomenclature decree, analysis is required to assess the impact of the operation on the aquatic environment (or to assess the impact on the aquatic environment of a specific operation):

- the quality of marine or estuarine sediments is assessed relative to the thresholds in field 4.1.3.0 of the nomenclature, for which reference levels N 1 and N 2 are specified in tables I and II;

Table I

Levels relating to trace elements (in mg/kg of dry sediment analyzed on the fraction below 2 mm)		
TRACE ELEMENTS	LEVEL N1	LEVEL N2
Arsenic	<u>25</u>	<u>50</u>
Cadmium	<u>1,2</u>	<u>2,4</u>
Chrome	<u>90</u>	<u>180</u>
Copper	<u>45</u>	<u>90</u>
Mercury	<u>0,4</u>	<u>0,8</u>
Nickel <u> </u> <u> </u>	<u>37</u>	<u>74</u>
Lead <u> </u> <u> </u>	<u>100</u>	<u>200</u>
<u>Zinc</u>	<u>276</u>	<u>552</u>

Table II

Levels relating to polychlorobiphenyls (PCBs) (in µg/kg of dry sediment analyzed on the fraction below 2 mm)		
PCB	LEVEL N1	LEVEL N2
<u>PCB congener 28</u>	<u>5</u>	<u>10</u>
<u>PCB congener 52</u>	<u>5</u>	<u>10</u>
<u>PCB congener 101</u>	<u>10</u>	<u>20</u>
<u>PCB congener 118</u>	<u>10</u>	<u>20</u>
<u>PCB congener 138</u>	<u>20</u>	<u>40</u>
<u>PCB congener 153</u>	<u>20</u>	<u>40</u>
<u>PCB congener 180</u>	<u>10</u>	<u>20</u>

Table IIbis

<u>Levels relating to polycyclic aromatic hydrocarbons (PAH)</u> <u>(in µg/kg of dry sediment analyzed on the fraction below 2 mm)</u>		
<u>PAH</u>	<u>LEVEL N1</u>	<u>LEVEL N2</u>
Naphthalene	<u>160</u>	<u>1 130</u>
Acenaphthene	<u>15</u>	<u>260</u>
Acenaphthylene	<u>40</u>	<u>340</u>
Fluorene	<u>20</u>	<u>280</u>
Anthracene	<u>85</u>	<u>590</u>
Phenanthrene	<u>240</u>	<u>870</u>
Fluoranthene	<u>600</u>	<u>2 850</u>
Pyrene	<u>500</u>	<u>1 500</u>
Benz[a]anthracene	<u>260</u>	<u>930</u>
Chrysene	<u>380</u>	<u>1 590</u>
Benzo[b]fluoranthene	<u>400</u>	<u>900</u>
Benzo[k]fluoranthene	<u>200</u>	<u>400</u>
Benzo[a]pyrene	<u>430</u>	<u>1 015</u>
Dibenz[a,h]anthracene	<u>60</u>	<u>160</u>
Benzo[g,h,i]perylene	<u>1 700</u>	<u>5 650</u>
Indeno[1,2,3-cd]pyrene	<u>1 700</u>	<u>5 650</u>

Table II ter

	Levels relating to tributyltin (TBT) (in $\mu\text{g}/\text{kg}$ of dry sediment analyzed on the fraction below 2 mm)	
	LEVEL N1	LEVEL N2
PARAMETER		
TBT	100	400

During the analyses, in order to evaluate the quality of discharges and sediments according to the reference levels specified in the above tables, the content to be taken into account is the maximum measured content. However, the following may be tolerated:

- 1 exceedance for 6 samples analyzed;
- 2 exceedance for 15 samples analyzed;
- 3 3 exceedances for 30 samples analyzed;

1 exceedance per batch of 10 additional samples analyzed provided that the measured contents of the samples exceeding the limits remain below 1.5 times the reference levels in question.

Appendix 3

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Decision IG.23/13

Updated guidelines on the management of desalination activities

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twentieth meeting,

Having regard to the 1996 Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities, and in particular article 7 thereof, under which common guidelines, standards and criteria were to be formulated and adopted to address required technical specifications to combat pollution derived from land-based sources and activities,

Recalling the 2003 Guidelines for the Environmental Sound Management of Seawater Desalination Plants in the Mediterranean, and acknowledging the progress achieved and lessons learned in their implementation,

Recalling also decision IG.22 adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016), by which they mandated the updating of the 2003 Guidelines,

Noting that desalination activities are growing exponentially in the Mediterranean region owing to an increase in freshwater demand and an improvement in technology and economic viability,

Noting also the associated impact of desalination activities on marine and coastal ecosystems,

Committed to further streamlining the Mediterranean Action Plan ecological objectives, in particular those related to pollution, biodiversity, and coast and hydrographic and associated Good Environmental Status targets, to ensure that Good Environmental Status is achieved or maintained at the sites,

Having considered the report of the meeting of the focal points for the Programme for the Assessment and Control of Marine Pollution in the Mediterranean held in May 2017,

1. *Adopt* the Updated Guidelines on the Management of Desalination Activities, set out in the Annex to the present decision, which replace the 2003 Guidelines;
2. *Request* the Contracting Parties to make every effort to ensure their effective implementation in the Mediterranean area;
3. *Encourage* the Contracting Parties to ensure that the utilization of alternative water sources and measures (such as water conservation, water treatment and re-use and prevention of water waste due to faulty infrastructure, among others) is considered before the desalination option and that the use of desalination technologies that minimize energy use, utilize renewable energy, reduce greenhouse emissions, brine discharge and chemicals, and utilize green materials should be encouraged and directed to at the planning stages;
4. *Also encourage* the Contracting Parties to develop and adopt criteria and standards for intake and brine discharge, and ensure their enforcement by the national regulating authorities, bearing in mind that the cumulative effects of desalination in the Mediterranean region should be assessed using the ecosystem approach and modelling tools;
5. *Further encourage* the Contracting Parties to identify, promote and strengthen the synergies and mechanisms of cooperation with the desalination industry and other relevant stakeholders to ensure a sustainable and integrated desalination management in the Mediterranean region;

6. *Request* the Secretariat to facilitate the work of the Contracting Parties for the implementation of the Updated Guidelines on the Management of Desalination Activities, by seeking cooperation and reinforcing synergies in that area with Mediterranean Action Plan components and in collaboration with the European Union Horizon 2020 regional programme;

7. *Also request* the Secretariat to establish strategic partnerships with the desalination industry and other relevant stakeholders with the aim of facilitating access to data and knowledge exchange on best available techniques and best environmental practices for desalination activities in the Mediterranean region.

Annex

Updated Guidelines on the Management of Desalination Activities

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Appendix

Appendix 1: Questionnaire Seawater desalination status in the Mediterranean Region

Appendix 2: References

List of Abbreviations / Acronyms

AD	Adsorption desalination
BAT	Best Available Technology
BEP	Best Environmental Practice
CDI	Capacitive deionization
CFCs	Chlorofluorocarbons
CPs	Contracting Parties
CSP	Concentration Solar Power
COP	Conference of the Parties
EcAp	Ecosystem Approach
ED	Electrodialysis
EDR	Electrodialysis reversal
EEA	European Environmental Agency
EIA	Environmental Impact Assessment
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FO	Forward Osmosis
GES	Good Environmental Status
GHG Emissions	Greenhouse Gas Emissions
GWI	Global Water Intelligence (GWI)
IAEA	International Atomic Energy Agency
IDA	International Desalination Association
IMAP	Integrated Monitoring and Assessment Programme
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
LBS Protocol	Land-Based Sources Protocol
LTD	Low Temperature distillation
MAP	Mediterranean Action Plan
MD	Membrane distillation

MED	Multiple Effect Distillation
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
MSF	Multi Stage Flash Distillation
PRO	Pressure retarded osmosis
RO	Reverse Osmosis
RE	Renewable Energies
RED	Reverse Electrodialysis
SW	Seawater
SWIM-Programme	Sustainable Water Integrated Management Programme
TVC	Thermal Vapor Compression
UNEP	United Nations Environment Programme
UNEP/MAP	United Nations Environment Programme\Mediterranean Action Plan
ZLD	Zero Liquid Discharge

1. Introduction

1. The MED POL Programme of UNEP/MAP following approval by the MED POL Focal Point meeting, published in 2003 the MAP Technical Report No. 139: Sea Water Desalination in the Mediterranean. Assessment and Guidelines. At the time, the Guidelines, largely used by the Contracting Parties, were up to date and described the need for seawater desalination, the basic technologies, the state and trends of seawater desalination in the Mediterranean region and touched on the environmental impacts and legal aspects of brine disposal.

2. Since 2003, the global desalination effort has increased exponentially due to increase in freshwater demand and improvement of technologies and economic viability. The Mediterranean region followed the global trend and the installed desalination capacity increased from ca. 4 million m³/day (Mm³/day) in 2003 to 12 Mm³/day in 2013. Technologies changed as well, together with increased awareness of the possible environmental impacts, in particular on the marine environment. Moreover, the legal framework for the regulation of waste disposal into the Mediterranean and pollution-related Regional Plans (in the framework of the Land-based sources (LBS) and Dumping protocols and the SAP/MED) evolved to integrate the aspects of the Ecosystem Approach (EcAp) to achieve and preserve Good Environmental Status (GES).

3. Therefore, MEDPOL is now reviewing and updating the 2003 MAP Technical report 139, to better describe the desalination effort around the Mediterranean, and assess its impacts on the coastal and marine environment. The new guideline aims to provide guidance to the Contracting Parties on how to desalinate in a sustainable way and how to monitor the environment. The new guideline builds on previous publications: MAP Technical report 139 (UNEP/MAP/MEDPOL 2003), SWIM report (Khordagui 2013), UNEP and NRC publications (NRC 2008, UNEP 2008) among others, and publications that are cited along this report.

2. Seawater desalination

4. Seawater (SW) desalination accounts for ca. 60 % of the global desalination effort and more than 80 % around the Mediterranean. It is also the most energy consuming desalination type because of the high salt concentration of the feed water. Therefore, the updated Guidelines address desalination as seawater desalination, with the understanding that brackish water desalination is common in many world areas but not in the Mediterranean (Khordagui 2013, Lior 2017).

5. An additional point to be considered is the difference between installed desalination capacity and actual desalination production. Most of the statistics on desalination (originating mainly from the International Desalination Association (IDA) and Global Water Intelligence (GWI) reports) address installed desalination capacity. However, the installed desalination capacity may be higher than the production due to changes in desalination needs, usually correlated to climatic variability (draught or rainy years), availability of natural or reused water supply and financial costs.

2.1. The need for seawater desalination

6. Global water use has been growing at more than twice the rate of population increase in the last century (FAO 2012). This, in conjunction with increased incidence of draughts and changes in precipitation patterns, as a result of climate change, have reduced the availability of freshwater. Two out of every three persons on the globe may be living in water-stressed conditions by the year 2025, if present global consumption patterns continue¹.

7. The water crisis and the dwindling access to potable water in many regions and the ever improving desalination technology prompted the increase in desalination worldwide, in particular seawater desalination. Historically, desalination on a commercial scale started around 1965 having a

¹<http://www.who.int/heli/risks/water/water/en/> (accessed February, 6th 2017)

global capacity of about 8,000 m³/day in 1970, reaching an estimated 86.6 Mm³/day at the end 2015². From 1997 to 2008 the compound annual growth rate of desalination was 17%. Desalination grew exponentially at a rate of 14%/year from 2007 to 2012, and the rate declined to 3%/year from 2012 to 2015 (Gude 2016, Lior 2017). Large, mega-size plants turned economically viable and were constructed. Desalination in the Mediterranean countries reflected the global progression and will be discussed in Section 3.

2.2. Brief description of current established (mature) seawater desalination methods

8. Desalination technologies can be divided into two major processes:

- a) membrane process (non-phase change), in which semi-permeable membranes are used to separate water from dissolved salts, and
- b) thermal process (phase change), in which feedwater is boiled (under suitable operating temperatures and pressures) and the vapor condensed as pure water.
- c) Hybrid technologies that include both processes, such as membrane distillation, are starting to being used as well (see below).

9. The thermal processes dominated the desalination industry up to 2003-2005 when membrane technology, in particular reverse osmosis (RO), surpassed it (Gude 2016). Following is a brief description of the established (mature) desalination methods by technology.

2.2.1. Membrane Processes

10. Reverse Osmosis (RO) uses pressure to force water molecules from the feed solution through semi-permeable membranes that retains the salts and filter particles, producing fresh water and brine. The efficiency of the process is 0.45 for seawater (SW) and 0.75 for brackish water (BW) (World_Bank 2012). The brine produced from SWRO has about twice the seawater salinity.

11. At the various stages of the process chemicals may be added, that are subsequently disposed with the brine at sea or inland: coagulants in the pre-treatment stage (iron or aluminum salts, polymers); biocides (such as chlorine) and neutralizers (sodium sulfite); antiscalants to prevent fouling of the membranes (such as polyphosphates, polyphosphonates, polyacrylic acid, polymaleic acid); cleaning solutions for RO membranes (acidic and alkaline solutions and detergents); and pH and hardness adjustors for the product water (limestone).

12. The successive steps, usage of chemicals, energy recovery and improved efficiency were extensively described (Fritzmann et al. 2007, Greenlee et al. 2009, Elimelech and Phillip 2011, Ghaffour et al. 2013). At the current state of the art SWRO plants consume 3-4 kWh/m³ energy and emit 1.4-1.8 kgCO₂/m³ and 10-100 g NO_x/m³ of produced water (Lior 2017).

13. Electrodialysis (ED), is an electrochemical separation process in which ions are transferred through ion-exchange membranes by a direct current voltage, leaving desalinated water as the product (NRC 2008). Electrodialysis reversal (EDR), a modification of ED, can operate with highly turbid feed waters.

2.2.2. Thermal Processes

14. Multi Stage Flash Distillation (MSF) uses a series of stages, each with successively lower temperature and pressure, to rapidly vaporize (or “flash”) water from the bulk liquid. The vapor is then condensed by tubes of the inflowing feedwater, thereby recovering energy from the heat of condensation (NRC 2008). The process efficiency is 0.25 and the brine produced from SW desalination has about 1.5 the seawater salinity and temperature higher by ca. 5 degrees.

²<http://www.iwa-network.org/desalination-past-present-future/>

15. At the various stages of the process chemicals may be added, that are subsequently disposed with the brine at sea or inland: antifoaming agents, corrosion inhibitors, biocides (such as chlorine) and neutralizers (sodium sulfite); antiscalants to prevent fouling (such as polyphosphates, polyphosphonates, polyacrylic acid, polymaleic acid); cleaning solutions; and pH and hardness adjusters for the product water (limestone). Thermal desalination plants are subjected to corrosion and subsequent discharge of metals (such as copper) with the brine.

16. Multiple Effect Distillation (MED) is a thin-film evaporation approach, where the vapor produced by one chamber (or “effect”) subsequently condenses in the next chamber, which exists at a lower temperature and pressure providing additional heat of vaporization. The process efficiency is 0.34. Compared to MSF it uses less power due to reduced pumping requirements (NRC 2008). Large MED plants incorporate thermal vapor compression (TVC) where the pressure of the steam is used (in addition to heat) to improve efficiency (NRC 2008).

2.3. Future directions of seawater desalination technology – emerging technologies, process improvement and use of renewable energy.

17. The ever increasing desalination industry promoted the research and engineering to develop new technologies, hybrid technologies, to redesign components of existing systems to improve efficiency, reduce energy and chemical consumption and reduce waste and brine discharge. Following is a brief description of the future directions in desalination.

18. Forward osmosis (FO). The FO process is based on the principle that water (solvent) diffuses through a semi-permeable membrane from low concentration region to high concentration region by the natural osmotic process. A semipermeable membrane is placed between a low concentration feed solution and a high concentration draw solution. The chemical potential difference between the two solutions drives water molecules through the membrane from the feed to the draw solution while solutes are retained. The water is then separated and the draw solution reused. The separation process can be expensive depending on the draw solution characteristics (Gude 2016, Straub et al. 2016, Amy et al. 2017).

19. Membrane distillation (MD) is a thermally driven process that utilizes a hydrophobic, microporous membrane as a contactor to achieve separation by liquid-vapor equilibrium. The driving force of MD is the partial vapor pressure difference maintained at the two interfaces of the membrane (hot feed and cold permeate). The hot feed solution is brought into contact with the membrane which allows only the vapor to pass through its dry pores so that it condenses on the coolant side. The process uses lower temperatures and pressures compared to the established thermal and membrane processes and can reach 90% recovery (World Bank 2012, IAEA 2015, Kim et al. 2016, Amy et al. 2017).

20. Adsorption desalination (AD) is a heat-driven adsorption/desorption cycle process. In this process raw seawater is fed into an evaporator at its ambient temperature and an adsorbent is used to adsorb the vapor generated at very low pressure and temperature, under low pressure environment. When saturated, the adsorbent is heated to release the vapor (desorption process) and is then condensed inside an external condenser. There is no need to heat the feed water as in other thermal processes (Kim et al. 2016).

21. Among the emerging processes and technologies are: Pressure retarded osmosis (PRO), Reverse electrodialysis (RED), Low Temperature distillation (LTD), Capacitive deionization (CDI). Most of these technologies are not mature and are not utilized in large scale plants. Close circuit RO is now emerging into the commercial arena. FO and MD are used in niche applications (Amy 2017).

22. Improvements of current technologies: Many improvements are constantly taking place in the ever changing field of desalination, especially in yield improvement and reduction of energy and chemical consumption and brine discharge. Below are a few examples:

- a) Zero liquid discharge (ZLD), is a process that recovers water from the concentrates, to eliminate liquid wastes. Most of the emerging technologies can theoretically be employed in zero liquid discharge schemes. ZLD is particularly important in inland brackish desalination (Gude 2016, Tong and Elimelech 2016) and may be feasible in small seawater desalination plants;
- b) Improvement of conventional and design of new membranes (membrane engineering) to increase yield, reduce energy consumption and associated GHG emissions are under constant development. Among them are the development of biomimetic membranes, based on aquaporins (a water channeling protein), synthetic water and ion channels, graphene;
- c) Renewable energies (RE). RE, solar (concentration solar power (CSP), photovoltaic (PV)), geothermal, wind and marine renewable energy (wave, tide and currents), will eventually replace conventional energy in desalination when economically viable (Gude 2016, Amy et al. 2017). However, IAEA (IAEA 2015) forecasts that in 2030 RE powered desalination will be sufficient only for domestic water supply but will expand to meet industrial supply by 2050.
- d) Improvement of diffuser technology to improve the dilution processes during the brine discharge at sea (Portillo et al 2013, Vila et al 2011).

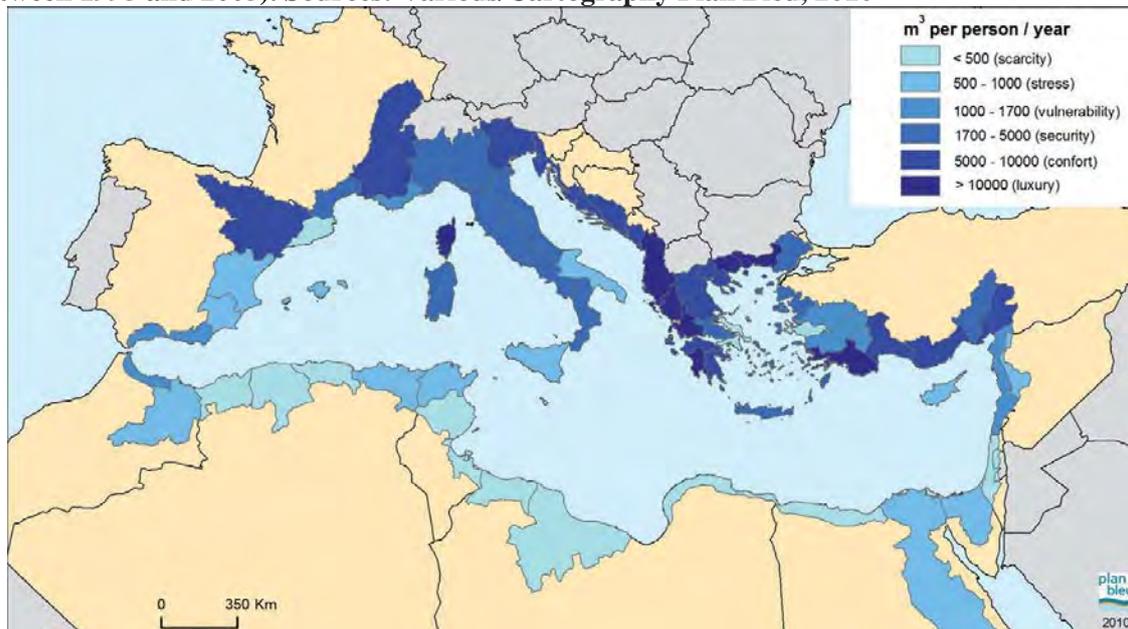
3. The state and trends of seawater desalination in the Mediterranean region

23. The renewable natural water resources per inhabitant in the countries surrounding the Mediterranean Sea ranges from scarcity (<500 m³/person year) to comfort and luxury (>5000 m³/person year) (AQUASTAT³, Plan Bleu, 2010).

24. There is an imbalance between the northern and southern shores of the Mediterranean, the latter considered as one of the most water-scarce regions of the world. As a result, most of the desalination effort around the Mediterranean is concentrated in the southern and eastern shores and in Spain. In 2013, over 1532 seawater desalination plants had been installed around the Mediterranean Sea with a total cumulative installed capacity of about 12 Mm³/day. Seawater desalination by reverse osmosis accounted for ca. 80 % of the production. Nearly all the desalinated water produced is consumed by municipalities as drinking water (Khordagui 2013).

³ http://www.fao.org/nr/water/aquastat/water_res/index.stm

Figure 1. Renewable natural water resources per inhabitant in the various basic Mediterranean Basins (between 1995 and 2005). Sources: Various/Cartography Plan Bleu, 2010



25. In 2014, the European Environmental Agency with UNEP/MAP published a report compiling the pollution levels in the region, in particular the major drivers of environmental changes and their implications on the protection of the marine environment which didn't address desalination (EEA-UNEP/MAP 2014). However, in UNEP/MAP State of the Mediterranean report in 2012, desalination was mentioned as a new pressure and a key sector affecting the marine and coastal environment in the Mediterranean (UNEP/MAP 2012).

3.1. Evolution of seawater desalination in Mediterranean countries from 1999 to 2013

26. The total desalination capacity around the Mediterranean in 1970 was 0.025 Mm³/day.

27. By the end of 1999, it had increased by almost 2 orders of magnitude to a total capacity of close to 2 Mm³/day, with 41% produced by RO (UNEP/MAP/MEDPOL 2003). Spain was the bigger producer of desalinated water with 33% of the total capacity, mainly from RO process. Libya was the second producer, with 30% of the total capacity, mainly from MSF process. Italy, Malta, Algeria and Cyprus accounted for 18, 6, 5 and 2% of the total capacity, respectively (UNEP/MAP/MEDPOL 2003).

28. In 2007, the total desalination capacity in the Mediterranean was 4.0 Mm³/day (14% of the total global capacity). Spain was the main producer, with 35% of the total capacity in the Mediterranean followed by Libya, with 20%. Algeria, Israel, Italy, Malta and Cyprus accounted for 19, 10, 7, 5 and 4% of the total capacity, respectively (Lattemann et al. 2010a, Lattemann et al. 2010b). The main process utilized was RO.

29. In 2011, the capacity was increased to 11.6 Mm³/day in the Mediterranean countries, however this estimate may include desalination in the Atlantic and Red Sea. Spain was the main producer (41% of the total capacity in the Mediterranean) followed by Algeria and Israel with 15 and 10%, respectively. Libya accounted for 7% of the total production and Italy and Egypt, 6% each (Cuenca 2013).

30. The potential environmental impacts of desalination around the Mediterranean Sea was assessed within the EU Program SWIM- Sustainable Water Integrated Management, Activity 1.3.2.1

(Khordagui 2013), as well as the installed capacity. In 2013, the total cumulative installed desalination capacity was about 12 Mm³/day. From 2000 to 2013 the installed capacity increased by 560% (40%/year). RO was the most common desalination technology in the area (ca. 82%) followed by MSF (11%) and MED (6.5%). In 2013, Spain was the main producer (31% of the total capacity) followed by Algeria, Israel and Libya with 20, 18 and 11%, respectively.

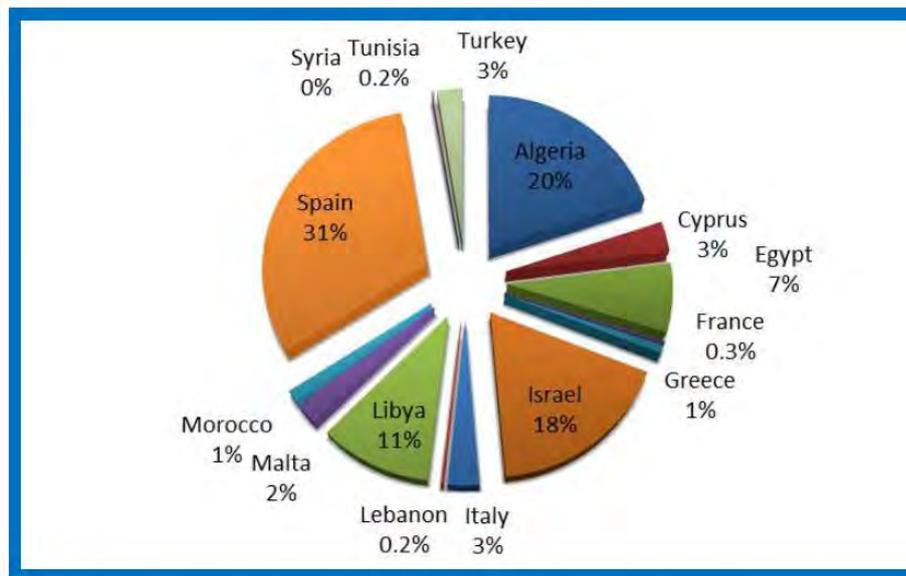


Figure 2. Relative contribution of each Mediterranean country to the total desalination capacity of 12 Mm³/day in 2013. Figure from Khordagui (2013) compiled with data from GWI Desal Data.

3.2. Installed capacity for seawater desalination in the Mediterranean and actual production

31. The SWIMM report (Khordagui 2013) is the most updated collective report on the state of desalination in the Mediterranean region. In order to revise and amend the current knowledge, partially filled questionnaires were sent to the Contracting Parties, asking for their collaboration in completing them. The Questionnaire includes general questions (installed desalination capacity, actual production, the contribution of seawater desalination to the actual production and future plans) and specific questions (number of plants that desalinate more than 10,000 m³/day, their location, process used details on chemical usage and discharges to the environment). A questionnaire template for collecting information and data related to desalination activities is contained in Appendix 1 to the updated Guidelines to be used for assessment purposes.

4. Environmental impacts of seawater desalination with particular reference to the marine environment

32. This section addresses the impact of seawater desalination on the marine environment following the start of plant operations, based on Kress and Galil (2015) and on additional published reports and peer reviewed literature cited along the text. The possible effects during the construction and operating phases are described in sections 5 and 6. The main impacts of seawater desalination on the marine environment are associated with two components: intake of seawater (feed water) into the desalination plant and brine discharge. However, the number of articles publishing quantitative effects *in situ* or in lab experiments is small and limited in scope (Roberts et al. 2010), but growing in the last years. Those suggest that desalination effluents impact the marine biota at the vicinity of the outfall, but are not definitive because of conflicting results. The results are site specific, depending on the

sensitivity of the receiving environment, the desalination process, size of plant and discharge composition and hindered by the lack of long term studies. GHG emissions may also affect the marine environment through ocean acidification but will not be discussed in this section.

4.1. Intake of seawater

33. The main effects associated with source water (seawater) withdrawal are entrainment and impingement of marine organisms (NRC 2008, UNEP 2008). They are also the least studied and known effects, in particular the impact on the population level.

34. Entrainment is the transport of small planktonic organisms with the flow of seawater into the desalination plant. It is generally recognized that the entrained flora and fauna that enters the desalination plant will perish during the different stages of the desalination process, including biocide application. This is in contrast with cooling waters from power stations, where a lower mortality has been reported (Mayhew et al. 2000, Barnthouse 2013). Entrainment can be reduced by locating the intakes away from biologically productive areas, such as in deeper water farther offshore, or by using underground beach wells although the latter are difficult to implement for large-scale desalination plants (NRC 2008, Elimelech and Phillip 2011).

35. Impingement occurs at open intakes when organisms sufficiently large to avoid going through the installed intake screens are trapped against them by the force of the flowing seawater into the desalination plant. Impingement of jellyfish at the intake have been known to block intakes and reduce production⁴. Impingement can be reduced through a combination of appropriate screens and low intake velocity. The US-EPA recognizes intake flow velocity of 0.152 m/sec as BAT for impingement reduction. The EU funded ProDes project suggested a maximum intake velocity of 0.1 m/sec⁵.

4.2. Brine discharge

4.2.1. Brine dispersal (Abiotic impacts)

36. Brine is defined here as the hypersaline discharge from a membrane based plant and as the hyper saline and warm discharge from a thermal desalination plant, without the chemicals used in the process. Brine dispersion may vary significantly depending on site characteristics, effluent volume, mode of discharge, and the prevailing hydrographic conditions. Nevertheless, salinity and temperature are higher than reference at the discharge sites but as mentioned, the area affected is highly variable (Fernandez-Torquemada et al. 2009, Holloway 2009, McConnell 2009, Dрами et al. 2011, Kress and Galil 2012). Studies of the effect of thermal desalination in the enclosed Gulf showed an effect on water temperature and salinity and a regional increase in salinity (Purnama et al. 2005, Lattemann and Hopner 2008, Uddin et al. 2011).

37. Brine discharge may increase seawater stratification that together with higher salinity and temperature may reduce oxygen levels in the water. This concern was raised during the EIA of the Perth (Australia) SWRO, but although monitoring showed slight water stratification close to the diffuser, no significant effect was found on dissolved oxygen concentrations (Holloway 2009).

38. An additional abiotic impact of brine discharge may be aesthetic due to the discharge of turbid brine. This effect was described for the Ashkelon (Israel) SWRO that until 2010 discharged in pulses backwash containing iron hydroxide used as coagulant in the pre-treatment stage. The iron hydroxide formed a conspicuous "red plume" (Safrai and Zask 2008, UNEP 2008, Dرامي et al. 2011).

⁴ <http://gulfnews.com/news/uae/general/jellyfish-choke-oman-desalination-plants-1.355525>

⁵ http://www.prodes-project.org/fileadmin/Files/D6_2_Legislation_Guidelines.pdf

4.2.2. Brine (salinity and temperature) effects on biota

39. Salinity and temperature have long been perceived as inhibitory environmental factors for survival and growth of marine biota (Murray and Wingard 2006, Wiltshire et al. 2010) and therefore, both are expected to affect the biota near desalination brine discharge areas.

i. Laboratory and mesocosm studies

40. Laboratory and mesocosm experiments on *Posidonia oceanica*, a seagrass endemic to the Mediterranean Sea of particular habitat importance, and included in Annex II of the SPA Protocol, have shown that at certain conditions, increased salinity affected physiological function, leaf growth and survival rates (Fernández-Torquemada et al. 2005, Ruiz et al. 2009, Sandoval-Gil et al. 2012, Marín-Guirao et al. 2013).

41. Two other Mediterranean seagrasses, *Cymodocea nodosa* and *Zostera noltii*, also included in Annex II of the SPA Protocol, were proved sensitive to increases in salinity (Fernández-Torquemada and Sánchez-Lizaso 2011) while other seagrasses' tolerance to hyper salinity stress varied (Walker and McComb 1990, Koch et al. 2007, Sandoval-Gil et al. 2012) (Walker et al. 1988, Koch et al. 2007, Sandoval-Gil et al. 2012a, Sandoval-Gil et al. 2012b).

42. Stressful combinations of temperature and salinity substantially reduced larval performance and development of the barnacle *Amphibalanus improvises* (Nasrolahi et al. 2012), while salinity was shown to affect the silica structure of diatoms (Vars et al. 2013).

43. Hyper salinity decreased embryos survival of the giant Australian cuttlefish *Sepia apama* and reduced mean weight and mantle length (Dupavillon and Gillanders 2009). Whole effluent toxicity testing (WET) performed using locally relevant species as part of the EIA for the Olympic Dam SWRO plant, Australia, attributed toxicity to increased salinity (Hobbs et al. 2008). On the other hand, no significant effect was found in 18 common species during an extensive EIA performed for the Carlsbad SWRO plant (Southern California) (Le Page 2005).

44. Recently, a mesocosm experiment on the impact of high salinities (5% and 15% higher than ambient salinity) on microbial coastal populations of the Eastern Mediterranean found that after ca. 12 days of exposure, chlorophyll a and primary productivity increased and the composition of the microbial population changed. The latter was dependent on the initial, seasonal dependent, population and on the intensity of the salinity enrichment (Belkin et al. 2015).

ii. In situ studies

45. A field survey of a shallow *P. oceanica* meadow in Spain showed it to be affected after 6 years of exposure to RO brine (Sánchez-Lizaso et al. 2008), in agreement with the laboratory studies. Also in Spain (south-eastern Mediterranean coast) brine discharge was shown to change the benthic community (Del Pilar Ruso et al. 2007, Del Pilar -Ruso et al. 2008, de-la-Ossa-Carretero et al. 2016). Echinoderm disappeared near the outfall of the Dhekelia SWRO in Cyprus (Argyrou 1999). However, no effect of brine discharge was found in the northwest Mediterranean (Raventos et al. 2006) nor in southwest Florida (Hammond et al. 1998). Moreover, in some instances, results of monitoring of the benthic community were inconclusive due to a shift in sediment particle size that can induce changes in community composition (Shute 2009, Riera et al. 2011, Riera et al. 2012).

46. *In situ* studies detected changes in microbial communities and functioning in the Mediterranean and Red Sea (Drami et al. 2011, van der Merwe et al. 2014a, Belkin et al. 2017). The photo physiology of the algal symbiont of the coral *Fungia granulosa* was not influenced by rapid and prolonged changes in salinity but varied with changes in light conditions (van der Merwe et al. 2014b).

4.2.3. *Effect of chemicals used in the desalination process and discharged with the brine*

47. Impacts of chemicals discharged with the brine on the marine environment are scarcely known. The co-occurrence of stressors: salinity, temperature, chemicals and co-discharged waste effluents (such as cooling waters from power stations) also confound the discussion of results in the few existing studies, preventing the establishment of a cause-response relationship.

48. Chlorine is used in both desalination and power plants to prevent fouling. In RO plants the residual chlorine is oxidized to prevent damage to the membranes, in thermal desalination plants, as in power plants, residual chlorine may be discharged with the brine. Residual chlorine reacts swiftly with seawater to form toxic complexes such as bromoform (Taylor 2006) shown to accumulate in the liver of the European seabass, *Dicentrarchus labrax*. In the same study it was impossible to separate the effect of bromoform from temperature on *Mytilus edulis*.

49. Corrosion products (metals) from thermal desalination plants, in particular copper, a common material in heat exchangers, were shown to accumulate in the vicinity of outfalls. Many of the studies state that the presence of copper does not mean an adverse effect because copper is a natural compound found in nature (Lattemann and Hopner 2008). However, earlier studies found that copper affected echinoderms, tunicates and Florida seagrass and micro-organisms (Chesher 1971, Brand et al. 1986). Recently, higher than natural concentrations of copper and zinc in sediments and bivalves was reported at the brine discharge of two SWRO in Taiwan (Lin et al. 2013).

50. Sodium meta-bisulphite ($\text{Na}_2\text{S}_2\text{O}_5$) is commonly used in cleaning reverse osmosis membranes. Short-term pulses to the marine environment may result in acidification and hypoxia. Toxicity bioassays on the lizard fish *Synodus synodus* in the Canary Islands revealed a high sensitivity to short-term exposure to low concentrations, with total mortality occurring at higher concentrations (Portillo et al. 2013).

51. The toxicity found during WET test on the diatom *Nitzschia closterium* was attributed to salinity (70% of the toxic effects) while 30% was attributed to the polyphosphonate antiscalant (Hobbs et al. 2008). In a recent mesocosm study in the Eastern Mediterranean, addition of phosphonate relieved immediately the phosphorus stress of the microbial community and in 10 days reduced bacterial diversity and increased eukaryotic diversity (Belkin et al. 2017).

52. Iron salts used as coagulants in the pre-treatment stage at the Ashkelon (Israel) SWRO and discharged in pulses at sea were found to decrease phytoplankton growth efficiency at the outfall in in situ studies while during a mesocosm experiment, the iron addition immediately altered the microbial community composition, enhanced the bacterial production and efficiency and decreased primary production. After 10 days, autotrophic biomass and assimilation number decreased compared to the reference (Drami et al. 2011, Belkin et al. 2017).

4.3. Emerging contaminants

53. The desalination industry is, as stated before, very dynamic, striving to improve yield, to reduce the amount of chemicals used in the process and discharged with the brine, and to use less hazardous substances (green chemistry). Therefore, it is hard to keep up with the changes and the environmental scientist should work in close cooperation with the desalination plants operators to be advised on the changes made in the process. For example, the Hadera (Israel) desalination plant now uses bio-flocculation instead of coagulation with iron salts as a pre-treatment step and therefore iron is no longer discharged with the brine.

54. An additional hindrance is that many of the chemicals (mainly coagulants and anti-scalants) are protected by patents; therefore the exact composition is usually proprietary and cannot be divulged. In this case, the active compound should be identified and compiled together with its

toxicological properties. It should be mentioned that known pollutants are also used in the process: such as acids, bases, cleaning solutions, metal salts as well as known corrosion products (metals).

55. Based on a review of existing technologies and state of play, the following contaminants emerge from desalination technologies:

Contaminants	Used/produced in desalination process	
	Membrane	Thermal
Fe salts, Al salts, organic polymers	Coagulant	Not used
Heavy metals Fe, Ni, Cr, Mo	Stainless steel Corrosion	Stainless steel Corrosion
Heavy metals Cu, Ni, Ti	Not relevant	Corrosion from heat
Chlorine, other oxidants	Biocide, Used but neutralized with bisulfite prior to disposal	Biocide Residual chlorine
Bisulfite	Biocide neutralizer	Not used
Polyglycol, detergents	Not Used	Antifoaming agent
Detergent, oxidants, complexing agents	Membrane cleaning	Not used
Polyphosphate, Polyphosphonate, organic polymers (polymaleic and polyacrylic acids)	Anti-scalant	Anti-scalant
Nutrients (phosphorus, nitrogen, carbon)	Anti-scalant	Anti-scalant
Alkaline solutions	Cleaning (neutralized prior to disposal)	Not used
Acidic solutions	Cleaning (neutralized prior to disposal)	Cleaning
	Not used	Corrosion inhibitors
Limestone (CaCO ₃)	pH and hardness adjustor of produced water	pH and hardness adjustor of produced water
Salt	Brine	Brine
Temperature	Not applicable	Brine

5. Legal aspects of brine disposal, in relation to the amended LBS Protocol, as well as commitment to achieve Good Environmental Status based on the Ecosystem Approach.

5.1. The amended LBS Protocol and seawater desalination

56. The amended LBS Protocol states that point source discharges into the marine environment should be authorized or regulated and a system of inspection and monitoring put into place. It includes

4 annexes and although desalination is not named as one of the sectors of activity to be considered when setting priorities for the preparation of action plans, the principles outlined in them can be applied to the desalination industry.

- i. Annex I lists 19 categories of substances and sources of pollution to be taken into account in the preparation of action plans, most of them relevant to desalination, such as organohalogen and nitrogen and phosphorus compounds, heavy metals, non-biodegradable detergents, thermal discharges, non-toxic substances that may have an adverse effect on oxygen concentration or on the physical and chemical characteristics of seawater.
- ii. Annex II describes the elements to be taken into account in the issue of the authorizations for discharges of wastes and provides a check list to be used during the Environmental Impact Assessment procedure (EIA, see chapter 6).
- iii. Annex III, atmospheric discharge touches the desalination industry only in the context of energy use and GHG emissions.
- iv. Annex IV specifies the criteria for the definition of Best Available Technology (BAT) and Best Environmental Practice (BEP) (See chapter 6).

57. Implementing Ecosystem approach (EcAp) to achieve and maintain Good environmental status (GES)

58. The term Ecosystem approach (EcAp) was first applied in a policy context at the Earth Summit in Rio in 1992, where it was adopted as an underpinning concept of the Convention on Biological Diversity (CBD) (Beaumont et al. 2007, UNEP/MAP 2016) and defined as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way”. The EcAp requires several elements, based on the DPSIR (driver, pressure, state, impact, response) conceptual framework (Farmer et al. 2012, Borja et al. 2016a, Borja et al. 2016b):

- i. defining the source of the pressures emanating from activities;
- ii. a risk assessment and risk management framework for each hazard;
- iii. a vertical integration of governance structures from the local to the global;
- iv. a framework of stakeholder involvement; and
- v. the delivery of ecosystem services and societal benefits (Elliott 2014).

59. It also requires and adaptive management to deal with the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning.

60. Ecosystem Approach is the overarching principle of UNEP/MAP with the ultimate objective to achieve and maintain Good Environmental Status (GES) of the Mediterranean Sea and Coast (UNEP/MAP 2012, 2014a, b, 2016). This principle was incorporated into the work of UNEP/MAP through a series of decisions agreed upon at meetings of the Barcelona Convention COP:

61. Decision IG.17/6 set forth the ecological vision for the Mediterranean: “A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations” and outlined a roadmap for the implementation of the Ecosystem Approach, setting out 7 steps including definition of vision and goals, development of 11 ecological objectives, operational objectives and respective indicators, the development of GES descriptors and targets, monitoring programs, and necessary measures to achieve GES. Decision IG.20/4 validated the work done regarding the 11 ecological objectives, operational objectives and indicators for the Mediterranean. Decision IG.21/3 on the Ecosystems Approach adopted definitions of GES and agreed on regionally common targets and indicators. The latest development related to the implementation of the Ecosystem Approach in the Mediterranean is the adoption of Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and related assessment criteria (IMAP) by the COP 19 (Decision IG. 22/7).

62. The 11 Ecological Objectives are⁶:

- i. Biodiversity is maintained or enhanced.
- ii. Non-indigenous species do not adversely alter the ecosystem.
- iii. Populations of commercially exploited fish and shellfish are within biologically safe limits.
- iv. Alterations to components of marine food webs do not have long-term adverse effects.
- v. Human-induced eutrophication is prevented.
- vi. Sea-floor integrity is maintained.
- vii. Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.
- viii. The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.
- ix. Contaminants cause no significant impact on coastal and marine ecosystems and human health.
- x. Marine and coastal litter does not adversely affect coastal and marine ecosystems.
- xi. Noise from human activities cause no significant impact on marine and coastal ecosystems.

63. Most of the Ecological and Operational objectives are applicable to the desalination industry both at the intake and discharge sites (see chapter 4). Therefore, while examining and monitoring the disposal site, care should be taken to add the parameters that will help define the environmental status prior to the start of operations and to follow long term trends.

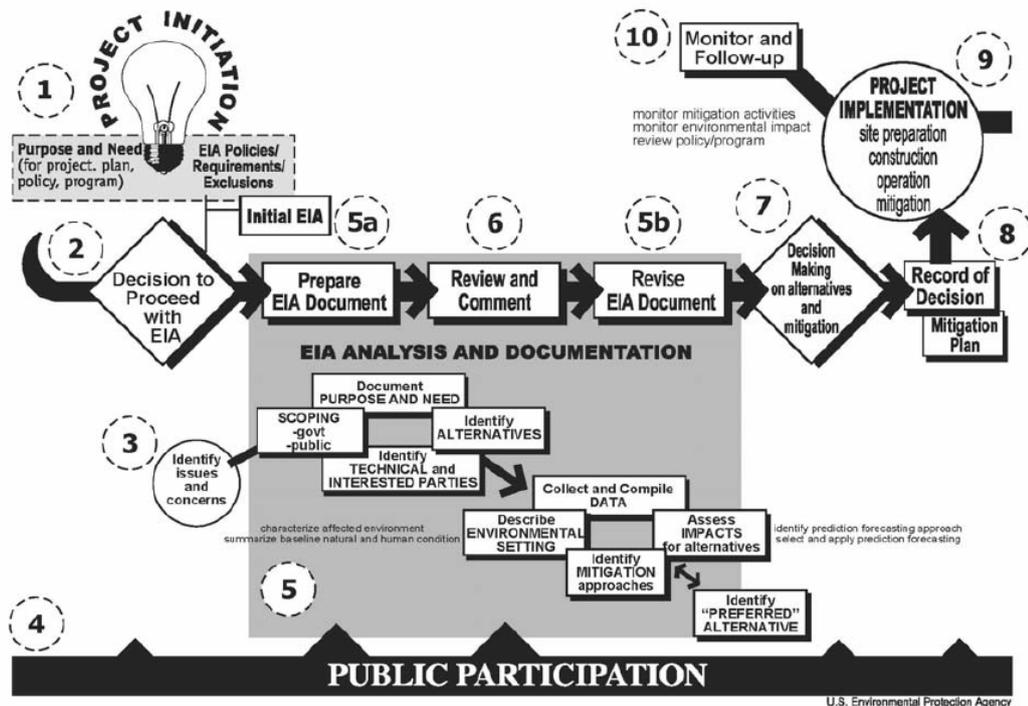
6. Environmental Impact Assessment (EIA)

64. Environmental Impact Assessment (EIA) is a process by which the anticipated effects on the environment of a proposed development or project are identified at the design and planning stages. If the likely effects are unacceptable, design measures or other relevant mitigation measures can be taken to reduce or avoid those effects. The EIA should be prepared by professionals and specialists in a multidisciplinary manner, and include engineers, environmental specialists, designers, and be performed within the national regulatory framework in conjunction with the decision makers. Stakeholders input should be encouraged. The EIA procedure has been extensively described in UNEP's guidance manual published in 2008 (UNEP 2008). A succinct depiction of the EIA is given in the following diagram⁷.

⁶<http://web.unep.org/unepmap/who-we-are/ecosystem-approach>

⁷<https://nepis.epa.gov/Exe/ZyNET.exe/50000I6K.txt?ZyActionD=ZyDocument&Client=EPA&Index=1995%20Thru%201999&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C95THRU99%5CTXT%5C00000013%5C50000I6K.txt&User=anonymous&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&slide>

THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS



65. Below is a description of the suggested steps and emphasis for an EIA process concerning the desalination industry. It serves as a general guideline; it is not all inclusive and should be adapted based on the specifics of the project and location of the desalination plant.

6.1. Project description

66. A general description of the purpose and need of the project should be given at the beginning of the EIA document. It should include the following information:

- Proposed location of the desalination plant
- Co-location with other industries (such as power plants)
- The onshore and offshore components of the plant (buildings, pumps, pipelines, brine outfall), planned construction activities and timeline
- Connection to the water supply grid.

6.2. Technology selection and characterization of discharges

67. A detailed technological description of the chosen desalination process should be part of the EIA, including the rationale for the choice. It should include the following information:

- The desalination technology chosen and engineering specifications
- Desalination capacity of the plant and future expansion plans
- Energy usage and source
- Area and method of source water intake (open intake, well intake)

- The treatment steps of the source water during the desalination process (among others the pre-treatment, biocide application, anti-scaling measures, cleaning stages, desalinated water treatment)
- Type of discharges and emissions (marine, terrestrial and atmospheric)
- Total volume of discharges and emissions (daily, yearly)
- Area and method of brine discharge (open discharge, co-discharge, marine outfall with or without diffusers)
- Brine discharge pattern (continuous, intermittent, variable)
- Physico-chemical characteristics of the brine (salinity, temperature, etc...)
- Concentrations and loads of discharged substances and their environmental characterization (such as persistent, toxicity, bioaccumulation)

6.3. Brine dispersion modelling

68. The EIA process in choosing the disposal site and methodology should be accompanied by modelling the dispersion of the brine. The models include, among others, near field and far field numerical modelling, circulation models, ecosystem models (Brenner 2003, Christensen and Walters 2004, Botelho et al. 2013, Purnama and Shao 2015, Abuqatayef et al. 2016)

6.4. Environmental setting description (terrestrial and marine)

69. Existing data on the land and marine habitat from the proposed planned desalination plant site, including the intake and discharge areas, should be compiled and critically analyzed. When no available data exist or when there are only partial or out of date data, surveys should be conducted prior to construction. The number of surveys and timing (i.e. seasonal) should be decided on a site specific basis. This information (compiled and/or new) will also provide a valuable reference (baseline) to be used for environmental monitoring following the start of operations (see Section 7). It is important that the methodology used in undertaking baseline investigations is documented so that the results of later monitoring can be referenced.

6.4.1 Terrestrial environment description

- Physical landscape characteristics (soil, habitat, geology)
- Current uses
- Archeological and cultural value
- Environmental value
- Proximity to protected areas, occurrence of protected species in the area

6.4.2 Marine environment description

- Oceanographic conditions and water quality in the area
- Current uses
- Sediment composition and bathymetry
- Biota in the seawater and benthic compartments, including endangered and alien species, proximity to protected areas.

6.5. Assessment of possible impacts

70. Assessment of possible impacts should be performed based on existing literature and when needed, complemented with laboratory studies such as toxicity and whole effluent test (WET), mesocosm experiments. As noted in section 4, the effects of seawater desalination on the marine environment are not well documented although the number of publications and the awareness have been increasing in the past years. The impacts emanate during the construction activities at land (building the desalination facility, pumping stations, pipelines, connecting to infrastructure), during the construction activities at sea (installation of intake and outfall), and during the operational phase (feed water intake and brine discharge).

6.5.1 Possible impacts during the construction phase

71. During the construction phase, the possible impacts originate from the construction activities at land (building the desalination facility, pumping stations, pipelines, connecting to infrastructure) and at sea (installation of intake and outfall). Most impacts are localized and may cease after the construction phase but may be significant during construction (UNEP 2008, Lokiec 2013).

Terrestrial

- Alteration of the natural terrain
- Impact on flora and fauna
- Impacts of construction wastes and excess soil
- Soil and groundwater pollution (fuels, oil)
- Air pollution (dust emission)
- Noise emission during construction work
- Damage to archeologic values and natural preserves

Marine

- Alteration of seabed (composition and bathymetry)
- Sediment resuspension during marine works (increased turbidity)
- Release of nutrients and pollutants (if present) with sediment resuspension
- Impact on the benthic biota due to alteration of the seabed and on benthic and pelagic biota due to increased turbidity and pollutants
- Effect on sensitive marine life due to noise, vibration and light
- Oil pollution from ships involved in the construction works.

6.5.2 Possible impacts after start of operations

72. After start of operations the following impacts may occur:

Terrestrial

- Permanent alteration of the coastal habitat environment
- Aesthetic impact due to plant structure, and obstruction of free passage along the seashore due to the location of the plant, onshore pipelines and pumping station

- Emission of GHG and air pollutants in the case of power generation on site
- Noise and light pollution
- Accidental spillage or leakage of chemicals
- Solid waste and sanitary sewage

Marine

- Permanent alteration of the marine habitat
- Changes in hydrography and sediment transport
- Impingement and entrainment of marine biota
- Water quality deterioration and biological effects due to the discharge of brine and chemicals used in the desalination process.
- Facilitating the introduction of non-indigenous species due to changes in habitat, in particular increased salinity and temperature
- Noise and light pollution

6.6. Impact mitigation

73. The EIA should include a description of measures to be undertaken in order to avoid, and mitigate likely negative impacts of the desalination plant on marine and coastal environment. Below is a list of steps to be considered in this regard, during the construction phase and after the start of the operations.

6.6.1 Impact mitigation during construction

74. During construction stage the following steps should be considered to mitigate the possible impacts

- Use of environmental friendly construction methods, such a pipe-jacking instead of open trenches for the installation of pipelines
- Rehabilitation of areas affected during construction
- Design assuring minimal alteration of the natural environment
- Recycling of construction wastes
- Use of containment basins for fuel and oil tanks
- Surface wetting to prevent air pollution by dust.
- At sea, pipe-jacking (as far as possible from shore), and controlled dredging beyond micro-tunneling technique.
- Covering of the trench after pipeline installation and restoration of the original bathymetry

6.6.2 *Impact mitigation after start of operations*

Terrestrial

- Minimal energy consumption (power plant fueled by natural gas or renewable energy)

- Acoustic insulation and minimal external lighting
- Minimal use of process chemicals – safety measures for transportation, storage and handling, containers for solid waste and authorized landfill disposal
- Pipelines laid underground

Marine

- Intake and outfall pipelines below the seabed to minimize marine habitat alteration
- Slow suction velocity to prevent impingement (or well drilling)
- Self-cleaning traveling screen for debris collection at the intake system and disposal in authorized waste disposal sites
- Chlorine dosing (shock treatment) into the intake in the direction of the plant avoiding discharge to the sea
- Outfall diffuser system to increase initial dilution and reduce salinity and temperature, or in open discharge, dilution with co-discharge, i.e. cooling water of power plant
- Reduction of brine discharge, increased recovery
- Reduction of use of chemicals in the process
- Land based treatment of backwash
- Use of environmental friendly chemicals
- Treatment of limestone reactors washing together with backwash
- Neutralize inorganic membrane cleaning solution prior to discharge.

6.7. Best Available Technology (BAT) and Best Environmental Practice (BEP)

75. The best available technology and the best environmental practice are defined in Annex IV of the amended LBS Protocol as follows: BAT “means the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste” and BEP “the application of the most appropriate combination of environmental control measures and strategies”.

76. These definitions were further addressed in the IPPC Directive to explain that "available" techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages while "best" shall mean most effective in achieving a high general level of protection of the environment as a whole.

77. It is recognized that BAT and BEP change with time following technological and scientific advances and with changes in economic and social factors. This is true in particular for the desalination industry that is in a constant state of rapid improvement and change due to the large research and engineering effort put into technological development. Therefore, BAT and BEP processes should follow them closely in order to:

- Increase recovery rates (efficiency of desalination)
- Minimize energy and chemical consumption
- Replace chemicals, such iron salts coagulants, anti-scalants, with more environmental friendly substances or with processes that do not require the use of chemicals

- Decrease discharges or increase near field dilution
- Reuse brine in novel desalination technologies to further increase freshwater yield
- Promote cleaner production

6.8. Sustainability

78. Sustainability integrates the evaluation of economic, environmental and social impacts in large projects, among them seawater desalination. The impacts are strongly interconnected and should be evaluated in an integrative way. The main goals are to save material and energy resources and reduce waste. Sustainability analysis should be implemented in the planning and design of the project prior to its construction and operation (Gude 2016, Lior 2017).

79. The sustainability evaluation defines indicators that measure economic, environmental economic and social impacts, their relative importance (or weights) and if possible, computes a single composite sustainability index, aggregating the indicators and their relative importance. While the viability of desalination used to be judged mainly on economics and production reliability now it includes environmental and social aspects as well.

80. Following are some of the indicators and considerations that should be taken into account during a sustainability study.

i. Economics

- Water use and demand
- Cost of alternative water sources (conservation of natural resources, rain collection, water treatment and re-use, prevention of water waste due to leaks and faulty pipes, more)
- Total unsubsidized cost of the desalinated water.
- Energy source and process technology
- Labour operation and maintenance cost

ii. Environment

- EIA and BAT approaches
- Effects on feedwater and its domain (intake and brine discharge)
- Resource depletion (brackish water desalination)
- GHG emissions
- Transboundary pollutant transport (brine discharge)

iii. Social

- Impacts on human health (desalinated water quality)
- Land use and rapid unplanned local growth, without accompanying infrastructure
- Social acceptance, confidence in desalinated water supply
- Impact on water consuming sectors such as agriculture
- Impact on recreational activities or other legitimate uses of the sea and the coastline

7. Environmental Monitoring

81. Environmental monitoring is a legal requirement addressed in the amended LBS protocol (article 8) as well as a scientific requirement to follow possible impacts of seawater desalination on the marine environment. The environmental monitoring should follow the baseline survey performed during the EIA (see paragraph 68) but not restricted by it. Monitoring during the construction phase will be different from the long term environmental monitoring needed during plant operations. There are a few publications addressing environmental monitoring at desalination plants (NRC 2008, UNEP 2008, Lattemann and Amy 2012). It is recommended to inform the relevant national authorities as soon as possible when deviations from the permitting conditions are observed during the monitoring survey.

7.1. Monitoring during the construction phase

82. Monitoring during the construction phase should be planned based on the possible effects originating from the construction activities in land and at sea (Section 6.5). The purpose is to assess if an activity is within acceptable impact and if not, introduce mitigation measures as soon as possible.

83. The terrestrial monitoring during construction should include:

- i. Monitoring the disposal of construction wastes on site to prevent damage to land not within the area
- ii. Monitoring accidental discharge of fuel, oil, other substances and dust, to prevent soil, atmosphere and ground water pollution
- iii. Monitor noise and light levels and if needed, limit hours of operations
- iv. At the end of construction, the area should be inspected to check if measures were applied to rehabilitate the area that no trenches were left open, that all non-permanent constructions were removed, etc.

84. The marine monitoring during the construction should include

- i. Monitoring the water turbidity levels, and if above a pre-determined value, regulate dredging operations
- ii. At sensitive areas where the sediments are suspected to be polluted, follow the release of pollutants into the water column
- iii. Monitor noise, vibration and light levels that may be a hindrance to marine mammals and other sensitive marine life
- iv. Monitor the sediment quality used to cover the pipelines, if not from local source
- v. At the end of construction, all marine installations should be mapped in an updated bathymetry map.
- vi. Seagrass and macroalgae beds should be monitored for recovery

7.2. Long term monitoring following start of operations

85. Regular monitoring of the marine environment following the start of plant operations should be a long-term commitment, throughout the lifetime of the desalination plant and some years beyond, in line with the permitting conditions. These long-term data series with proper controls are essential to normalize for natural temporal variability in order to prevent erroneous conclusions on the environmental effects of seawater desalination.

86. The monitoring plan should be based on the EIA document and other environmental management documents performed prior to the plant construction and in line with the permitting conditions. The monitoring data should be analyzed regularly and critically to allow for changes in the monitoring design when needed, to enforce permitting license requirements, and to require mitigation steps when effects are deemed excessive. The data should be published and disseminated to the community to afford feedback to the regulators and scientist performing the monitoring.

87. Following are the general recommended components of a monitoring study. The specific monitoring should be adapted based on the environmental setting and sensitivity, the desalination technology, including the intake and brine discharge methods, and in accordance with international and national legislation and requirements. The monitoring program should be approved by the national regulators prior to its implementation.

7.2.1. Marine Sampling

88. Sampling frequency and methods should be decided based on the site-specific characteristics. It is recommended that at the beginning, monitoring should be conducted at least twice each year at relevant seasons (i.e, winter and summer or spring and fall). It is recommended to include additional surveys during plant cleaning operations.

89. Sampling stations. The initial design of the sampling stations should be based on the brine dispersion pattern obtained from the modelling results. Two sampling grids are required: one extensive grid of stations to follow and delimit the brine plume dispersion and spreading at the time of the survey (hereafter dispersion stations), and one smaller grid of stations to sample water, sediment and biota to assess the effects of brine discharge (hereafter sampling stations). The dispersion stations array should be flexible, and updated *in situ* based on the actual brine dispersion (as determined by seawater temperature and salinity measured during the survey) and/or following the examination of the monitoring data⁸. The sampling stations should be positioned in three general areas: impacted areas (within the mixing zone, where salinity and temperature are at the highest), affected areas (beyond the mixing zone but still under the influence of the brine) and reference areas (where no brine is present). Three to four stations are recommended to be sampled at each area.

90. The Sampling vessel should be equipped with accurate global positioning system and be able to accommodate the scientific instrumentation and personnel. During sampling a detailed log should be kept, including the survey date, name of participants, meteorological and sea state condition (air temperature, winds, currents, waves), the exact position of each station (latitude, longitude, depth), time that station was occupied and what was sampled, any unusual occurrence during sampling or at the sea.

91. Parameters to be measured. In general, the decision on the parameters to be measured should be based on the expected discharges from the desalination plant, identified in the EIA, and on the ecological and operational objectives and GES definition.

92. At the dispersion stations, continuous depth profiles of temperature, salinity, dissolved oxygen, fluorescence and turbidity should be measured.

93. At the sampling stations, three compartments will be sampled: seawater, sediment and biota.

- i. Seawater: The basic parameters include continuous depth profiles as in the dispersion stations, the concentration of suspended particulate matter, nutrients (nitrate, nitrite, ammonium, total nitrogen, phosphate, total phosphorus, silicic acid), metals, chlorophyll-a, substances discharged at sea and identified in the EIA. The following parameters of seawater biota are optional and should be considered based on the area characteristics: microbial population (phytoplankton and bacterial numbers) and composition, primary and bacterial production rates, zooplankton population (number and composition)⁹.

⁸ In situ monitoring stations with instruments recording temperature, salinity, dissolved oxygen and fluorescence should be considered. However it is recognized that this may be difficult to implement due to the high cost of the instrument and maintenance.

⁹ Genomic tools are seen as a promising and emerging avenue to improve ecosystem monitoring, as these approaches have the potential to provide new, more accurate, and cost-effective measures. The most promising is metabarcoding

- ii. Sediment. The basic parameters include sediment size distribution (granulometry), heavy metal (such as mercury, cadmium, copper, zinc, iron, aluminium) and organic carbon concentration, in fauna community structure (number of specimens, taxonomic determination to the species level if possible)¹⁰. If the discharge area is rocky, the sessile population should be characterized and assessed. If the discharge area is located near seagrass and macroalgae beds, those should be also characterized and assessed.
- iii. Biota. In addition to the parameters mentioned in the seawater and sediment samples, endangered species and invasive species identified in the EIA should be monitored.

94. Sampling methods should be adequate to allow for the representative collection of the samples. *In situ* measuring instrumentation should be calibrated according to the manufacturer specifications.

95. Sample collection. Samples should be marked and assigned unique identifiers. On a long-term monitoring program the same station will be occupied repeatedly, therefore the sampling date should be one of the identifiers to prevent confusion. The samples should be preserved adequately following sampling, during transportation and up to the measurement stage in the laboratory.

96. Analytical methods. The analytical measurements should be performed preferably by accredited laboratories, and if unavailable, by laboratories with quality control/ quality assurance methodologies. The analytical method chosen should be accurate and precise to allow for the assessment of the brine impact, and to follow temporal changes.

7.2.2. Monitoring report

97. The monitoring report should include:

- i. An introduction describing the desalination plant technology, monthly production, intake and brine discharge (volume and composition), any malfunction that may have impacted the marine environment (such as unplanned discharge of solid material)
- ii. A detailed description of the monitoring survey, including dates, sea state, sampling station locations, identity of samples taken at each station, sampling methods, sampling preservation methods and analytical methods
- iii. Results, with tables of all the data collected in situ and in the laboratory
- iv. Discussion, including maps of the brine dispersal, assessment of impacts based on the EIA and literature
- v. Conclusions
- vi. Recommendations for the continuing monitoring such as changes in station number and location, in parameters measured, in the frequency of sampling.

7.2.3. In-plant monitoring

98. In-plant monitoring should include water quality of the source water (seawater intake) and the volume and composition of the brine.

- i. Seawater intake: Concentrate in parameters that may affect the desalination process and the quality of the desalinated water.
- ii. Brine prior to disposal: Discharge volume, temperature, salinity, concentration of chemicals used in the desalination process and discharged with the brine.

¹⁰ Genomic tools are seen as a promising and emerging avenue to improve ecosystem monitoring, as these approaches have the potential to provide new, more accurate, and cost-effective measures. The most promising is metabarcoding

Appendix 1
Questionnaire
Seawater desalination status in the Mediterranean Region

Questionnaire
Seawater desalination status in the Mediterranean Region

1. General Questions– Only for plants along or near the Mediterranean Coast

1.1. Country: _____

1.2. How many desalination plants are in operation in your country along or near the Mediterranean Coast? _____

1.2.1. How many plants desalinate seawater? _____

1.2.2. How many plants desalinate brackish water? _____

1.2.3. How many plants have a production capacity $>50,000 \text{ m}^3/\text{day}$? _____

1.3. What is the total annual production of desalinated water? _____

1.3.1. What is the total annual production of desalinated water? _____

1.3.2. What is the actual total annual production originating from seawater desalination? _____

1.4. Are there more desalination plants at the planning/construction stage along the Mediterranean coast? _____

1.4.1. How many? _____

1.4.2. Total planned desalination production _____

1.4.3. Expected year for start of production _____

2. Detailed information for large size plants (>10,000 m³/day, 3.65 Mm³/year production) only along the Mediterranean Coast. (Please copy table for additional columns).

	Plant Name	Plant Name	Plant Name	Plant Name	Plant Name	Plant Name
Name						
Year starting to operate						
Location¹						
Desalination Technology²						
Production, m³/day						
Method of brine discharge³						
Co- discharge with brine⁴						
Chemicals used in the desalination process⁵						
Coagulants						
Anti-Scalant						
Biocides						
Water Hardener						
Other						
Chemicals co-discharged with brine⁶						
Is there a marine monitoring program in place?						

¹Location: city, area

²Desalination technology: **RO**-Reverse Osmosis, **MSF**-Multi Stage Flash, **MED** - Multi Effect Distillation, **Other** – please add technology

³Method of Brine discharge: **OD**-Open discharge, **MO**- Marine outfall, **Other** – please add details

⁴Co-discharge with brine: Other discharges, for example, cooling waters from Electric power stations

⁵Please name the chemicals: i.e. Coagulants – iron salts (**FE**); anti-scalant- polyphosphonates (Ppho), **If the identity of the chemical is unknown, please add yes or no**

⁶Please name the chemicals discharged with the brine

Appendix 2
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Programme of Work and Budget 2018-2019

Decision IG.23/14
Programme of Work and Budget for 2018–2019

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean at their twentieth meeting,

Recalling articles 18 and 24 (2) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, hereinafter referred to as “the Barcelona Convention”, and decision IG.21/15 on the Financial Rules and Procedures of the Barcelona Convention, adopted by the Contracting Parties at their eighteenth meeting (COP 18) (Istanbul, Turkey, 3-6 December 2013),

Recalling also decision IG.22/1 on the Mid-term Strategy for 2016–2021 as the framework for the development and implementation of the Programme of Work of the United Nations Environment Programme Mediterranean Action Plan, adopted by the Contracting Parties at their nineteenth meeting (COP 19) (Athens, Greece, 9-12 February 2016),

Recalling decision IG. 17/5 of COP 15 (Almeria, Spain, January 2008) adopting the “Governance Paper” and decision IG.19/5 of COP 16 (Marrakesh, Morocco, 3-5 November 2009) adopting the mandates of the Components of MAP,

Welcoming the progress report on the activities carried out during the biennium 2016–2017 and the related expenditure report,

Being aware of the need to further strengthen cooperation and coordination among the Contracting Parties, the Secretariat and the MAP Components for the implementation of the biennial Programmes of Work as set out in the Governance Paper adopted at COP 15,

Emphasizing the need for stable, adequate and predictable financial resources for the Mediterranean Action Plan and the Mediterranean Trust Fund,

Welcoming the improvement in the rate of collection of assessed contributions and the establishment of the Working Capital Reserve at the level of 15 per cent of the annual expenditure during the last two biennia,

Welcoming the achievement of a significant balance of the Mediterranean Trust Fund,

Expressing deep appreciation to the Contracting Parties and other partners that have provided additional financial and other resources for the implementation of the activities of the biennium 2016–2017, including the Italian Cooperation Agreement, and welcoming the financial resources mobilized by the secretariat, including regional activity centres for the same purpose,

Appreciating the offer by the Government of Greece of new premises to host the Coordinating Unit in Athens within the biennium 2017–2018,

Understanding that the detailed Programme of Work will be further elaborated in consultations between the Coordinating Unit and other Mediterranean Action Plan components through activity fiches,¹

1. *Approve* the Programme of Work and Budget for 2018–2019 as set out in the Annex to the present decision;

2. *Also approve* the budget appropriations, as set out in table 1 “Overview of income and commitments” of the annex to the present decision, in the amount of 13,886,051 euros composed of the Mediterranean Trust Fund of 11,413,576 euros the European Union discretionary contribution of 1,192,968 euros and the host country contribution of 800,000 United States dollars, inclusive of the amount set aside to cover the deficit in the host Government contribution account and the savings of 545,107 euro from the Mediterranean Trust Fund from previous biennium;

¹ ref:UNEP(DEPI)/MED WG.443/Inf.9

3. *Further approve* the assessed 2018–2019 ordinary contributions from Contracting Parties shown in table 2 “Expected Ordinary Income” of the Annex to the present decision, which reflects the 2016–2018 scale of assessment adopted by the United Nations General Assembly at its seventieth session on 23 December 2015 by resolution 70/245 and confirms the importance of keeping the scale used for ordinary contributions up to date;
4. *Request* the Executive Director of the United Nations Environment Programme, in consultation with the United Nations Environment Assembly of the United Nations Environment Programme, to extend the Mediterranean Trust Fund until 31 December 2019;
5. *Approve* the staffing of the Coordinating Unit, including the Programme for the Assessment and Control of Marine Pollution in the Mediterranean for the biennium 2018–2019, as indicated in table 4a “Details of Salaries and Administrative Costs of the Secretariat” in the annex to the present decision;
6. *Welcome* the offer of Italy to provide support for a post of Information and Communications Officer in the Coordinating Unit during the biennium 2018–2019 from the Italian bilateral agreement which will allow the Contracting Parties to further consider the long-term need for that post;
7. *Take note* of the staffing of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea for the biennium 2018–2019 as indicated in table 4c “Details of salaries and administrative costs (REMPEC)”, set out in the Annex to the present decision;
8. *Authorize* the Coordinating Unit to charge the one-time cost of the move to the new premises during the biennium 2018–2019 to the savings achieved during the biennium 2016–2017, keeping the Bureau of the Barcelona Convention fully informed;
9. *Urge* the Contracting Parties to pay their contributions to the Mediterranean Trust Fund in accordance with procedure 4.2 of the Financial Rules and Procedures to allow for the full and effective implementation of the Programme of Work;
10. *Request* the Secretariat to keep up-to-date information on the status of contributions of the Contracting Parties to the Mediterranean Trust Fund and to continue to post it in a publicly available place on the Mediterranean Action Plan website;
11. *Urge* the Contracting Parties to adhere to nomination deadlines of their representatives in meetings of the Mediterranean Action Plan system and to avoid late cancellation of their travel in order to minimize the financial implications and losses arising from the increase in airfare and cancellation fees;
12. *Urge* the Contracting Parties to consider increasing their voluntary contributions in cash or in kind in support of the implementation of the Programme of Work for 2018–2019;
13. *Invite* other partners, including industry, to contribute adequate human and financial resources to meet the external funding requirements for priorities still unfunded under the Programme of Work and Budget for 2018–2019 and to support the resource mobilization activities of the Secretariat;

14. *Request* the Secretariat, in consultation with the Bureau, to prepare for consideration and approval by the Contracting Parties at their twenty-first meeting two alternatives for a simplified and more strategic results-based Programme of Work and Budget for 2020–2021. These proposals should be in line with the relevant provisions of the “Governance Paper” and Decision IG. 19/5 of COP 16, in full alignment with the Mid-term Strategy, and take into account the progress achieved during the implementation of the Programme of Work for 2018–2019, explaining the key principles and assumptions on which it is based, draw attention to significant changes between 2018-2019 and the 2020-2021 Programme of Work and provide a summary analysis and narrative explanations of the budget tables showing the share of the core Mediterranean Trust Fund going to each theme of the Mid-Term Strategy, as well as of the external secured and non-secured funding;

15. The alternatives should take into account the continued existence of a surplus in the Mediterranean Trust Fund which should be used to ensure that contributions remain level. The alternatives should:

- a. make an assessment of the required rate of growth for the core expenditure budget which should not exceed a 4% increase from the 2018-2019 biennium;
- b. maintain the core expenditure budget at the 2018-2019 level in nominal terms.

Annex
Programme of Work and Budget 2018-2019

1. Overview of Income and Commitments

All amounts in €

Part A (Core Funding)

exchange rate

0.945

exchange rate

0.918

<i>A. Income</i>	<i>Approved 2016</i>	<i>Approved 2017</i>	<i>Total 2016-2017</i>	<i>Proposed 2018</i>	<i>Proposed 2019</i>	<i>Total 2018-2019</i>
<i>Expected Ordinary Income</i>						
MTF Ordinary Contributions	5,706,788	5,706,788	11,413,577	5,706,788	5,706,788	11,413,576
EU Discretionary Contribution	596,484	596,484	1,192,968	596,484	596,484	1,192,968
Greek Host Government Contribution ⁽¹⁾	378,000	378,000	756,000	367,200	367,200	734,400
<i>TOTAL of Expected Ordinary Income</i>	6,681,272	6,681,272	13,362,545	6,670,472	6,670,472	13,340,944
<i>B. Savings to be used</i>				374,771	170,336	545,107
<i>Total Available Funds</i>				7,045,243	6,840,808	13,886,051
<i>C. Commitments</i>	<i>Approved 2016</i>	<i>Approved 2017</i>	<i>Total 2016-2017</i>	<i>Proposed 2018</i>	<i>Proposed 2019</i>	<i>Total 2018-2019</i>
Activities	2,145,200	2,096,850	4,242,050	2,197,582	1,904,304	4,101,886
Posts and Other Administrative Costs	3,771,916	3,820,266	7,592,182	4,019,821	4,200,264	8,220,085
Programme Support Costs	680,781	680,781	1,361,562	720,959	701,815	1,422,774
<i>TOTAL Regular Commitments</i>	6,597,897	6,597,897	13,195,794	6,938,362	6,806,383	13,744,745
<i>Provision for Working Capital Reserve (incl. PSC)</i>	12,500	12,500	25,000	38,031		38,031
<i>Grand Total</i>	6,610,397	6,610,397	13,220,794	6,976,393	6,806,383	13,782,776

Difference between Income and Commitments (CAL) ⁽²⁾	70,875	70,875	141,750	68,850	34,425	103,275
				0	0	0

Part B (External Funding)

	<i>Total 2016-2017</i>	<i>Total 2018-2019</i>
UNEP/MAP Project Funding	2,006,500	9,018,339
Resources mobilized by Components	6,007,500	2,720,000
Resources to be mobilized	6,988,180	2,345,000
TOTAL	15,002,180	14,083,339

Part C (RAC's Hosting Countries' Contributions)⁽³⁾

<i>Country (Center)</i>	<i>2016</i>	<i>2017</i>	<i>Total 2016-2017</i>	<i>2018</i>	<i>2019</i>	<i>Total 2018-2019</i>
Croatia (PAP/RAC)	159,666	159,666	319,332	159,666	159,666	319,332
France (BP/RAC)	524,000	524,000	1,048,000			
Italy (INFO/RAC)	231,679	100,000	331,679	100,000	100,000	200,000
Malta (REMPEC) ⁽⁴⁾	209,000	209,000	418,000	255,000	255,000	510,000
Spain (CP/RAC)						
Tunisia (SPA/RAC)	90,000	90,000	180,000	90,000	90,000	180,000
TOTAL of Host Country Contributions (in cash/kind)	1,214,345	1,082,666	2,297,011	604,666	604,666	1,209,332

(1): The equivalent of USD 400,000 in EUR using the budget rate (0.945 for 2016-2017, 0.918 for 2018-2019).

(2): The deficit recovery is planned to be completed in 2019.

(3): The Hosting Countries Contributions Table will be completed reflecting inputs from the Hosting Countries.

(4): Malta contributes EUR 250,000 for office premises and EUR 5,000 for the maintenance agreement annually.

2. Expected Ordinary Income

Contracting Parties	2016-2017 %	Ordinary Contributions for 2016 (in €)	Ordinary Contributions for 2017 (in €)	2018-2019 %	Ordinary Contributions for 2018 (in €)⁽¹⁾	Ordinary Contributions for 2019 (in €)
Albania	0.06	3,217	3,217	0.06	3,217	3,217
Algeria	1.13	64,746	64,746	1.13	64,746	64,746
Bosnia and Herzegovina	0.09	5,228	5,228	0.09	5,228	5,228
Croatia	0.70	39,813	39,813	0.70	39,813	39,813
Cyprus	0.30	17,292	17,292	0.30	17,292	17,292
EU	2.50	142,670	142,670	2.50	142,670	142,670
Egypt	1.07	61,126	61,126	1.07	61,126	61,126
France	34.24	1,954,037	1,954,037	34.24	1,954,037	1,954,037
Greece	3.32	189,412	189,412	3.32	189,412	189,412
Israel	3.03	172,924	172,924	3.03	172,924	172,924
Italy	26.41	1,507,250	1,507,250	26.41	1,507,250	1,507,250
Lebanon	0.32	18,499	18,499	0.32	18,499	18,499
Libya	0.88	50,268	50,268	0.88	50,268	50,268
Malta	0.11	6,434	6,434	0.11	6,434	6,434
Monaco	0.07	4,021	4,021	0.07	4,021	4,021
Montenegro	0.03	1,609	1,609	0.03	1,609	1,609
Morocco	0.38	21,716	21,716	0.38	21,716	21,716
Slovenia	0.59	33,780	33,780	0.59	33,780	33,780
Spain	17.22	982,447	982,447	17.22	982,447	982,447
Syria	0.17	9,652	9,652	0.17	9,652	9,652
Tunisia	0.20	11,260	11,260	0.20	11,260	11,260
Turkey	7.17	409,387	409,387	7.17	409,387	409,387
TOTAL ORDINARY CONTRIBUTIONS (MTF)	100.00	5,706,788	5,706,788	100.00	5,706,788	5,706,788

ADDITIONAL CONTRIBUTIONS

EU Discretionary		596,484	596,484		596,484	596,484
Host Country (Greece) ⁽²⁾		378,000	378,000		367,200	367,200

(1): The proposed contributions for 2018-2019 include 100% alignment with current UN assessed rates (2016-2018).

(2): The equivalent of USD 400,000 in EUR using the budget rate (0.945 for 2016-2017 and 0.918 for 2018-2019).

3. Summary of Activities and Administrative Costs by Component (MTF/EU discr.)

(in €)	Approved Budget (in €)			Proposed Budget (in €)		
	2016	2017	Total 2016-2017	2018	2019	Total 2018-2019
SECRETARIAT						
TOTAL ACTIVITIES	1,102,300	1,221,000	2,323,300	1,062,636	1,082,969	2,145,605
POSTS AND OTHER ADMINISTRATIVE COSTS	1,566,150	1,601,880	3,168,030	1,793,953	1,932,814	3,726,767
TOTAL	2,668,450	2,822,880	5,491,330	2,856,589	3,015,783	5,872,372
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE (REMPEC)						
TOTAL ACTIVITIES	177,000	111,000	288,000	222,000	86,000	308,000
ADMINISTRATIVE SUPPORT	579,328	591,947	1,171,274	595,704	602,861	1,198,565
TOTAL	756,328	702,947	1,459,274	817,704	688,861	1,506,565
BLUE PLAN REGIONAL ACTIVITY CENTRE (BP/RAC)						
TOTAL ACTIVITIES	209,000	105,000	314,000	280,800	90,600	371,400
ADMINISTRATIVE SUPPORT	450,200	450,200	900,400	452,700	452,700	905,400
TOTAL	659,200	555,200	1,214,400	733,500	543,300	1,276,800
PRIORITY ACTIONS PROGRAMME REGIONAL ACTIVITY CENTRE (PAP/RAC)						
TOTAL ACTIVITIES	254,600	215,600	470,200	157,146	168,735	325,881
ADMINISTRATIVE SUPPORT	435,817	435,817	871,634	438,317	438,317	876,634
TOTAL	690,417	651,417	1,341,834	595,463	607,052	1,202,515
SPECIALLY PROTECTED AREAS REGIONAL ACTIVITY CENTRE (SPA/RAC)						
TOTAL ACTIVITIES	282,300	319,250	601,550	275,000	301,000	576,000
ADMINISTRATIVE SUPPORT	344,047	344,047	688,094	346,547	346,547	693,094
TOTAL	626,347	663,297	1,289,644	621,547	647,547	1,269,094
INFO/RAC						
TOTAL ACTIVITIES	80,000	50,000	130,000	80,000	70,000	150,000
ADMINISTRATIVE SUPPORT	36,750	36,750	73,500	39,250	39,250	78,500
TOTAL	116,750	86,750	203,500	119,250	109,250	228,500
SUSTAINABLE CONSUMPTION AND PRODUCTION REGIONAL ACTIVITY CENTRE (SCP/RAC)						
TOTAL ACTIVITIES	40,000	75,000	115,000	120,000	105,000	225,000
ADMINISTRATIVE SUPPORT	52,500	52,500	105,000	55,000	55,000	110,000
TOTAL	92,500	127,500	220,000	175,000	160,000	335,000
SUBTOTAL	5,609,992	5,609,991	11,219,982	5,919,053	5,771,793	11,690,846
PROGRAMME SUPPORT COSTS	680,781	680,781	1,361,562	720,959	701,815	1,422,774
GRAND TOTAL	6,290,773	6,290,772	12,581,544	6,640,012	6,473,608	13,113,620

Table 4a. Details of Salaries and Administrative Costs (Secretariat)

Secretariat	Approved Budget (in €)			Proposed Budget (in €) with 1% increase		
	2016	2017	Total 2016-2017	2018	2019	Total 2018-2019
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff³						
Coordinator - D.1	218,596	225,154	443,750	227,405	229,679	457,084
Deputy Coordinator - P.5	197,266	203,184	400,449	205,215	207,268	412,483
Programme Officer (Governance) - P.4	169,615	174,704	344,319	176,451	178,215	354,666
Programme Officer (MEDPOL) - P.4	169,615	174,704	344,319	176,451	178,215	354,666
Programme Officer (MEDPOL Monitoring & Assessment Officer) - P.3	143,466	147,770	291,235	149,247	150,740	299,987
Programme Officer (Socio-economic Activities/Sust. Development) - P.3	143,466	147,770	291,235	149,247	150,740	299,987
Programme Officer (MED POL Pollution) - P.3 ⁵	0	0	0	149,247	150,740	299,987
Legal Officer - P.3	143,466	147,770	291,235	149,247	150,740	299,987
Programme Officer QSR Expert - P.3 ⁴				0	150,740	150,740
Admin/Fund Management Officer - P.4 ¹	0	0	0	0	0	0
Total Professional Staff	1,185,489	1,221,053	2,406,542	1,382,510	1,547,077	2,929,587
General Service Staff						
Meetings and Procurement Assistant - G.6 ¹	0	0	0	0	0	0
Payments and Travel Assistant - G.5 ¹	0	0	0	0	0	0
Budget Assistant - G.6 ¹	0	0	0	0	0	0
Administrative Assistant - G.6 ¹	0	0	0	0	0	0
Information Assistant- G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Programme Assistant (MEDPOL) - G.5	54,000	54,000	108,000	54,000	54,000	108,000
Administrative Clerk - G.4 ¹	0	0	0	0	0	0
Total General Service Staff	216,000	216,000	432,000	216,000	216,000	432,000
TOTAL POSTS	1,401,489	1,437,053	2,838,542	1,598,510	1,763,077	3,361,587
Other Administrative Costs						
Travel on Official Business	110,000	115,000	225,000	120,000	120,000	240,000
Other Office costs ²	54,661	49,827	104,488	75,443	49,737	125,180
Total Other Administrative Costs	164,661	164,827	329,488	195,443	169,737	365,180
TOTAL POST AND OTHER ADMINISTRATIVE COSTS	1,566,150	1,601,880	3,168,030	1,793,953	1,932,814	3,726,767

(1) Post is covered by the Programme Support Costs.

(2) Allocation for MAP staff training, ICT services and MAP Office contingency plan development.

(3) One percent increase in the international staff cost in 2018 and 2019.

(4) The post is only for one year and will be financed by the savings.

(5) The Post was financed with external resources funding in 2016-2017. It will be financed by the Mediterranean Trust Fund (MTF) in 2018-2019 as a core post of MED POL approved by COP 18 (Istanbul, Turkey, 3-6 December 2013).

Table 4b.

UNEP/MAP posts funded with external resources			
Project Pool Management Officer, P.4 (GEF/EC MPA Projects)			
Project Assistant, G.4 (GEF/EC MPA Projects)			
Ecosystems Project Management Officer, P.3 (GCGP EcAp II project)			
Ecosystems Programme Management Assistant, G.5 (GCGP EcAp II project)			
Project Pool Budget and Finance Assistant			
	2018	2019	Total
Information and Communication Officer, P3 (pledged by the Government of Italy)	150,000€	150,000 €	300,000 €

REMPEC	Approved Budget (in €)			Proposed Budget (in €)		
	2016	2017	Total 2016-2017	2018	2019	Total 2018-2019
	MTF	MTF	MTF	MTF	MTF	MTF
Professional Staff⁽⁴⁾						
Head of Office P.4	158,455	163,446	321,901	165,080	166,731	331,811
Programme Officer (Prevention) P.3	122,470	124,918	247,388	126,167	127,429	253,596
Programme Officer (OPRC) P.3	128,020	130,270	258,290	131,573	132,888	264,461
Programme Officer (Offshore) P.3 ⁽¹⁾	0	0	0	0	0	0
Associate Professional Officer (APO) ⁽²⁾	0	0	0	0	0	0
Total Professional Staff	408,945	418,634	827,579	422,820	427,048	849,868
General Service Staff						
Administrative/Financial Assistant - G7 ⁽³⁾	24,644	25,773	50,417	24,644	25,773	50,417
Assistant to the Director - G.7	36,319	37,408	73,727	36,319	37,408	73,727
Secretary - G.5	26,293	27,004	53,297	26,293	27,004	53,297
Total General Service Staff	87,256	90,186	177,441	87,256	90,185	177,441
TOTAL POSTS	496,201	508,820	1,005,020	510,076	517,233	1,027,309
Other Administrative Costs						
Travel on Official Business	35,000	35,000	70,000	35,000	35,000	70,000
Office costs	48,127	48,127	96,254	50,628	50,628	101,256
Total Other Administrative Costs	83,127	83,127	166,254	85,628	85,628	171,256
TOTAL POST AND OTHER ADMINISTRATIVE COSTS	579,328	591,947	1,171,274	595,704	602,861	1,198,565
(1) This post could consist of a secondment made available for the implementation of the proposed activities in the PoW for the biennium 2018-19 in relation to the Offshore Action Plan or could be funded through projects.						
(2) This post will be covered by the relevant International Maritime Organization Member State in the framework of the IMO Associate Professional Officer (APO) programme.						
(3) This post is partially covered by IMO contribution (Euro 13,000 per annum) paid from IMO's share of Project Support Costs.						
(4) One percent annual increase on the international staff costs for 2018 and 2019.						

THEME 1: Governance												
Strategic objectives: 1. To strengthen regional and national governance mechanisms, resource availability and capacity for the implementation of and compliance with the Barcelona Convention, its Protocols, the Mediterranean Strategy for Sustainable Development and the adopted regional Strategies and Action Plans; 2. To mobilize additional resources to Mediterranean Trust Fund in order to increase its impacts; 3. To strengthen synergies, complementarities, and collaboration among international and regional partners and organizations active in the Mediterranean region, and enhance stakeholders' participation and outreach; 4. To deliver knowledge-based assessments of the Mediterranean environment and scenario development for informed decision-making and stakeholder work; 5. To ensure visibility of the MAP/Barcelona Convention, its role and achievements.												
2018-2019 Indicators: 1. Number of new ratifications of Barcelona Convention and its Protocols; 2. Level of satisfaction of services rendered to MAP meetings; 3. Share of external financial resources mobilized to finance MTF for the implementation of the Mid-Term Strategy; 4. Number of Parties reporting on the implementation of the Barcelona Convention and its Protocols; 5. Percentage of biennial increase of civil society organizations and private sector partnering with MAP; 6. Number of MoUs/MoCs concluded or renewed; 7. Number of joint activities with partners; 8. Number of countries updating and implementing integrated EcAp based monitoring programmes; 9. Number of reports, factsheets and other scientific publications produced by the MAP System; 10. Number of Info/MAP services provided and of data set/data services made available through Info/MAP platform; 11. Number of SEIS national nodes developed; 12. Number of downloads of publications available on MAP system websites; 13. Number of communication products released; 14. Number of events featuring MAP system; 15. Number of hits on the UNEP/MAP and MAP Components websites.						2018-2019 Targets: 1. At least additional 2 ratifications; 2. 80% level of satisfaction; 3. At least 30% of total MTF budget; 4. 22 Parties; 5. At least 20% compared to the current number; 6. 4 MoU/MoC concluded or updated; 7. 12 joint activities with Partners; 8. 21 countries; 9. 15 reports and factsheets; 10. At least 4 services; 11. At least for 8 countries; 12. At least 250 downloads per annum for each website; 13. 10 communication products released; 14. 50 events in other fora and 6 MAP events; 15. At least 20,000 total hits per annum.						
MTS. Number	MTS Key outputs	Proposed Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
1.1: Contracting Parties supported in the implementation of the Barcelona Convention, its Protocols, Regional Strategies and Action Plans												
1.1.1.	Ratification of the Barcelona Convention and its Protocols by all Contracting Parties supported.	1. Follow-up and promote ratification with a particular focus on those Protocols not yet entered into force or ratified by less than 50% of CP.	Letters, Missions to concerned countries, Communicate with Depositary and Contracting Parties, Embassies in Athens	CU	MED POL, PAP/RA C, REMPEC, SPA/RA C	a) Support under CU guidance, provided to CPs in their efforts to better understand Protocols' obligations and related measures for its implementation in view of enabling the conditions for ratification; b) Universal ratification of the amendments to the Barcelona Convention; c) Increased number of ratifications of the Protocols	5.000 €	5.000 €	10.000 €			
1.1.2.	Effective legal, policy, and logistic support provided to MAP decision-making process including advisory bodies meetings.	1. Organize COP 21	Prepare pre and in-session working documents in 4 languages, information documents, ensure conference services, venue, draft press releases, organize side events, make travel arrangements for 1 participant per CP and up to 10 representatives from MAP partners (civil society)	CU	All Components	a) COP21 successfully delivered; b) Progress achieved during the biennium 2018-2019 reviewed; c) COP 21 Declaration, Decisions including the PoW 2020-2021 reviewed and adopted.	0 €	300.000 €	300.000 €		60.000 €	
		2. Organize the 85th, 86th and 87th Meetings of the Bureau as well as meeting on the eve of COP 21	In house expertise, working documents in 2 languages, information documents, conference services, venue, travel arrangements for one delegate per Bureau member	CU	All Components	The 85th, 86th and 87th Meetings of the Bureau as well as a Bureau meeting on the eve of COP 21 successfully delivered.	70.000 €	35.000 €	105.000 €		30.000 €	The figures shown as external resources indicates the additional costs that go beyond the approved budget, to be incurred by a CP should it offers to host the meetings
		3. Organize the Meeting of MAP Focal Points preceded by the EcAp CG Meeting and supported by the MAP Component/Thematic FP meetings	In house expertise, working documents in 2 languages, information documents, conference services, venue, travel arrangements for one delegate per CP	CU	All Components	a) Meeting of MAP Focal Points and EcAp Coordination Group Meeting successfully delivered; b) A refined and mature package of draft Decisions as well as PoW and Budget 20-21 agreed for submission to COP21.	0 €	145.000 €	145.000 €		50.000 €	
				CU, MED POL, PAP/RAC, Plan Bleu, REMPEC, SCP/RAC, SPA/RAC, INFO/RAC	CU	Component/Thematic FP Meetings well attended to review <i>inter alia</i> draft guidelines, assessment products, proposed policy papers for further review by higher MAP relevant bodies; SPA/BD thematic focal points meeting organised and held on a trial basis; lessons learnt shared with the CPs.	0 €	320.000 €	320.000 €	20.000 €	100.000 €	Budget per each Component separately: 40,000 EUR MEDPOL 65,000 EUR SPA/RAC 70,000 EUR REMPEC 40,000 EUR PB 45,000 EUR SCP/RAC 40,000 EUR PAP/RAC 20,000 EUR INFO/RAC Non-secured: expected in-kind contributions from the Countries hosting the Meetings. 20,000 EUR Secured INFO/RAC (IMELS) 25,000EUR MED POL 5*15,000 EUR (SPA, REMPEC, PB, SCP, PAP)
		4. Organize Compliance Committee Meetings.	Working and information documents in 2 languages, conference services, venue, press releases, participation arrangements for up to 14 CC members and/or alternates; In house expertise	CU, CC members	MED POL, SPA/RAC, REMPEC, PAP/RAC	a) Two Compliance Committee Meetings successfully delivered; b) Status of implementation of the Convention and its Protocols reviewed and non compliance situations addressed and brought to the attention of COP21; c) Guidance provided to the CPs as appropriate.	35.000 €	35.000 €	70.000 €		30.000 €	The figure shown as external resources indicates the additional costs that go beyond the approved budget, to be incurred by a CP should it offers to host the meetings
		5. Organize the 18th Meeting of the MCSD and its Steering Committee annual meetings.	In house expertise, consultancy, working documents in 2 languages, information documents, Conference Services, Translation, Interpretation, Reports, Travel arrangements for 13 delegates from the CP and up to 10 members from Civil Society MAP partners	CU, MCSD Members, Plan Bleu	All other MAP components	a) 18th Meeting of the MCSD successfully held; b) Two meetings of the MCSD Steering Committee, at least one of them face-to-face, successfully held.	25.000 €	100.000 €	125.000 €		30.000 €	The figures shown as external resources indicates the additional costs that go beyond the approved budget, to be incurred by a CP should it offers to host the meetings
	6. Enhance the sustainability of MAP operations	In house expertise, Sustainable MAP Operations Task Force meetings	CU	MAP components	a) Guidelines on sustainable MAP operations delivered and implemented; b) Web pages for Sustainable MAP Operations developed and maintained; c) Internal MAP Secretariat Task Force operational.	15.000 €	0 €	15.000 €				
1.1.3	Strengthen interlinkages between Core and Cross-cutting themes and facilitate Coordination at national level across the relevant sectors.	1. Streamline in relevant national policies the updated MAP strategies and EcAp targets (MSSD, SCP AP, Regional Strategy on pollution prevention from ships, ICZM Action Plan, Offshore AP, RSFCCA).	In-house expertise, consultancy	CU, PAP/RAC	MAP components	a) LBS NAPs, ICZM national Strategies, Sea based pollution NAPs, Biodiversity NAPs reviewed for two CPs to assess integration and GES mainstreaming, Main findings assessed and recommendations provided to the MAP FP meeting in 2019; b) Thematic focal points operation tested and main findings reported to the Bureau and MAP FP meeting in 2019.	25.000 €	0 €	25.000 €			
		2. Continue to work on regional tools, including possible guidelines, on sustainable tourism with a particular focus on nautical activities, pleasure boating including cruises	Workshop; Awareness raising activities; Publications	Plan Bleu and all Components	UN-WTO, UNEP/DTIE, UNESCO, EU/EC, French Agency for Development,	Regional tools including possible guidelines on sustainable tourism developed through a participatory process in line with the MSSD 2016-2025 Vision and Objectives, taking into account in particular the SCP/Action Plan, the ICZM Protocol, the SAP BIO and the Marine Litter Regional Plan.	5.000 €	3.000 €	8.000 €	40.000 €		Bleu Tour Med Horizontal Project (Interreg project)
1.1.4	Funding opportunities for regional and national priorities identified, donors/partners informed and engaged, through the implementation of the updated Resource Mobilization Strategy, and	1. Implement the Resource Mobilization Strategy in a coordinated fashion.	In-house expertise, Round Table	CU	All Components	a) Updated RMS implemented in an integrated manner; b) Project fiches updated and reviewed by the CU; c) Bilateral meetings with donors; d) Organization of conference with donors; e) Coordinated submission of project proposals in line with the RMS.	20.000	0 €	20.000 €			
		2. Finalize the preparation of 6 child projects to the Mediterranean Sea Programme (MedProgramme):	In-house expertise, consultancy, Regional meetings to review project documents	CU	MED POL, PAP/RAC SPA/RAC, Plan Bleu, SPA/RAC	a) Project document for each child project under the new MED Programme finalized and submitted; b) Legal instruments to support the executing of each child	0 €	0 €	0 €	1.000.000 €		MED Programme

	Contracting Parties assisted in mobilizing resources.	Enhancing Environmental Security.				project finalized and signed.							
		3. Ensure timely execution and progress review of MAP Projects	In-house expertise, consultancy	CU	All Components	EU funded ECAP MED II, Marine Litter MED, SEIS Projects; GEF Adriatic on Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning; EU funded SIMWestMED, Supreme Projects, Bilateral Cooperation with Italy are efficiently implemented in line with MTS and MAP POW.	0 €	0 €	0 €	1.200.000 €			This represents the respective external budget allocations planned for 2018-2019
Total 1.1							200.000 €	943.000 €	1.143.000 €	2.260.000 €	300.000 €		
1.2: Contacting Parties supported in compliance with the Barcelona Convention, its Protocols, Regional Strategies and Action Plans													
1.2.1	Compliance mechanisms effectively functioning and technical and legal advice provided to Contracting Parties, including technical assistance to enhance implementation of the Convention and its Protocols including reporting	1. Provide technical assistance and guidance to CPs in the implementation of the Barcelona Convention and its Protocols. 2. Provide advice to Contracting Parties to facilitate the process of national implementation reporting. 3. Assess the status of the implementation of the Barcelona Convention and its Protocols through the reports submitted by the CP for the period 2016-2017 for submission to the Compliance Committee and COP 21.	In-house expertise, guidelines, online helpdesk, internal coordination In-house legal and technical expertise In-house legal and technical expertise	CU, INFO/RAC CU CU	MED POL, REMPEC, SPA/RAC, PAP/RAC	Informal hearings held by the Compliance Committee, as need be. a) Reporting tutorial document to facilitate the national reporting process; "b) "FAQ-type" document addressing key difficulties/challenges in reporting a) Guidelines for the preliminary assessment of compliance; b) Substantive analysis of the national reports on the implementation of the Barcelona Convention and its Protocols. Progress of implementation assessed, General and specific issues at stake highlighted and brought to the attention of MAP and relevant Component FPs.	10.000 € 5.000 € 10.000 €	10.000 € 5.000 € 0 €	20.000 € 10.000 € 10.000 €			10.000 €	
Total 1.2							25.000 €	15.000 €	40.000 €	0 €	10.000 €		
1.3: Strengthening participation, engagement, synergies and complementarities among global and regional institutions													
1.3.1	Regional cooperation activities promoting dialogue and active engagement of global and regional organizations and partners, including on SAP BIO, Marine Litter, SCP, ICZM, MSP and Climate Change (e.g. regional conference, donor meetings).	1. Promote NGOs to become MAP partners and facilitate their contribution to MAP objectives including annual round table discussions back to back with other meetings. 2. Organize meetings with MAP Partner Agencies and Regional Seas to review progress and maximize synergies in the implementation of respective cooperation agreements. 3. Co-organize with Co-Chairs the UFM H2020 Review and Monitoring and Capacity Building Sub Groups annual meetings. 4. Coordinate with key partners in supporting the implementation of the Regional Plan on Marine Litter; Strengthen and expand the Regional Collaboration Platform for Marine Litter in the Mediterranean established in September 2016; Enhance collaboration with European Regional Seas on marine litter and other issues of common concern. 5. Further develop and maintain/update the Mediterranean Marine Litter Regional Node with inputs of all Partners to the Collaboration Platform as well as CP. 6. Coordinate with Basel, Stockholm, Minamata Conventions and London Dumping Protocol to maximize synergies in supporting the implementation of respective BC and its Protocols provisions.	In-house expertise, on-line consultation for policy documents, support participation at MAP meetings In-house expertise, consultancies, document preparations, Back to Back or separate meetings Meeting organisation, Preparation of working and information documents, Travel, Conference services, Joint activities, regional meetings, exchange of information, SSFA, consultancies, Joint activities, regional meetings, exchange of information, SSFA, consultancies, In-house expertise, exchange of information,	CU CU MED POL MED POL MED POL, SCP/RAC	All Components, MAP Partners, CPs All Components CU, UFMS, H2020 Sub Groups and Steering Committee, EEA, PPRG CU, REMPEC, SCP RAC, RAC/SPA, Collaboration Platform Partners, UFM H2020 Initiative, Regional Seas Programmes and Conventions GPA, INFO/RAC, Plan/Bleu,SCP/RAC BSR Conventions, Minamata Convention, IMO, LDP, UNECE Regional conventions	a) Civil society more involved in policy development and implementation, as per relevant COP decisions; b) New Partners added to the list of MAP partners. a) Areas for leading role of MAP further defined (e.g. SD, SDG, IMAP, Marine Litter, ICZM, Ocean governance); b) Update of Collaboration Agreements with at least 2partners. a) The UFM H2020 Review and Monitoring and Capacity Building Sub Groups annual meetings successfully delivered; b) Strengthened cooperation with EEA, EIB and UFM in the framework of H2020; c) Work Programme of the three H2020 Components followed up in a continuous manner and their synergies with UN Environment/MAP-MED POL activities enhanced, joint activities developed and implemented as appropriate. a) Third and fourth meetings the Regional Collaboration Platform for Marine Litter in the Mediterranean with over 20 regional organizations held and annual joint workplans prepared, agreed and implemented in line with their mandates; b) Exchange of best practices facilitated, roster of experts, established, public and decision maker awareness raised; c) Relevant existing global guidelines and capacity building tools and methodologies identified and joint activities implemented as appropriate. Regional Node designed and operational, Best practices and roster of experts uploaded, links with GMLP established, Links with Clean Sea Campaign and Plastic Coalition established Joint activities identified on POPs, Mercuy and Marine Litter, synergies related SDG indicators achieved;	5.000 € 10.000 € 0 € 10.000 € 10.000 €	10.000 € 0 € 0 € 0 € 0 €	15.000 € 10.000 € 0 € 10.000 € 10.000 €			70.000 €	External funding from the EU funded ML Project and GPA/UNEP (20.000 €) and the bilateral cooperation agreement with IMELS-Italy (50.000 €)
1.3.2	Participation in relevant existing or new international initiatives and dialogue (e.g. ABNJ, MPAs, Offshore, Sustainable Development) to highlight the Mediterranean regional specificities and increase synergies.	Promote Barcelona Convention, its Protocols and the MSSD 2016-2025 with a particular focus on pollution control and prevention, biodiversity and ICZM	Position paper, side events, communication materials, "In house expertise, Participation at meetings, Position Papers, Formal submission	CU, MED POL, REMPEC, SPA RAC, PAP/RAC	MAP Components, IMO, LDP, CBD, BSR Conventions, EUSAir, EU MSFD, EU IMP, Adriatic Ionian Initiative	a) Promote role and visibility of the Barcelona Convention and UNEP/MAP in international fora and create new partnerships; b) Contribution provided to UNEA3, UN Environment regional Seas; c) Progress report on REMPEC activities submitted at each Session of IMO/MEPC and at relevant sessions of the IMO Technical Cooperation Committee; d) Information on MAP Work on the implementation of the Dumping Protocol shared with the Governing Bodies of the London Dumping Protocol, CBD, BSR Conventions, and BBNJ meetings; e) Joint working programme with ACCOBAMS implemented (2018-2019) concerning the updated Cetacean Action Plan; f) Participation at EU Working Group on MSP and the Joint EU Working Group on ICZM & MSP; EUSAIR and other relevant macro-regional strategies; g) Collaboration with OSPAR, HELCOM and BS Commissions.	23.000 €	13.000 €	36.000 €				With regards to point c) Target the relevant maritime administrations as well as create synergies with international developments and showcase a "UN deliver as one" (UN Environment/IMO)
1.3.3	MSSD implementation set in motion through actions on visibility, capacity building, and the preparation of guidelines to assist countries adapt the Strategy to their national contexts.	Strengthen and sustain the Simplified Peer Review Mechanism (SIMPEER)	Consultancy; Meetings, Workshop, Web Platform	Plan Bleu	CU, All, Components, MCSDD members	a) Peer review process extended to 3 more CPs; b) Updated web platform; c) Updated SIMPEER methodology; d) SIMPEER process links to National Voluntary Reviews of the HLPF strengthened.	70.000 €	3.000 €	73.000 €			-	Increased budget to secure 3 countries' participation, External funding expected from volunteer CPs.

MTS. Number	MTS Key outputs	Proposed Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
Total 1.3							128.000 €	26.000 €	154.000 €	90.000 €	10.000 €	
1.4: Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making												
1.4.1	Periodic assessments based on DPSIR approach and published addressing inter alia status quality of marine and coastal environment, interaction between environment and development as well as scenarios and prospective development analysis in the long run. These assessments include climate change-related vulnerabilities and risks on the marine and coastal zone in their analysis, as well as knowledge gaps on marine pollution, ecosystem services, coastal degradation, cumulative impacts and impacts of consumption and production.	1. Organise the preparation of the State of the Environment and Development Report 2019	In-house expertise; consultancy; working meetings.	Plan Bleu, CU, MAP components	ADEME, AfD, CIHEAM, CMI/World Bank, EEA, FAO, GIZ, IUCN, MAVAV	a) Development of the detailed table of contents (2018); b) First draft of SoED submitted to consultation (early 2019); c) SoED submitted to COP21; SoED published and disseminated (end 2019).	70.000 €	15.000 €	85.000 €		100.000 €	In-kind contribution from partners evaluated at roughly 100,000 inc. CMI/World Bank in cash contribution (tbc) 35,000
		2. Prepare jointly with the EEA the Second report on the Implementation of H2020 initiative for a Healthy Mediterranean.	In-house expertise; consultancy; working meetings.	MED POL, Plan Bleu, INFO/RAC	EEA	Thematic chapters on Industrial Emissions and Waste timely delivered through a consultation process with the CPs and the H2020 review and monitoring group;	10.000 €	0 €	10.000 €	50.000 €		This budget covers the coordination aspects. The substantive work will be delivered under output 3.4. The external funding is from the EU/EEA
		3. Develop and implement the first set of activities included in the Med 2050 Roadmap in accordance with Decision IG. 23/4	In-house expertise; consultancy; working meetings.	Plan Bleu	CP, IPEDMED, CIHEAM, OME, IUCN, Tour du Valat, GWP-Med, CMI/World Bank, others tbc	a) Development of the detailed table of contents (2018); b) Development of a common trends scenario serving as basis for development of other scenarios (2018); c) Co-construction of alternative/thematic scenarios (2018-2019); d) Co-construction of recommendations for decision makers (2019). e) Report of 2018-2019 activities prepared for further consideration and guidance to COP 21	35.000 €	8.000 €	43.000 €	10.000 €	0 €	Expected from GEF Med Programme 170 000, Voluntary in-kind contribution from CPs; In-kind contribution from partners (drafting of chapters/ sub-chapters, etc.) Activity will be continued and finalized in 2020- 2021 (with additional budget 2020-2021). The 2018-2019 period will produce chapter on general trends, water-energy-food-ecosystem nexus scenario and one other scenario tbc).
		4. Develop a action plan/roadmap to address the main information gaps identified during the QSR2017 for all IMAP Common Indicators.	In-house expertise, consultancies, CORMON meetings and or on line consultation.	MED POL/CU	SPA/RAC, REMPEC, PAP/RAC, Plan Bleu and CORMONS	Actions identified to fill the knowledge gaps for consideration of CORMONS, Component/Thematic FP and ECAP CG meetings	0 €	0 €	0 €			
1.4.2	MSSD implementation monitored, as appropriate and evaluated, as appropriate on periodic basis through the agreed set of indicators in line with SDG and the sustainability dashboard.	1. Improve the work on the indicators of the Mediterranean sustainability dashboard in accordance with Decision IG.23/4	In-house expertise; consultancy.	Plan Bleu/ CU and SCP/RAC, MCS D Steering Committee	EEA, GFN, UN SD, IUCN-Med, OME, others, tbc,	a) Dashboard indicators populated and updated to show trends; b) Development/improvement of the core set of Indicators for the monitoring of the MSSD implementation in synergy with the ongoing work on SDGs at the global level; c) Related factsheets and updating of the Med sustainability dashboard	10.800 €	3.000 €	13.800 €		20.000 €	Activity will be continued in 2020-2021 until 2025, Could be extended to, others Indicators sets (ie, SCP/AP Indicators with extra budget). SEIS project
1.4.3	Implementation of IMAP (the EcAp-based integrated monitoring and assessment programme) coordinated, including GES common indicators fact sheets, and supported by a data information center to be integrated into Info/Map platform.	1. Support the coordinated implementation of IMAP at regional, sub-regional and national level (see the respective outputs under Theme 2, 3 and 5)	In-house expertise and coordination.	CU/MED POL	SPA/RAC, REMPEC, Plan Bleu, CORMONS	a) Guidance fact sheets of IMAP common indicators updated and of candidate indicators developed b) Coherent quality assurance platform developed and implemented to support monitoring c) Coordinated methodological support provided to extend the geographical scope of IMAP implementation to offshore areas d) Monitoring protocols updated and developed in an integrated manner for different aspects of IMAP implementation e) Coordinated approach followed to support and organize	10.000 €	0 €	10.000 €			The related thematic activities per cluster are described under each respective theme (Pollution, Biodiversity and Land&Sea Interaction).
1.4.4	Interface between science and policy-making strengthened through enhanced cooperation with global and regional scientific institutions, knowledge sharing platforms, dialogues, exchange of good practices and publications.	1. Implement, sustain, and strengthen the mechanism to assist Barcelona Convention with scientific institutions.	Consultancy; Publications, Engage Stakeholder Dialogue with NFPS and MCS D Members. Consultation exercises; Communication; Networking; Capacity Building	Plan Bleu	Union for the Mediterranean, MEDECC, Aix-Marseille University, CIESM, MedCoast, MedCIVar, Research Institute for Development, ADEME, Monaco	Report (Information Document) on Environmental and Climate Change Drivers and Risks at the Regional and Sub-Regional Level, including Policy Responses	15.000 €	3.000 €	18.000 €	30.000 €	60.000 €	Union for the Mediterranean, Aix-Marseille University, Research Institute for Development, ADEME, Monaco Produce an Assessment Report (plus Policy Paper – Summary for decision-makers) on Environmental and Climate Change Drivers and Risks at the Regional and Sub-Regional
		2. Promote the participation of regional scientific and technical institutions in research and development activities and facilitate transfer of technology.	In house expertise, Travel	REMPEC	IMO, HELCOM, Bonn Agreement, CMCC,	Information disseminated on R&D activities and programmes, including data sharing and projects, in cooperation with other Regional Agreements; and Specialised events on risk assessment organised	0 €	0 €	0 €	0 €	0 €	Specific Objective 18 of the Regional Strategy (2016-2021) and Art.7.1.f of the 2002 Prevention and Emergency Protocol
		3. Develop a database of scientific community (institutions, scientists, researchers) on fields of Barcelona Convention and its Protocols.	In-house expertise, Consultancy	CU	INFO/RAC and other Components	Stakeholder's database maintained and updated	10.000 €	0 €	10.000 €		10.000 €	
		4. Streamline networking and focus on community building and strengthen communication based on capitalisation activities	Consultancy; Workshops; Publications	Plan Bleu	PAP/RAC, SPA/RAC European Topic Center – University of Malaga (ETC UMA), Barcelona Metropolitan Area (MedCities), Conference of Peripheral Maritime Regions of Europe (CPMR), Mediterranean Universities Union (UNIMED), Regional Environmental Centre for Central and Eastern Europe	a) Database of scientific community updated and maintained Stakeholder's mapping updated; b) Policy paper on community building. c) Assisting relevant Mediterranean stakeholders, ensuring synergies among this community, and increasing the visibility and impacts of their projects' results towards common identified strategic targets. d) Acting as a Science-Policy- Interface to foster the exchange of experiences and knowledge sharing and thus, influencing a behavioural and policy change in the Mediterranean region.	20.000 €	5.000 €	25.000 €	100.000 €		EU MED Programme 2014-2020 (ERDF) – PANACeA Horizontal Project, EU MED Programme 2014-2020 (ERDF) – InnoBlueGrowth
		5. Feed with updated information the Marine Litter Node in collaboration with GPML and the Regional cooperation platform on marine litter in the Mediterranean.	In house expertise	MED POL	SCP/RAC, REMPEC, ML Collaboration Platform	a) Marine Litter best practices shared; b) a roster of experts is established; c) awareness on marine litter actions enhanced in the region and at global level.	0 €	0 €	0 €			

MTS. Number	MTS Key outputs	Proposed Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non-secured	
		6. Contribute to strengthen Science Policy Interface in the Mediterranean with regards to IMAP implementation and feeling the knowledge gap to promote effective measures to achieve GES.	In house expertise	MED POL	CU, Plan Bleu, MAP components, EEA, Existing Projects	a) Roster of experts build; b) best practices on IMAP implementation science policy interface shared with regards to pollution and litter cluster.	0 €	0 €	0 €	10.000 €		The external funding is from GPA/UNEP
1.4.5	Educational programmes, including e-learning platforms and college level degrees, on governance and thematic topics of MAP relevance organized in cooperation with competent institutions.	Further establish/extend educational activities and promote educational programmes focusing on marine and coastal issues, with the aim to promote education on sustainable development.	In house expertise, communication	MED POL//INFO RAC	GPA, CPs	a) Available information on pollution and marine litter training and e- courses disseminated to focal points (i.e. the e-course on marine litter and ecosystem based management developed at global level by UN Environment and GMLP) and the Marine Litter Watch Programme developed by the EEA; b) Capacities of national and regional stakeholders enhanced;	5.000 €	0 €	5.000 €	0 €		
			In-house expertise	PAP/RAC	MAP Components, academic institutions	c) Agreements prepared and signed with relevant academic institutions for including the MedOpen (virtual training course in the academic curriculum.	10.000 €	0 €	10.000 €			
			In-house expertise	INFO/RAC; PAP/RAC	MAP Components, academic institutions	d) E-learning platform available to support e-learning course; e) Agreements prepared and signed with relevant academic institutions for including the MedOpen (virtual training course in the academic curriculum.	5.000 €	5.000 €	10.000 €	10.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS-Italy.
Total 1.4							200.800 €	39.000 €	239.800 €	240.000 €	190.000 €	
1.5: MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness and understanding												
1.5.1	Info/MAP platform and platform for the implementation of IMAP fully operative and further developed, connected to MAP components' information systems and other relevant regional knowledge platforms, to facilitate access to knowledge for managers and decision-makers, as well as stakeholders and the general public.	1. Develop the MAP catalogue of data/services	In-house expertise, service contract	INFO/RAC	CU, MAP Components	a) MAP Catalogue developed; b) Collection of MAP components metadata and access/harvesting to their catalogues for implementing MAP catalogue;	5.000 €	5.000 €	10.000 €	20.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS-Italy.
		2. Repower InfoMAP infrastructure and maintain and upgrade InfoMAP modules	In-house expertise, service contract	INFO/RAC	CU, MAP Components		15.000 €	5.000 €	20.000 €		10.000 €	
		3. Implement the selected dataflow in the Data Centre to support IMAP implementation	In-house expertise, service contract	INFO/RAC	CU, MAP Components	InfoMAP operational and accessible	5.000 €	15.000 €	20.000 €	20.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS-Italy.
		4. Within the overall INFO MAP Infosystem, maintain and upgrade the MED POL Infosystem to support online data submission related to pollution monitoring (in line with IMAP), inventories of pollutants loads, marine litter and related geo referenced assessments	SSFA, Consultancy, in house expertise	MED POL/INFO RAC	EEA, (SEIS Project), CPs	a) NBB/PRTR information system online operational, database updated with new data; b) MEDPOL monitoring database updated and operational including IMAP Pollution and Marine Litter indicators and countries reporting new QA data; c) User manual and training for the MEDPOL Information system including QA reporting; d) Information system on NAP/H2020 indicators fully operational and updated with QA data.	10.000 €	0 €	10.000 €	20.000 €	10.000 €	The external funding is from the EU funded SEIS II Project
		5. Maintain REMPEC's information system and improve the quality, speed and effectiveness of decision-making process in case of marine pollution incidents through the development and introduction of technical and decision support tools.	IT Services	REMPEC	INFO/RAC	Existing REMPEC's information system and decision support tools upgraded, updated and interconnected, where appropriate, to enable CPs and relevant partners to share data in accordance with the requirements of the 2002 Prevention and Emergency Protocol as well as IMAP	30.000 €	0 €	30.000 €	0 €	0 €	Specific Objectives 8, 17, 19 and 21 of the Regional Strategy (2016-2021), REMPEC Function C (UNEP/DECI)/MED IG.13/8, Annex IV, Appendix) as well as Art.7, 8, 9 and 10 of the 2002 Prevention and Emergency Protocol
		6. Upgrade the Mediterranean Biodiversity Platform to integrate all biodiversity databases	Services, in-house coordination and management, external expertise and services	SPA/RAC	INFO/RAC, REMPEC, MEDPAN, Action Plan partners	a) Mediterranean Biodiversity Platform upgraded to integrate other biodiversity databases(data.rac-spa.org); b)The MAPAMED database updated and improved - The MAPAMED system integrated into the MBP; c) The 2016 MPA Status Report disseminated; d)Marine Mediterranean Invasive Alien Species Database (MAMIAS) further developed and integrated in the Mediterranean Biodiversity Platform (web services for searching the database and extracting data, online mapping tools, early warning system, statistics and indicators, especially to support the IMAP).	35.000 €	10.000 €	45.000 €	20.000 €	0 €	MAVA Foundation for Nature for the project MEDKEYHABITATS II.
		7. Pilot data/service share among relevant regional organizations	In-house, service contract	INFO/RAC	CU, MAP Components	a) Implemented Pilot data-service sharing system with GFCM; b) Development of analysis for data-sharing options with relevant regional organizations.	15.000 €	5.000 €	20.000 €	100.000 €		The external funding is from the bilateral cooperation agreement with IMELS-Italy.
1.5.2	Barcelona Convention online Reporting System (BCRS) updated and operational, improved and maintained, and complemented and streamlined with other reporting requirements.	Update the BCRS on-line reporting system	In-house, service contract	INFO/RAC	CU, MAP Components	Revised BCRS on-line reporting system delivered, in light of the revised reporting format, and with incorporation of the ICZM Protocol reporting template.	25.000 €	5.000 €	30.000 €		10.000 €	
Total 1.5							140.000 €	45.000 €	185.000 €	180.000 €	30.000 €	
1.6: Raised awareness and outreach												
1.6.1	The UN Environment/MAP communication strategy updated and implemented.	1. Develop an operational Communication Strategy; Update the website(s), prepare news items, outreach media, prepare communication materials and publications.	Consultancy, in-house expertise	CU, INFO/RAC	MAP Components	a) website updated regularly (INFO/RAC with substantive inputs of the Components under CU guidance); b) communication material produced for projects and activities (with INFO/RAC support); c) news regularly disseminated (with INFO/RAC support); d) media outreach (with INFO/RAC support); e) MAP featured in regional and international meetings and conferences (INFO/RAC from information point of view); f) publications produced (INFO/RAC from graphic point of view) g)Operational Communication Strategy.	21.863 €	89.969 €	111.832 €		10.000 €	
			In-house coordination and management, external expertise and services	SPA/RAC	SPA/RAC Focal Points, MedPAN, IUCN, WWF, MedWet, national partners	a) Awareness, information and educational materials on biodiversity produced and disseminated; b) Communication events organised; c) SPA/RAC website maintained and updated to inform on SPA/RAC work and provide easy access to resources and platforms developed by the centre.	25.000 €	25.000 €	50.000 €	0 €	0 €	
			In house expertise	MED POL	CU, Plan Bleu, INFO/RAC,	a) Public and decision makers awareness raised on key issues related to pollution and marine litter in the Mediterranean;	0 €	0 €	0 €			
					CU, INFO/RAC	b) Knowledge on marine pollution and its impacts on marine and coastal environment expanded;	0 €	0 €	0 €			

				MAP Components, MAP Partners, CPs	c) Issues at stake and emerging issues identified and disseminated to respective targets groups.	0 €	0 €	0 €			
	2. Organize the annual celebrations of the Mediterranean Coast Day.	In-house coordination and management, external expertise and services, meetings.	PAP/RAC, CU	CPs, local authorities, NGOs, media	Two regional Med Coast Day celebrations organised	20.000 €	10.000 €	30.000 €	50.000 €		Contribution secured from the INTERREG MED CO- EVOLVE project (25.000 €) and the bilateral cooperation agreement with IMELS- Italy (25.000 €)
	3. Support national Coast Day celebrations organised by CPs.		PAP/RAC, CU	CPs, local authorities, NGOs, media	Upon request by CPs, national Coast Day celebrations supported with technical and promotional material, and participation of PAP/RAC representatives	0 €	0 €	0 €	75.000 €		The external funding is from MAVA Foundation
	4. Implement the agreed procedure to grant Istanbul Environment Friendly City Award.	In-house expertise; consultancy; service contracts	CU, INFO/RAC	Plan Bleu, INFO/RAC and other MAP Components, as appropriate	2nd edition of Istanbul Environment Friendly City Award to be granted at COP 21.	0 €	0 €	0 €		20.000 €	
	5. Enhance internal MAP networking and share of information	In-house expertise; consultancy	INFO/RAC and CU	MAP Components	a)Directory of all the MAP network maintenance and update (repository of NFPs designations; b)On-line Event Calendar of all the MAP network initiatives maintenance and update; c)Groupware of all the MAP network available: communication tool for document repository and interest groups management; d) Surveys and questionnaires platform available; e) MAP Secretariat Communication Task Force (MAP CU & RACs) coordination; f) Help desk and assistance for all the components of InfoMAPnetwork.	5.000 €	5.000 €	10.000 €		100.000 €	
	6. Enhance corporate image		INFO/RAC	CU, MAP Components	a)Restyling of logos and corporate material (header paper, envelopes, PPT format,etc.); b) Format/templates for MAP publications series; c) Creation of a shared graphic styles for the MAP system; d) Creation and restyling of graphic elements for the RAC's; e) Web sites design.	5.000 €	5.000 €	10.000 €		10.000 €	The source of non-secured funding is yet to be identified.
	7.Videoclips, videos, photo services and documentaries		INFO/RAC	CU, MAP Components	f) Video and photo services; g)Scientific documentaries.	0 €	0 €	0 €		40.000 €	
Total 1.6						76.863 €	134.969 €	211.832 €	100.000 €	205.000 €	
						TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
						770.663 €	1.202.969 €	1.973.632 €	2.895.000 €	720.000 €	

Theme 1	Total 2018	Total 2019	Total	External secured	External Non secured
Coordinating Unit	299.863 €	747.969 €	1.047.832 €	2.200.000 €	250.000 €
MED POL	45.000 €	40.000 €	85.000 €	170.000 €	45.000 €
REMPEC	30.000 €	70.000 €	100.000 €	30.000 €	15.000 €
PB/RAC	225.800 €	80.000 €	305.800 €	180.000 €	195.000 €
SPA/RAC	60.000 €	100.000 €	160.000 €	20.000 €	15.000 €
PAP/RAC	30.000 €	50.000 €	80.000 €	125.000 €	15.000 €
INFO/RAC	80.000 €	70.000 €	150.000 €	170.000 €	170.000 €
SCP/RAC	0 €	45.000 €	45.000 €	0 €	15.000 €
TOTAL	770.663 €	1.202.969 €	1.973.632 €	2.895.000 €	720.000 €

Footnotes
The indication of a Component/Partner does not necessarily imply allocation of funds.

THEME 2: Land and Sea Based Pollution												
Ecological Objectives / Long-Term Targeted Impacts:												
1. Human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms, and oxygen deficiency in bottom waters;												
2. Contaminants cause no significant impact on coastal and marine ecosystems and human health;												
3. Marine and coastal litter does not adversely affect coastal and marine environments;												
4. Noise from human activities causes no significant impact on marine and coastal ecosystems.												
Strategic objectives:												
1. To prevent, reduce and control selected/regulated pollutant inputs, oil discharges and spills;												
2. To prevent, reduce and control marine litter generation and its impact on the coastal and marine environment.												
2018-2019 Indicators:						2018-2019 Targets:						
1. Number of marine pollution prevention and control regulatory instruments and policies updated or developed;						1. 6 regional regulatory/policy tools developed/updated;						
2. Number of new and updated guidelines and other implementation instruments streamlining SCP tools for key sectors and areas of consumption and production;						2. 2new/updated guidelines including SCP streamlining;						
3. Number of countries submitting reports on annual pollution loads and pollution monitoring data for agreed pollutants;						3. 21ContractingParties;						
4. Number of projects identified and or prepared to eliminate pollution hot spots and respond to marine pollution;						4. 10pilotprojectsonmarinepollution;						
5. Number of businesses, entrepreneurs, financial agents and civil society organizations capacitated to promote SCP solutions alternative to POPs and toxic chemicals, and marine litter reduction;						5. Atleast100trainees.						
MTS Number	MTS Key outputs	Main Activities	Means of implementation	Lead: CU and or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
2.1: Strengthening regional implementation of the obligations under the Barcelona Convention and 4 pollutants-related Protocols, and of programmes of measures in existing relevant Regional Strategies and Action Plans												
2.1.1	Targeted measures of the regional plans/strategies facilitated and implemented	1. Prepare reports on the implementation of the existing regional Plans/Measures: (i.e. Mercury and WWTP) including socio economic analysis.	In house expertise, consultancies, expert meetings	MED POL, SCP/RAC	Plan Bleu, SWIM&H2020	a) Status and related socio economic aspects of implementation of key regional measures (i.e. Regional Plans on Mercury and WWTP) assessed for MEDPOLFPmeetingreviewin2019; b) Regional meetings held to share best practices on the implementation of the Regional Plans and other common measures.	15.000 €	5.000 €	20.000 €	60.000 €	20.000 €	The external secured funding is from the bilateral cooperation agreement with IMELS-Italy.
		2. Promote the use of relevant instruments and incentives to reduce/forbid the single-use of plastics, reduce the use of plastic bottles, etc.	In house expertise, SSFA, Regional meetings, consultancies	MED POL, SCP/RAC	Plan Bleu, SWIM&H2020, CPs	Best practices identified, collected and shared with the CPs, technical capacities of the CPs enhanced to facilitate the implementation of key legally binding measures under the Marine Litter Regional Plan and other Measures.	10.000 €	0 €	10.000 €	90.000 €	30.000 €	The external secured funding is from the bilateral cooperation agreement with IMELS-Italy. Non secured funding expected by GPA/UNEP.
		3. Promote the application of fishing for litter and adopt beach measures		MED POL			10.000 €		10.000 €	30.000 €	Secured External funding from the EU funded ML project	
		4. Promote sharing of best practices related to WWTP sludge and storm water management.		MED POL			27.773 €	0 €	27.773 €	10.000 €	Non Secured funding: In kind support for a regional meeting from the host country as appropriate	
		5. Strengthen the capacity of individual coastal States to respond efficiently to marine pollution incidents through the development of sub-regional operational agreements and contingency plans, as well as enhance the levels of pre-positioned spill response equipment under the direct control of Mediterranean coastal States.	Consultancy	REMPEC	CU, IMO	a) Technical support provided to CPs, which so request, to assess, prepare, adopt, update as well as implement and test national contingency plans and sub-regional agreements/contingency plans dealing with preparedness for and response to oil and HNS spills from ships, sea ports, oil handling facilities and offshore installations;	15.000 €	5.000 €	20.000 €	0 €	50.000 €	Specific Objectives 17 and 22 of the Regional Strategy (2016-2021)
			In House expertise	REMPEC	Cedre, FEDERCHIMICA, ISPRA, MONGOOS, SAF, IMO	b) Mediterranean Assistance Unit (MAU) maintained and, where appropriate, expanded; c) MAU special revolving fund replenished.	1.000 €	1.000 €	2.000 €	0 €	0 €	
		6. Improve follow-up of pollution events, monitoring and surveillance of illicit discharges, as well as improve the level of enforcement and the prosecution of discharge offenders.	Meeting, travel, interpretation, translation, In-House expertise	REMPEC	CU, IMO, Cedre, INTERPOL, CBSS (ENPRO), OSPAR (NSN), Bonn Agreement	a) Meeting of MENEAS organised and recommendations implemented through technical support provided to CPs, which so request;	30.000 €	0 €	30.000 €	0 €	0 €	Specific Objectives 7 and 8 of the Regional Strategy (2016- 2021)
			Travel	REMPEC		b) Participation of CPs to surveillance operations facilitated	5.000 €	5.000 €	10.000 €	0 €	0 €	
	7. Strengthen the Memorandum of Understanding (MoU) on port State control (PSC) in the Mediterranean region (Mediterranean MoU).	In House expertise	REMPEC	EMSA MedMoU	Collaboration with the Mediterranean MoU ensured and joint training activities implemented in cooperation with relevant organisations	0 €	0 €	0 €	0 €	0 €	Specific Objective 4 of the Regional Strategy (2016-2021)	
Total 2.1							113.773 €	16.000 €	129.773 €	180.000 €	110.000 €	
2.2: Development or update of new/existing action plans, programmes and measures, common standards and criteria, guidelines.												
2.2.1	Guidelines, decision-support tools, common standards and criteria provided for in the Protocols and the Regional Plans developed and/or updated for key priority substances or sectors	1. Prepare a proposal to update the annexes to the LBS, HW Protocols to enhance synergies with the relevant regional and global developments.	In house expertise, SSFA, Meetings	MED POL, CU	SCP/RAC, BSR Convention, EU MSFD, and other relevant Directives as appropriate	Updated annexes to better take into account GES and recent related developments at regional and global levels (Basel Convention, list of priority and emerging pollutants, EU MSFD, EU WFD as appropriate) developed and submitted for review by MED POL FP Meeting in 2019.	10.000 €	0 €	10.000 €			
		2. Prepare Regional Guidelines on Fishing for Litter and Adopt a beach.	Consultancies, Regional Meetings, in house expertise	MED POL	Regional Seas Programmes, GPA, GMLP, OSPAR, HECOM, Black sea Commissions	Draft Guidelines prepared and reviewed by expert meetings for consideration by the MED POL FP meeting in 2019	0 €	0 €	0 €	25.000 €		External support from EU funded marine Litter Med Project
		3. Finalize PRTR guidelines and common emission factors to assess the load of pollutants, including emerging contaminants, to the Mediterranean Sea, and support the Contracting Parties in their implementation.	In house expertise, SSFA, Regional meetings, consultancies	MEDPOL	EEA, SEIS Project, INFO/RAC	PRTRguidelinesandcommonemissionfactorsdevelopedinconsultationwiththeCPandimplementedthemasappropriateanduponrequesttosupport NBB reporting	25.000 €	0 €	25.000 €	20.000 €		External support from the EU funded SEIS 2 Project
		4. Finalize, validate and apply a common risk assessment tool to identify marine litter accumulation/hotspots (incl ghost nets).	In house expertise, SSFA, Regional meetings, consultancies	MEDPOL	ML Regional Collaboration Platform, RSP, GPA	Tool developed and used for Identifying and assessing Marine Litter Hotspots	0 €	0 €	0 €	20.000 €		External support from EU funded Marine Litter Med Project
		5. Develop Guideline and training material to prevent the generation of plastics and wastes ending up as marine litter.	In-house expertise, consultancies, national meetings,	SCP/RAC	MED POL, ML Regional Collaboration Platform, MLGP GPA, Regional Seas	Guidelines and training materials at regional and sub regional levels	0 €	0 €	0 €	60.000 €		External support from EU funded Marine Litter Med Project (20.000 €) and from the bilateral cooperation agreement with IMELS-Italy (40.000 €).
		6. Revise the existing recommendations, principles and guidelines, and develop new ones aimed at facilitating international cooperation and mutual assistance within the framework of the 2002 Prevention and Emergency		REMPEC		a) Draft guidance document developed to determine the application of charges at reasonable costs for the use of port reception facilities or, when applicable, application of No-Special-Fee system;	0 €	0 €	0 €	12.000 €	0 €	Specific Objectives 5, 6, 9 and 21 of the Regional Strategy (2016-2021) as well as REMPEC Function C

		Protocol	Consultancy	REMPEC	MED POL SCP/RAC, IMO	b) Draft operational Guidelines developed on the provision of reception facilities in ports and the delivery of ship-generated wastes.	0 €	0 €	0 €	21.000 €	0 €	(UNEP/DEPI)/MED IG.13/8, Annex IV, Appendix) and Art.14 of the 2002 Prevention and Emergency Protocol. Implementation of the Marine Litter MED Project. External secured funding is from the Marine Litter MED Project (6.000 €) and the bilateral cooperation agreement with IMELS-Italy (15.000 €).
		7. Continue the work on artificial reefs	In house expertise and consultations	MED POL, SP/RAC, PAP/RAC	Other MAP Components, London Convention – London Protocol	Report submitted to COP 21						
2.2.2	Regional programmes of measures identified and negotiated for pollutants/categories (sectors) showing increasing trends, including the revision of existing regional plans and areas of consumption and production	Develop the main elements of six Pollution Reduction Regional Plans (Municipal WWTP, Sewage Sludge Management, Agriculture nutrients Management, Aquaculture nutrients Management, Urban Storm water Management, Marine Litter (upgrade))	Consultancies, Regional Meeting	MED POL	SCP/RAC, Plan Bleu, REMPEC, ML Regional Collaboration Platform, other Partners	a) Main elements and measures under the six Pollution Reduction Regional Plans agreed by the 2017 Meeting of the MED POL Focal Points identified and assessed to achieve/maintain GES; b) Concrete proposal to MED POL FP and ECAP Coordination Group meeting in 2019 on the main elements of the six Pollution Reduction Regional Plans; c) Socioeconomic assessment of selected new/updated regional measures.	50.000 €	10.000 €	60.000 €	25.000 €		External funding from the PPG of the Med programme
Total 2.2							85.000 €	10.000 €	95.000 €	183.000 €	0 €	
2.3: Strengthening and implementation of marine pollution prevention and control legislation and policies at national level, including through enforcement and integration into sectorial processes.												
2.3.1	Adopted NAPs (Art. 15, LBS Protocol) implemented and targeted outputs timely delivered	1. Support streamlining NAP measures in the national regulatory systems and their implementation in 5 countries (focus ELV&ECS/GES) including Permitting and Inspection based on the most recent MAP technical guidelines, with special reference to offshore installations, PCB, Lubeoil, lead batteries.	SSFA, Consultancies, National/Regional meetings	MED POL	REMPEC, CPs, H2020 Capacity Building Programme, Pollution related MEA, IMPEL	National regulations/guidelines developed/updated to promote use of BAT and BEP as well as setting common standards and GES for different contaminants/pollutants of national and or regional priority the view to enhance marine pollution prevention & control tools in key sectors and contaminants	80.000 €	20.000 €	100.000 €		20.000 €	Coordination will be sought with the H2020 Capacity Building programme to maximize synergies
2. Assess and promote the use of relevant instruments and incentives to reduce the single-use of plastics and develop measures for banning single-use of plastic bags and implementing EPR in 5 countries.		In house expertise, consultancies, national meetings, regional/sub-regional workshop	SCP/RAC, MED POL	REMPEC, CPs, H2020 Capacity Building Programme,	Support to 5 countries eligible under the EU funded Marine Litter Med Project, , to upgrade and further develop regulations to promote the banning of the single-use plastic bags, as well as the reduction of plastics production and use in packaging and on other main uses (for sectors and services affecting/generating marine litter).	0 €	0 €	0 €	55.000 €	0 €	Activities addressing the implementation of Article 9 of the Regional Plan on Marine Litter: banning of single-use plastic bags and promotion of EPR. Funding will be needed to provide support in the implementation of the regulations developed with the countries	
3. Undertake an indicator based midterm evaluation of the NAPs implementation based on the existing reporting system and in close collaboration with the Contracting Parties.		In house expertise, consultancies, expert meetings	MED POL	H2020 Review and Monitoring Sub group, EEA, CPs, PPG MED Programme	An indicator-based midterm evaluation of NAPs implementation is initiated; NAP indicators populated with data	10.000 €	0 €	10.000 €		20.000 €	External funding in kind from EU/EEA funded SEIS II Project allocated for preparing the joint EEA/MAP report on the progress of H2020 Initiative; Synergies will	
2.3.2	NAPs developed to implement the Regional Strategy for Prevention of and Response to Marine Pollution from Ships	Promote the ratification and implementation of relevant international maritime conventions related to the protection of the marine environment as well as enhance the effectiveness of maritime administrations.	Consultancy	REMPEC	CU, IMO	Technical support provided to CPs, which so request, to prepare or update their NAPs	26.000 €	0 €	26.000 €	0 €	0 €	Specific Objectives 1 and 3 of the Regional Strategy (2016-2021)
2.3.3	SCP Regional Action Plan (pollution-related activities) mainstreamed into and implemented through NAPs and national processes, such as SCP National Action Plans and NSSDs.	1. Support the establishment of regulatory and economic measures related to the implementation of SCP/circular economy; 2. Undertake of screening of BATs, BEPs and circular economy measures for 2 industrial sectors.	In house expertise, experts, workshops, working meeting, technical studies, guidelines, communication material	SCP/RAC	UfM H2020 capacity Building Programme, MED POL, CPs, UfMS	Support to 4 countries eligible for funding under the H2020 in the development of specific SCP/circular economy measures. Development of 2 studies on BATs, BEPs and circular economy measures for 2 industrial sectors	0 €	0 €	0 €	120.000 €	0 €	SWIM H2020 SM project
Total 2.3							116.000 €	20.000 €	136.000 €	175.000 €	40.000 €	
2.4: Marine Pollution Monitoring and Assessment												
2.4.1	National pollution and litter monitoring programmes updated to include the relevant pollution and litter IMAP indicators, implemented and supported by data quality assurance and control	1. Continue supporting of updated national monitoring programmes on marine litter, contaminants and eutrophication in line with IMAP, the LBS Protocol and the Regional Plan on ML.		MED POL		a) Number of countries (4-5) provided with technical and financial support to implement their updated national monitoring programme and submit quality assured data,(according to agreed reporting templates);	70.000 €	70.000 €	140.000 €	60.000 €		In kind external funding from EU funded ECAP MED II project
2. Consolidate a common metadata and data reporting template for all related indicators and associated parameters and a QA scheme and checklist			MEDPOL		b) Metadata and data reporting template finalized for each indicator, taking into account multiple parameters and integrated into INFOMAP system for review by CorMon Pollution and Litter;	30.000 €	0 €	30.000 €				
3. Organize specific training of national monitoring experts on best practices and data reporting and joint monitoring programmes			MEDPOL		c) Quality assurance programmes undertaken of the implementation of national monitoring programmes for contaminants in biota and sediment; biological effects methods; and eutrophication (nutrient and chlorophyll) in sea water to be reviewed in regional/sub-regional meetings;	120.000 €	80.000 €	200.000 €		50.000 €		
4. Undertake coordinated quality assurance and training programmes (eutrophication, contaminant at regional and national levels		SSFA, Consultancies, In house expertise, consultation on line and three CORMON Meetings	MEDPOL	AIEA, Quasimeme, Alessandria University, National MED POL Designated Laboratories, EU MSFD TGML, MEDITIS, JRC, other relevant Scientific Institutions	d) National experts trained (min 15) on quality assurance programmes for contaminants in biota and sediment; and eutrophication (nutrient and chlorophyll) in seawater;	30.000 €	0 €	30.000 €				
5. Design QA programme for marine litter and biomarkers based on existing best practices and systems.			MEDPOL		e) QA programme for Marine litter and biomarkers presented for review by CORMON Pollution and Litter.	0 €	0 €	0 €		20.000 €		All these activities are strictly related to and contribute to IMAP implementation and CORMONS work.
6. Further develop the IMAP Guidance and related factsheets for key Pollution indicators and categories:			MEDPOL		f) List of existing monitoring protocols in pollution and marine litter and methodological gaps finalized with a particular focus, on offshore areas monitoring, update of the IMAP Guidance factsheets on Pollution and Marine Litter; g) Monitoring protocols developed for Marine Litter (e.g. riverine litter, inputs from WWTP); h) Minimum four protocols developed and published on Contaminants and Eutrophication (e.g. Offshore and coastal sediment sampling, emerging contaminants in biota, and emerging contaminants in sediments, eutrophication analytical methods); i) Analysis report on bioeffects-based methods; These deliverables will be reviewed annually or on 2 year basis by the CorMon Meetings on Pollution and Litter clusters with the priority focus on points f) and g) above.	70.000 €	20.000 €	90.000 €				

MTS Number	MTS Key outputs	Main Activities	Means of Implementation	Lead: CU and or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
2.4.2	Inventories of pollutant loads (NBB, PRTR from land-based sources, and from offshore and shipping) regularly updated, reported and assessed	Ensure efficient NBB/PRTR reporting and provide support to up to 10 CP including quality assurance control of data	SSFA, Consultancies, Regional Meetings, National Meetings	MED POL	EEA (SEIS Project), INFO/RAC	a) Updated quality assured data provided by all CP through PRTR/NBB system; b) Updated NBB prepared and submitted to MEDPOL	100.000 €	15.000 €	115.000 €	35.000 €		External funding from EU/EEA funded SEIS II Project
2.4.3	Marine pollution assessment tools (in depth thematic assessment, maps and indicator factsheets) developed and updated for key pollutants and sectors within EcAp	1. Update the pollution assessment maps with new data up to 2019 at national, sub regional and regional levels including the updated list of hotspots.	Consultancies, SSFA, In house expertise	MED POL	Plan Bleu, CPs	Maps update, hot spots map, inventories map, part of SoED Report and the Joint EEA/MAP H2020 Report	5.000 €	5.000 €	10.000 €			
		2. Further develop the list of H2020/NAP Indicators and related fact sheets including data set dictionaries.	SSFA, National and regional consultants, Regional Meeting	MEDPOL	Plan Bleu, INFO/RAC, CPs, EEA	Fact sheets on core NAP indicators developed and populated with data and used for assessing NAP implementation, H2020 implementation and the LBS Protocol of the Barcelona Convention , Data set dictionaries developed and updated for the selected indicators	10.000 €	0 €	10.000 €	40.000 €		External funding from EU/EEA funded SEIS II Project
		3. Update thematic assessments to contribute to the SoED with new data where applicable (Pollution and Marine Litter)	In house expertise, consultancies, expert meetings	MEDPOL	Plan Bleu, EEA (SEIS Project), SPA/RAC INFO/RAC, ACCOBAMS	a) Assessment criteria and threshold on status of GES in the Mediterranean for Contaminants and Eutrophication taking into account the assessments undertaken during the last biennia on pollution trends, EAC and BAC as well as ML baseline values and targets;	25.000 €	10.000 €	35.000 €	20.000 €		External funding from EU/EEA funded SEIS II Project
						b) Assessment of the effects of marine litter on marine organisms mainly targeting on ingestion of ML from Sea turtles (joint with SPA/RAC);						
						c) Identification and initial analysis of ML hotspots in the Mediterranean.						
REMEPEC	Plan Bleu	Thematic chapters to the SoED report on pollution from ships and Offshore sectors.	5.000 €	5.000 €	10.000 €							
SCP/RAC and MED POL	SCP/RAC, MED POL	Assessment on the plastic industry clean production to prevent plastic waste and micro plastic and their toxicity for consideration by MED POL Focal Points and other relevant components.	0 €	10.000 €	10.000 €							
Total 2.4							465.000 €	215.000 €	680.000 €	155.000 €	70.000 €	
2.5: Enhanced capacity at regional, sub-regional and national levels including assistance and capacity building												
2.5.1	Training programmes and workshops in areas such as pollution monitoring, pollutant inventories, policy implementation, common technical guidelines, authorization and inspections bodies, compliance with national legislation	1. Undertake training to support countries in the implementation of IMAP with a particular focus on scale of assessment, offshore monitoring, integration of indicators towards GES and joint monitoring.	Regional/Sub regional Meetings, Consultancies, SSFA	MED POL	CU, REMPEC, SPA/RAC, Plan Bleu/PAP/RAC, CPs	Capacity building offered to national and local experts as appropriate	0 €	0 €	0 €	10.000 €	50.000 €	External funding from EU funded ECAP MED II Project; Source of the non secured external funding not yet identified.
		2. Promote sharing of best practices on "Adopt-a-beach" and "Fishing-for-Litter" measures; on waste management with particular focus on plastic prevention and e waste; as well as on environmental inspection and law enforcement with a focus on Dumping and offshore Protocols as well as one the newly updated Dumping Protocol Guidelines.	Regional/Sub regional Meetings, Consultancies, SSFA	MED POL	BSR Conventions, Regional Seas, GPA/MLGP, CPs, ML Collaboration Platform Partners, REMPEC, SCP/RAC, GFCM, IMO, London Dumping Protocol,	a) National experts trained on best practices, and awareness raised among local actors and industries;	0 €	0 €	0 €	25.000 €		External Funding from the EU funded Marine Litter MED Project. These activities will be implemented in close relation with output 2.1
				MEDPOL		b) Capacities enhanced on meeting compliance with national regulations; c) meeting of informal network of compliance and enforcement held with concrete contribution from the Contracting Parties for mutual assistance	20.000 €	50.000 €	70.000 €	20.000 €	External Funding will be sought in collaboration with IMO, BSR joint secretariat and IMPEL/EU	
		3. Sharing lessons learned and goods practices to enable the replication of previous pilot projects contributing to the implementation of the SCP AP.	National Workshops, Consultancies, in house expertise	SCP/RAC	CPs	5 national dissemination events and publication of communication material on the results of the pilot projects	0 €	0 €	0 €	100.000 €	0 €	EU funded Switch MED Project
		4. Increase as much as practical, the level of knowledge in the field of prevention of, preparedness for and response to marine pollution by oil and other harmful substances	Training, Workshop	REMEPEC	IMO	a) National and regional training courses/workshops organised on response to spill incidents involving oil and/or HNS;	55.000 €	0 €	55.000 €	0 €	40.000 €	Specific Objectives 3, 5, 6, 9 and 20 of the Regional Strategy (2016-2021) as well as Art.14 of the 2002 Prevention and Emergency Protocol. Implementation of the Marine Litter MEDProject
				REMEPEC		b) Training organised for flag State inspection officers in relation to relevant international instruments, in particular MARPOL;	0 €	0 €	0 €	20.000 €	0 €	
				REMEPEC		c) National workshops on the ratification and effective implementation of the BWM Convention as well as the AFS Convention and the Biofouling Guidelines;	0 €	0 €	0 €	40.000 €	0 €	
				REMEPEC		d) National workshops on ratification and effective implementation of MARPOL Annex V;	10.000 €	0 €	10.000 €	20.000 €	0 €	
REMEPEC	Meeting	CU MEDPOL, SCP/RAC, IMO	e) National meetings organised to raise awareness on the need to better manage sea-based litter in ports and to provide ships using their ports with updated information relevant to the obligation arising from Annex V of MARPOL and from their legislation applicable in the field;	0 €	0 €	0 €	20.000 €	0 €				

MTS Number	MTS Key outputs	Main Activities	Means of Implementation	Lead: CU and or Component	Partners	Expected Deliverables	MTF			External resources		Comments	
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured		
			Workshop	REMPEC	CU MEDPOL, SCP/RAC, IMO	f) Regional/sub-regional workshop organized to share best practices on No-Special-Fee systems.	0 €	0 €	0 €	20.000 €	0 €		
2.5.2	Pilot projects implemented on marine litter, POPs, mercury, and illicit discharges reduced, including through SCP solutions for alternatives to POPs and toxic chemicals and the reduction of upstream sources of marine litter for businesses, entrepreneurs, financial institutions and civil society.	1. Conclude the Pilots on FFL and Adopt a beach in at least 7 countries removal/reduction and ML prevention (SCP) pilot projects with support from the EU funded ML Project and Cooperation Agreement with Italy.	SSFA, Consultancies, In house Expertise	MED POL, REMPEC, SCP/RAC		a) COP 19 Marine litter reduction targets met in pilot areas; b) Assessment report based on the results of the pilot projects in the framework of the ML MED project.	0 €	0 €	0 €	200.000 €		External funding secured from Marine litter MED Project (50.000 €) and the Bilateral cooperation Agreement with Italy-IMELS (150.000 €)	
		2. Design in details pilot projects on PCB, Mercury and decontamination on site based on NAP hotspots.	Consultancies, Regional Meetings, Mission to countries	In house expertise, MED POL, REMPEC, SCP/RAC		Reduction and disposal of POPs and contaminated areas identified for remediation under the new Med Programme	0 €	0 €	0 €	180.000 €		External funding secured from the PPG under the Med programme	
		3. Enhance the provision of reception facilities in ports, delivery of ship-generated wastes and reduction of the pollution generated by pleasure craft activities	Consultancy	REMPEC	CU, MEDPOL, SCP/RAC, IMO	a) Up to ten pilots implemented in relation to the provision of reception facilities in ports and the delivery of ship-generated wastes in one marina per target country, as selected in collaboration with national authorities;	0 €	0 €	0 €	200.000 €	0 €		Specific Objectives 5, 6 and 9 of the Regional Strategy (2016-2021) as well as Art.14 of the 2002 Prevention and Emergency Protocol. Implementation of the Marine Litter MED Project (100.000 €) and funds in the framework of the bilateral cooperation agreement with IMELS-Italy (100.000 €).
		4. Implement pilot project on ML prevention (particularly focused on plastics and micro plastics in cosmetics)	In-house expertise, consultancies, national seminar, case studies	SCP/RAC		The best 25 SCP solutions to prevent ML will be identified from all over the world. Out of them at least one will be selected and implemented in MENA countries	0 €	0 €	0 €	155.000 €		Implementation of SDG 12 and 14; implementation of Regional Plan on Marine Litter, SCP Action Plan. Activity funded by SwitchMed until 2018 (40.000 €) and the Bilateral Cooperation Agreement with IMELS-Italy (115.000 €). Seed funding would be needed to consolidate a programme on SCP solutions for Marine Litter plastics, micro plastics in cosmetics and toxic chemicals starting in 2019.	
		5. Implement pilot project on safe alternatives to toxic chemicals	In-house expertise, consultancies, national seminar, case studies	SCP/RAC		The best 25 SCP solutions to prevent the use of toxic chemicals will be identified from all over the world. Out of them one will be selected and implemented in one CP	0 €	0 €	0 €	40.000 €	25.000 €		Implementation of SDG 12 and 14; implementation of Regional Plan on POPs. Activity funded by SwitchMed until 2018. Seed funding would be needed to consolidate a programme on SCP solutions for Marine Litter and Toxic chemicals starting in 2019 SwitchMed Programme.
		6. Sharing lessons learned and good practices to enable the replication of previous pilot projects contributing to the implementation of the SCP AP.	In-house expertise, consultancies, national meetings, regional/sub-regional workshop, guideline, training material	SCP/RAC	MEDPOL, CP	Organisation of 5 national dissemination events and publications of communication material on the results of the pilot projects.	0 €	0 €	0 €	30.000 €	10.000 €		Contribution from Marine Litter MED and Switch MED Projects.
Total 2.5							85.000 €	60.000 €	145.000 €	1.060.000 €	145.000 €		
2.6: Enhanced cooperation at regional, sub-regional and national levels to prevent and control marine pollution													
2.6.2	Networks and initiatives of businesses, entrepreneurs and civil society providing SCP solutions contributing to alternatives to POPs and toxic chemicals and to reduce upstream sources of marine litter supported and coordinated.	Undertake training and support programme to support SMEs and CSO to implement innovative solutions to prevent the generation of waste ending up as marine litter and the shift to safe alternatives to POPs and toxic chemicals	Training, capacity building	SCP/RAC	MED POL	Technical support, national training and capacity building activities are provided	80.000 €	10.000 €	90.000 €	0 €	40.000 €	Implementation of SDG 8, 9, 12 and 14; implementation of Regional Plan on ML and Regional Plan on POPs. Diverse on-going and planned actions for 2018 address this activity under different funding sources (SwitchMed, Marine Litter Med, H2020, etc). But no specific support programme has been designed to ensure long term implementation of actions. Seed funding would be needed to consolidate a programme on SCP solutions for Marine Litter and Toxic chemicals for 2018-2019	
Total 2.6							80.000 €	10.000 €	90.000 €	0 €	40.000 €		
2.7: Identifying and tackling new and emerging issues, as appropriate													
2.7.1	Reviews/policy briefs developed and submitted to Contracting Parties on emerging pollutants, ocean acidification, climate change and linkages with relevant global processes	1. Examine the possibility of designating the Mediterranean Sea or parts thereof as SOx emission control area under MARPOL Annex VI and effectively implement the existing energy efficiency measures.	In-House expertise Consultancy	REMPEC	CU, IMO	Roadmap put in place for the preparation of a submission to the IMO to designate as a SOx ECA in certain areas of the Mediterranean Sea requiring specific environmental protection as well as possible further steps explored	25.000 €	0 €	25.000 €	0 €	0 €	Specific Objective 15 of the Regional Strategy (2016-2021) as well as follow-up on the basis of the outcome of the 2017 technical and feasibility study on the designation of SECAs and recommendations of the SECA Technical Committee of experts	

MTS Number	MTS Key outputs	Main Activities	Means of Implementation	Lead: CU and or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non-secured	
		2. Reduce marine noise caused by ships.	In-House expertise	REMPEC	MED POL, SPA/RAC, WWF, ACCOBAMS	Technical support provided to CPs, which so request, to raise awareness on the reduction of underwater noise from commercial shipping to address adverse impact on marine life	0 €	0 €	0 €	0 €	0 €	Specific Objective 13 of the Regional Strategy (2016-2021)
Total 2.7							25.000 €	0 €	25.000 €	0 €	0 €	
							TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
							969.773 €	331.000 €	1.300.773 €	1.753.000 €	405.000 €	

Theme 2	Total 2018	Total 2019	Total	External secured	External Non secured
Coordinating Unit			-		
MED POL	717.773	295.000	1.012.773	840.000	240.000
REMPEC	172.000	16.000	188.000	353.000	90.000
PB/RAC	-	-	-	-	-
SPA/RAC			-		
PAP/RAC			-		
INFO/RAC			-		
SCP/RAC	80.000	20.000	100.000	560.000	75.000
TOTAL	969.773	331.000	1.300.773	1.753.000	405.000

Footnotes
The indication of a Component/Partner does not necessarily imply allocation of funds.

THEME 3: Biodiversity and Ecosystems												
Ecological Objectives / Long-Term Targeted Impacts: 1. 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; 2. Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem; 3. 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; 4. 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; 5. Sea-floor integrity is maintained, especially in priority benthic habitats.												
Strategic objectives: 1. To strengthen the management, including socio-economic aspects, and extend the network of Coastal and Marine Protected Areas including SPAMIs; 2. To strengthen the implementation of action plans on endangered and threatened species key habitats and Non-Indigenous Species; 3. To promote Coastal and Marine Protected Areas as a contribution to Blue Economy; 4. To strengthen the resilience of Mediterranean natural and socioeconomic systems to the impacts of climate change.												
2018-2019 Indicators: 1. Number of countries implementing the Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats as well as the Action Plan on Species Introductions and Invasive Species; 2. Number of guidelines and other tools elaborated/updated and disseminated; 3. Number of MSP pilot projects taking into account biodiversity conservation measures; 4. Number of NAPs developed or updated in line with SAP BIO, EcAp, Aichi Targets and the Nagoya Protocol, including streamlining of climate change and SCP Regional Action Plan; 5. Number of regulatory measures developed and agreed at national levels; 6. Number of biodiversity-related actions implemented within ICZM activities; 7. Number of convened scientific meetings on Mediterranean marine biodiversity; 8. Number of joint strategies and/or working programmes developed with Partners; 9. Number of trainings on marine biodiversity conservation												
2018-2019 Targets: 1. At least 3; 2. 3 Guidelines; 3. At least 1 pilot; 4. 7 NAPs; 5. 5 national regulatory measures; 6. 2 actions; 7. 5 meetings; 8. 2 joint strategies or working programmes; 9. At least 4 trainings on marine biodiversity conservation												
MTS. Number	MTS Key outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
3.1 Strengthening regional implementation of the obligations under the Barcelona Convention, and its relevant Protocols and other instruments												
3.1.1	A comprehensive coherent network of well managed MPAs, including SPAMIs, to achieve Aichi Target 11 in the Mediterranean set up and implemented	1. Support the operation, on a trial basis, of the Ad hoc Group of experts on MPAs under the SPA/BD Protocol 2. Develop and strengthen an effective SPAMI management	In-house coordination, convening annual meetings In-house coordination, staff hiring, travel, external expertise and services, administrative support	SPA/RAC SPA/RAC	CU and other Components; Ad hoc Group members, including those representing other scientific advisory groups REMPEC, SPAMI managers, IMO	The Ad hoc Group of experts on MPAs' delivers to SPA/RAC scientific and technical advice on future orientations in MPA planning and governance, and identifies gaps impeding the proper development of a regional MPA network. a) Twinning agreements among SPAMIs based on a model developed by SPA/RAC b) Management and monitoring programmes harmonized and improved, including climate change impact on biodiversity SPAMI managers trained; Civil society involved in SPAMI management; A collaborative platform for SPAMIs setup; Guidance provided on PSSAs identification in relation with SPAMIs.	0 €	0 €	0 €	20.000 €	0 €	MedMPA Network project (UN Environment - EU) 2016-2018
3.1.2	Most relevant area-based management measures are identified and implemented in cooperation with relevant global and regional organizations, through global and regional tools (SPAMIs, FRAs, PSSAs, etc.), including for the conservation of ABNJ, taking into consideration the information on Mediterranean EBSAs.	Provide coordinated support to Contracting Parties in identifying and planning relevant joint management measures at subregional level to achieve GES in ABNJ or where the limits of jurisdiction have not yet been defined.	Consultancies, synergy actions with partners, in house coordination	SPA/RAC	REMPEC, GFCM, IMO, ACCOBAMS, CBD	Two pilots/sites identified and selected; Relevant area based management measures identified and concerned Parties supported for their elaboration, having regard of existing legal frameworks and regimes including maritime traffic, fisheries regulations, SPAs and SPAMIs	0 €	10.000 €	10.000 €	50.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS-Italy.
Total 3.1							0 €	10.000 €	10.000 €	570.000 €	0 €	
3.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines for the conservation of Coastal and Marine Biodiversity and Ecosystems												
3.2.1	Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats, on species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water	1. Implement/update the Regional Action Plans for the conservation of Mediterranean endangered and threatened species, key habitats, and species introductions as well as the Mediterranean Strategy and Action Plan on Ships' Ballast Water Management are updated to achieve GES; 2. Elaborate Guidelines for the conservation of Mediterranean marine endangered and threatened species, key habitats and non-indigenous species	consultancies, collaboration with national and regional partners, workshop organization, etc.	SPA/RAC SPA/RAC SPA/RAC SPA/RAC SPA/RAC	REMPEC, ACCOBAMS, Action Plans Partners and Associates, CPs, MAVA Foundation	a) Relevant scientific documentation contributing to update knowledge and enhance conservation actions towards the conservation of Mediterranean endangered and threatened species elaborated. b) Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats implementation supported through pilot actions at national and regional levels. c) Progress on the implementation of Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats assessed at national and regional levels. d) Regional Action Plans for the conservation of Mediterranean endangered and threatened species and key habitats updated notably their timetables, taking into account the IMAAP (Monk Seal Strategy, Cartilaginous Fishes AP, Marine Turtles AP, Marine Vegetation AP). e) Guidelines for the assessment of environmental impact on coralligenous/maërl assemblages elaborated.	20.000 €	25.000 €	45.000 €	60.000 €	0 €	Marine turtles conservation project (MAVA Foundation under discussion) MedKeyHabitats II project under preparation with MAVA

MTS Number	MTS Key outputs	Main Activities	Means of Implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019	Total 2018-2019 non secured	
	Management are updated to achieve GES.	3. Support the implementation of the Mediterranean Strategy on Ships' Ballast Water Management and Action Plan and provide assistance to control and manage ships' biofouling to minimise the transfer of invasive aquatic species.	Consultancy	REMPEC	CU SPA/RAC, IMO	Technical support provided to CPs, which so request, to: a) ratify and implement the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, in conjunction with the implementation of the Mediterranean Strategy on Ships' Ballast Water Management; b) apply the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species.	20.000 €	0 €	20.000 €	0 €		Specific Objectives 1 and 2 of the Regional Strategy (2016-2021), follow-up of the 2017 assessment of the level of implementation of the Mediterranean Strategy on Ships' Ballast Water Management as well as outcome of the 5th and final Global Project Task Force meeting (GPTF-5) of the GEF-UNDP-IMO Global Ballast Partnerships, in collaboration with SPA/RAC.
3.2.2	Guidelines and other tools for the conservation of endangered and threatened Mediterranean coastal and marine species, key habitats, for non-indigenous species control and prevention as well as the management of marine and coastal protected areas developed/updated and disseminated	3.2.2.8 Identify measures to prevent ML generation in the management of MPA (SPAMI)	In-house expertise, sub-regional events, actions plans, governance plan	SCP/RAC	SPA/RAC, MedPAN, MIO-ECSDE, SSSUP, IAT	Review of the most promising measures to minimize ML generation in MPAs and select the best ones considering the ecosystem services. Preparation of a governance plan on major measures to minimize the generation of ML that are common to all Med MPAs; Preparation of specific action plans on the most promising measures to address ML in 10 MPA, adapted to the specific context and protected areas.	0 €	0 €	0 €	160.000 €	0 €	Funding will be provided for the preparation of the governance plan and the Action Plans on ML reduction in MPAs (SPAMIs). Deliverables will be completed by July 2018 under ACT4LITTER Project (80.000 €) and the bilateral cooperation agreement with IMELS-Italy (80.000 €).
3.2.3	Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM) applied in selected areas at a pilot level linking coastal and open sea areas subject to major pressures. To this end the information on EBSA areas could be used.	1. Apply MSP and ICZM within a selected area, including EBSAs, aiming to identify most relevant area-based management options at a pilot level	Ad-hoc projects developed with Parties' and external support	SPA/RAC SPA/RAC	PAP/RAC, CU, CBD, GFCM, IMO	a) Further MSP pilot projects elaborated taking into account areas subject to major pressures; b) MSP pilot project implementation outputs as assigned to RAC/SPA in the Adriatic sub-region.	0 €	0 €	0 €	226.000 €	0 €	The external funding is from the Project "Implementation of Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning (GEF)" (26.000 €) and from the bilateral cooperation agreement with IMELS-Italy (200.000 €)
Total 3.2							40.000 €	25.000 €	65.000 €	446.000 €	0 €	
3.3 Strengthening national implementation of biodiversity conservation policies, strategies and legislation measures												
3.3.1	NAPs for the conservation of Mediterranean endangered and threatened species and key habitats and on species introductions and invasive species developed/updated	1. Support countries to update/develop new SAP BIO NAPs on biodiversity including for the conservation of Mediterranean threatened and endangered species and key habitats 2. Support the Contracting Parties and partners in producing and publishing relevant scientific documentation contributing to update knowledge and enhance conservation actions taken towards the conservation of species listed in Annex II to the SPA/BD Protocol.	Consultancies, in house coordination Consultancies, collaboration with national institutions, in house coordination	SPA/RAC SPA/RAC	REMPEC, CPs, Action Plan Partners CPs, Action Plan Partners, GFCM, ACCOBAMS, IUCN, BirdLife, MAVA	At least two CPs formulate National Action Plans streamlining the requirement of the Regional AP for the conservation of Mediterranean threatened and endangered species and key habitats to achieve GES and meet the ecosystem approach based MAP ecological objectives on biodiversity, in line with Aichi Targets and the Nagoya Protocol, incorporating SCP Regional Action Plan priority actions and climate change adaptation priority fields of action. a) A desktop study on cave habitats elaborated and the Mediterranean coralligenous report updated; b) Reports on case studies of fisheries affecting through bycatch vertebrate species covered by Regional Action Plans and listed in Annex II, to facilitate appropriate taking of mitigation measures.	10.000 € 0 €	0 € 0 €	10.000 € 0 €	10.000 € 15.000 €	0 € 0 €	MedKeyHabitats II project under preparation with MAVA MedKeyHabitats II project and project on by-catch, under preparation with MAVA Foundation
3.3.2	National measures developed and implemented to strengthen the protection and the management of relevant marine and coastal sites, especially those containing threatened habitats and species (including deep-sea habitats)	1. Undertake ecological, socio-economic and stakeholders assessments, and elaborate management plans for newly created/future MPAs in Algeria, Egypt, Lebanon, Morocco and Tunisia; Develop communication and information tools on MPA issues. 2. Support the management and expansion of Marine Protected Areas in Libya 3. Support countries to increase the knowledge of deep sea areas under their national jurisdiction to facilitate their conservation	In-house coordination, external expertise, national workshops In-house coordination, external expertise and services, national workshops Consultancies, collaboration with national and regional institutions Consultancies, collaboration with national and regional institutions	SPA/RAC SPA/RAC SPA/RAC	CU, MedPAN, WWF CU, IUCN, WWF National Partners, CPs, IUCN-Med, MedPAN, MAVA Foundation National Partners, CPs, IUCN-Med, GFCM, Birdlife, MAVA Foundation	Ecological/socio-economic assessment reports elaborated and results disseminated; One management plan elaborated; Communication activities undertaken A national inventory of marine and coastal sites of conservation interest in Libya elaborated; MPA management plans elaborated; A Civil Society Organisation (CSO) participatory platform prepared and initiated; Marine key habitats mapped and marine mega fauna (mammals, seabirds, turtles and cartilaginous fishes) monitored; Libyan national staff trained on MPA network planning and management; Awareness and communication campaigns and material, on the value and importance of MPAs, elaborated and their implementation initiated. Not yet finalized Marine threatened and endangered mega fauna (mammals, seabirds, turtles and cartilaginous fishes) monitoring supported in open sea and deep sea areas under national jurisdiction in line with IMAP.	10.000 € 0 € 0 €	10.000 € 0 € 0 €	20.000 € 0 € 0 €	115.000 € 1.307.339 € 1.000.000 € 0 €	0 € 0 € 0 €	MedMPA Network project (UN Environment - EU) 2016-2018 MedProgramme project (GEF) under preparation Medkeyhabitats II under preparation with MAVA Bycatch project under preparation with MAVA

MTS. Number	MTS Key outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
Total 3.3							20.000 €	10.000 €	30.000 €	2.447.339 €	0 €	
3.4 Monitoring, inventory and assessment of biodiversity with focus on endangered and threatened species, non-indigenous species and key habitats												
3.4.1	Monitoring programmes for key species and habitats as well as invasive species, as provided for in the IMAP are developed and implemented, including on the effectiveness of marine and coastal protected areas, and on climate change impacts	1. Support the development and implementation of National/Sub-regional Monitoring Programme(s) in line with biodiversity cluster of IMAP.	In house coordination	SPA/RAC	Contracting Parties, CU and other Components, ACCOBAMS, IUCN, GFCM, Birdlife, MEDASSET, National partners	a) Indicator Guidance Factsheets for Common Indicators related to biodiversity and non-indigenous species (EO1 and EO2) further developed;	20.000 €	40.000 €	60.000 €	277.000 €	0 €	Sub-regional monitoring activity financed by the ongoing EcAp-MED II project (20 000€); Implementation of Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning (GEF) (257 000€)
			External expertise and consultancies	SPA/RAC		b) Monitoring Protocols for Common Indicators developed/updated;						
			Collaboration with national institutions	SPA/RAC		c) CORMON meeting on biodiversity successfully held;						
			Regional meeting	SPA/RAC		d) IMAP National/Sub-regional monitoring activities carried out;						
			Consultancies, collaboration with national institutions	SPA/RAC	Contracting Parties, CU and other Components, National partners	e) Sub-regional monitoring programme on common indicators for biodiversity proposed for the Adriatic Sea in line with IMAP cluster on biodiversity and fisheries;	10.000 €	10.000 €	20.000 €	40.000 €	0 €	Marine turtles conservation project (under discussion with MAVA)-ACCOBAMSSURVEY INITIATIVE funded byMAVA
		2. Run in 2018 the ordinary periodic review of the 7 SPAMIs included in the list in 2012, and in 2019 the ordinary periodic review of the 12 SPAMIs included in the list in 2001.	In-house coordination, external expertise	SPA/RAC	CU, SPA/RAC Focal Points and MPA managers	a) The ordinary periodic review aimed at making an in depth assessment of SPAMI management effectiveness undertaken for the 19 SPAMIs included in the list in 2001 and 2012; b) The report, main findings and recommendations submitted to SPA/RAC focal point meeting in 2019.	17.000 €	28.000 €	45.000 €	0 €	0 €	-
		3. Assess the progress made in implementing the Roadmap on MPAs by the Contracting Parties.	In-house coordination, external expertise	SPA/RAC	Contracting Parties, CU and other Components, MedPAN, WWF, IUCN, ACCOBAMS, GFCM	The progress made (success and possible failure) by the Mediterranean countries towards achieving the Aichi Target 11 evaluated and post-2020 targets set for the region.	25.000 €	0 €	25.000 €	0 €	0 €	-
3.4.2	Biodiversity conservation assessment tools (in-depth thematic assessment, maps and indicator fact sheets) developed and updated to show trends at national, sub-regional and regional levels, and measure the effectiveness of the SAP BIO NAPs and Regional Action Plans implementation	1. Evaluate SAP BIO implementation and its impact in Mediterranean conservation, including through the biodiversity action plans 2. Draft the SOED chapter on marine and coastal biodiversity and MPA/SPAMI	2 regional workshops of SAP BIO National Correspondents (one back-to-back with the 14th SPA/RAC Focal Point meeting) plus consultancy and conference services, in house coordination	SPA/RAC	CU and other Components, Parties, SAP BIO National Correspondents, Partners, CU and other Components	a) SAP BIO Implementation 2003-2018 evaluated. b) Main achievements, gaps and needed future directions based in lessons learnt identified, allowing building a new Strategic Programme to be implemented in the future, fully embracing current SDGs and EcAp arised needs, in harmonization also with Contracting Parties engagements towards the CBD. c) The evaluation results transmitted to SPA Focal Points	75.000 €	15.000 €	90.000 €	0 €	0 €	-
				SPA/RAC		d) The process for the evaluation of the SAP BIO implementation will be complemented with an in depth analysis of its indicators to deliver the thematic chapter of the SOED Report.						
3.4.3	Common indicators on biodiversity and non-indigenous species monitored through IMAP in MPAs and SPAMIs, and relevant data sets established	Cooperate at sub-regional level to test joint monitoring activities in (a) selected area(s), thus supporting countries to implement joint monitoring programmes in line with the IMAP recommendations in MPAs/SPAMIs.	In house coordination	SPA/RAC	Contracting Parties, CU, INFO/RAC, ACCOBAMS, GFCM, MEDASSET, BirdLife	Data sets about common indicators collected in selected MPAs/SPAMIs and integrated in the Mediterranean Biodiversity Platform.	0 €	20.000 €	20.000 €	20.000 €	0 €	Ongoing EcApMed II project
			External expertise	SPA/RAC								
3.4.4	Inventory of vulnerable and fragile coastal and marine ecosystems and assessment of sensitivity and adaptive capacities of coastal and marine ecosystems to changes in sea conditions as well as of the role of services they provide developed	Carry out the inventory of coastal and marine ecosystems of Ghar El Melh Lagoon (Tunisia) towards its protection and sustainable management.	In house coordination and expertise	SPA/RAC	WWF-MedPO	Coastal and marine ecosystems of Ghar el Melh lagoon (Tunisia) inventoried and its protection and sustainable management plan elaborated.	0 €	0 €	0 €	0 €	0 €	External funds (cooperation with WWF-North Africa)
Total 3.4							147.000 €	113.000 €	260.000 €	337.000 €	0 €	
3.5 Technical assistance and capacity building at regional, sub-regional and national levels to strengthen policy implementation and compliance with biodiversity -related national legislation												
3.5.1	Capacity-building programmes related to the development and management of marine and coastal protected areas, to the conservation and monitoring of endangered and threatened coastal and marine species and key habitats, and to monitoring issues dealing with climate change and biodiversity developed and implemented, including pilots to support efforts aimed at MPA/SPAMI establishment and implementation.	1. Organize specific training courses, workshops, symposia related to the conservation and monitoring of threatened and endangered Mediterranean coastal and marine species, key habitats and non-indigenous species	In house coordination, external consultancy, workshop organisation	SPA/RAC	Marine Key Habitats Action Plan Partners. REMPEC. Bern and Bonn Conventions, ACCOBAMS, National partners	a) The 3 rd Mediterranean Symposium on Coralligenous and other calcareous bio-concretions, b) the 2 nd Mediterranean Symposium on Dark Habitats; c) Symposium on marine key habitats, d) 6 th Mediterranean Symposium on Marine Vegetation, e) 1 st Symposium on Marine Alien Species, f) 6 th Mediterranean Conference on Marine Turtles, the Biennial Cetacean Conference, organised. g) Proceedings of these symposia edited and disseminated; h) Training on the monitoring of marine key habitats in the Adriatic region organised. i) Training on characterization, mapping and monitoring of marine key habitats organised. j) Reports on capacity building programmes elaborated.	15.000 €	33.000 €	48.000 €	95.000 €	0 €	a. MedKeyHabitats II project under preparation with MAVA; b. MedNIS project under preparation; c. Marine turtle conservation project (under discussion with MAVA); d. Implementation of Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning (GEF) project

MTS. Number	MTS Key outputs	Main Activities	Means of Implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
		2. Organise training of practitioners to follow observatories of the Mediterranean related to biodiversity and human activities and related impacts in marine and coastal areas	Supporting base for training provided by interoperable observatory platform integrating networks of marine environment and maritime activity observing and forecasting systems across the Mediterranean basin, addressing both the open sea and the coastal zone, with trained practitioners at national levels to operate it	SPA/RAC	-	Reports of workshops to train future managers and operators of the National Observatories	0 €	0 €	0 €	90.000 €	0 €	The external funding is from ODYSSEA (EU)
		3. Strengthen and enhance capacity building activities on the conservation of Mediterranean marine biodiversity	Internal expertise and coordination	SPA/RAC	-	The results of the capacity building evaluation study (made in 2017) consolidated into a strategy on capacity building on the conservation of Mediterranean marine biodiversity	0 €	0 €	0 €	0 €	0 €	
Total 3.5							15.000 €	33.000 €	48.000 €	185.000 €	0 €	
3.6 Enhanced cooperation at regional, sub-regional and national levels to protect and conserve biodiversity and ecosystems												
3.6.1	Joint strategies and programmes on biodiversity and ecosystem conservation developed, by taking into account NAPs in cooperation with relevant partner organizations at global and regional levels	1. Develop and implement an agreed strategic framework for the activities related to Mediterranean marine spatial management and conservation measures with key regional bodies	Discussion with partner organisations and in house consultancies	SPA/RAC	Coord. Unit, REMPEC, Contracting Parties, ACCOBAMS, GFCM, IUCN, MedPAN, IMO	Outcomes of the discussions on the joint cooperation strategy submitted to COP 21 for its consideration	0 €	0 €	0 €	0 €	0 €	
		2. Continue the implementation of existing cooperation agreements, update them and/or develop related joint technical action programmes, and develop new agreements as needed	Common agreements/working programmes or activities documents elaborated, discussed with relevant bodies and presented to Party representatives	SPA/RAC	CU, Relevant partner organizations	Ongoing MoUs with relevant regional organisations renovated and updated as needed with emphasis on: a) enhancing an adequate monitoring of the Mediterranean ecosystems constituents, and including ongoing and envisaged impacts following the EcAp; b) addressing such impacts through enhanced MSP actions	0 €	0 €	0 €	0 €	0 €	
Total 3.6							0 €	0 €	0 €	0 €	0 €	
3.7 Identifying and tackling with new and emerging issues, as appropriate												
3.7.1	Coordination with the ongoing process towards the adoption of an implementing agreement on BBNJ (namely concerning marine genetic resources, marine protected areas BNJ, and SIA)	Coordinate with the ongoing process towards the adoption of an implementing agreement on BBNJ (namely concerning marine genetic resources, marine protected areas BNJ, and SIA).	Consultancies, in home contributions and coordination	SPA/RAC	REMPEC, CU, GFCM, IMO	Documentation contribution to relevant meetings to advance in the topics and reports of participation to BBNJ meetings	5.000 €	0 €	5.000 €	0 €	0 €	
Total 3.7							5.000 €	0 €	5.000 €	0 €	0 €	
							TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
							227.000€	191.000 €	418.000 €	3.985.339 €	0€	

Theme 3	Total 2018	Total 2019	Total	External Secured	External Non-Secured
Coordinating Unit			-		
MED POL			-		
REMPEC	20.000	-	20.000	-	-
PB/RAC			-		
SPA/RAC	207.000	191.000	398.000	3.825.339	-
PAP/RAC			-		
INFO/RAC			-		
SCP/RAC	-	-	-	160.000	-
TOTAL	227.000	191.000	418.000	3.985.339	-

Footnotes
The indication of a Component/Partner does not necessarily imply allocation of funds.

THEME 4: Land and Sea Interaction and Processes												
Ecological Objectives / Long-Term Targeted Impacts:												
1. The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved;												
2. Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.												
Strategic objectives:												
1. To reduce anthropogenic pressure on coastal and marine areas in order to prevent or reduce their degradation;												
2. To ensure preservation of the integrity of coastal ecosystems, landscapes and geomorphology;												
3. To adopt measures to reduce the negative impact of natural hazards and in particular of climate change;												
4. To ensure that activities on the land and the sea part of the coastal zones are compatible and mutually supportive.												
2018-2019 Indicators:						2018-2019 Targets:						
1. Number of tools and methodological documents developed for implementation by the Contracting Parties;						1. 2 methodological tools prepared;						
2. Number of ongoing projects, including CAMPs, addressing land-sea interactions;						2. At least 1 CAMP project finalized;						
3. Coastal networks established and functioning.						3. CAMP network functioning						
MTS. Number	Key Outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
4.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans												
4.1.1.	Contracting Parties assisted in identifying, implementing and evaluating specific measures and tools to reduce pressures on coastal and marine areas (e.g. coastal setback, land policy measures, zoning)	1. Provide assistance to the CPs upon request	In-house expertise, travel	PAP/RAC	CU, CPs	Assistance provided on specific issues of concern for CPs in the process of the ICZM Protocol implementation (upon request)	0 €	0 €	0 €			Administrative costs only
Total 4.1							0 €	0 €	0 €	0 €	0 €	
4.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines												
4.2.1.	Tools and guidelines for environmental assessments developed and applied (e.g. EIA, cumulative assessments, SEA)	1. Prepare guidelines for SEA and EIA in a transboundary context and submit them for adoption at COP21	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other components, CPs	Guidelines prepared based on the existing international instruments in the field and adapting them to the BC context, with possible priority for the Adriatic and West Med basins, linked with SIMWESTMED and SUPREME projects and EUSAIR	0 €	0 €	0 €	50.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS- Italy.
4.2.2		1. Organize regional (Mediterranean) training on MSP, its links with ICZM and transboundary issues related to its implementation	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other components, CPs, partners from the SIMWESTMED and SUPREME projects	Regional workshop on MSP for all Mediterranean countries organized and common understanding of the MSP process and its links with ICZM ensured	10.000 €	0 €	10.000 €	40.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS- Italy.
		2. Analyze and define in an integrated manner opportunities for transboundary cooperation on MSP	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU, INFO/RAC, CORILA-Venice, SHOM-France, Italian Ministry of Infrastructure and Transport, Italian Ministry of Environment, Land and Sea, Croatian Institute for Spatial Development, Malta Environment and Planning Authority, Regional Development Center of Koper, Spanish Institute of Oceanography, Universities from Venice and Athens, CRPM, Agence des Aires Marines Protegees-Brest.	Challenge to and opportunities for transboundary cooperation on MSP (data requirements, land-sea interactions, ICZM and MSP, use of IMAF indicators, stakeholder analysis) analyzed, and possible approaches to addressing them proposed			0 €	140.000 €		Two EU-funded projects on MSP: SIMWESTMED for the Western Mediterranean EU MS and SUPREME for the Eastern Mediterranean EU MS

MTS. Number	Key Outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
	Marine Spatial Planning defined in the context of the Barcelona Convention and applied, as appropriate	3. Implement MSP pilot activities in Montenegrin transitional waters	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components, National and local authorities and institutions of Montenegro	MSP for a selected area of transboundary waters in Montenegro prepared	0 €	0 €	0 €	190.000 €		GEF Adriatic project
		4. Reduce risk of collisions by establishing Ship's Routing Systems and improve the control of maritime traffic	Consultancy	REMPEC	CU PAP/RAC, IMO	Technical support provided to CPs, which so request, to: a) propose to IMO, where necessary, additional appropriate routing systems in the Mediterranean, for adoption; and b) identify possible areas of the Mediterranean where control of maritime traffic could be improved by the establishment of a regime based on the use of Automatic Identification System (AIS) in conjunction with Vessel Traffic Services (VTS) and mandatory ship reporting systems.	0 €	0 €	0 €	0 €	0 €	Specific Objectives 10 and 11 of the Regional Strategy (2016-2021), in collaboration with PAP/RAC
		5. Establish procedures for the designation of places of refuge in order to minimize the risks of widespread pollution as well as enhance the availability of adequate emergency towing capacity throughout the Mediterranean to assist vessels, including tankers, in distress	Consultancy	REMPEC	CU PAP/RAC, IMO	Technical support provided to CPs, which so request, to: a) facilitate the decision making when designating a place of refuge for ships in need of assistance; and b) enable them to share emergency towing equipment and arrangements to assist ships in distress in the Mediterranean.	0 €	0 €	0 €	0 €	0 €	Specific Objectives 14 and 16 of the Regional Strategy, in collaboration with PAP/RAC
		6. Identify Particularly Sensitive Sea Areas (PSSAs)	Consultancy	REMPEC	CU SPA/RAC, IMO	Technical support provided to CPs, which so request, to conduct the necessary studies, in cooperation with IMO, and to prepare the relevant submissions to IMO for the designation of PSSAs, if any, in strict compliance with the applicable IMO Guidelines	0 €	0 €	0 €	0 €	0 €	Specific Objective 12 of the Regional Strategy, in collaboration with SPA/RAC
Total 4.2							10.000 €	0 €	10.000 €	420.000 €	0 €	
4.3 Strengthening national implementation												
4.3.1.	New generation of CAMPs prepared to promote land-sea interactions, also addressing trans-boundary aspects, as appropriate d-	1. Prepare, sign agreement for and launch a new CAMP project in Bosnia-Herzegovina.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components, as appropriate, CP's national and local authorities and institutions	a) Agreement between UNEP/MAP and the Government of Bosnia-Herzegovina signed; Inception Report prepared; b) Inception Meeting organised; c) Activities implemented according to the time schedule established in the Inception Report.	50.000 €	65.000 €	115.000 €			

MTS. Number	Key Outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
		2. Negotiate new CAMP project(s), preferably including a transboundary or transnational one, and linking coastal and open sea areas subject to major pressures.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU, SPA/RAC, REMPEC and other Components, CPs' national and local authorities and institutions	Feasibility Study for a new CAMP project prepared and agreement signature supported with the host-country(ies).	15.000 €	0 €	15.000 €	30.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS- Italy, in case of a transboundary or transnational CAMP project
Total 4.3							65.000 €	65.000 €	130.000 €	30.000 €	0 €	
4.4 Monitoring and assessment												
4.4.1.	Mapping of interaction mechanisms on coastal and marine environment at regional and local levels developed, including assessment of the risks of sea level rise and coastal erosion, and their impacts on coastal environment and communities	1. Develop approaches proposed for addressing land- sea interactions, ICZM and MSP and use of IMAP indicators	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and INFO/RAC, EASME funded projects SIMWESTMED and SUPREME Projects' partners (see 4.2.2)	Approaches proposed for addressing land-sea interactions, ICZM and MSP and use of EcAp indicators tested in several pilot areas of Western and Eastern Mediterranean EU Member States	0 €	0 €	0 €	60.000 €		Two EU-funded projects on MSP: SIMWESTMED for the Western Mediterranean EU MS and SUPREME for the Eastern Mediterranean EU MS
		2. Implementing the SDG 14 in the Mediterranean by promoting the Blue Economy.	Consultancy; In house expertise, Workshops	Plan Bleu	All Components, UFM	Case studies to foster the Blue Economy (in fisheries and aquaculture, maritime transport and port activities, wind energy, tourism and recreation, biological resources), covering economic benefits of environmental services, of innovation, of inclusion (e.g. of the young). Recommendations for a transition towards a Blue Economy in the Mediterranean.	20.000	3.000	23.000	90.000 €		The external funding is from the bilateral cooperation agreement with IMELS- Italy
		3. Develop / consolidate tools to facilitate climate change integration into the decision-making process	Consultancy; Publications	Plan Bleu	All Components, MedSea Foundation	The costal risk index developed and validated with most of the Mediterranean countries and at sub regional level. Further development of the MedCIP in synergy with the MSSD dashboard	5.000	2.000	7.000	40.000 €	0 €	ENI/CBC MED project (tbc)
4.4.2.	National coast and hydrography monitoring programmes developed and updated to include the relevant IMAP common indicators, interactions and processes	1. Consolidate common knowledge to inform MSP as a tool for EcAp application in the Adriatic sub-region (close link with Key Output 4.2.2)	In-house coordination and management, external expertise and services, meetings, CORMON meeting on coast and hydrography	PAP/RAC	CU and other Components, National and local authorities and institutions of the two project countries (Albania and Montenegro), other CPs	National IMAPs finalized for the project counties: Albania and Montenegro	0 €	0 €	0 €	357.000 €		GEF Adriatic project
		2. Continue support to the finalization of national IMAPs' Coast and Hydrology components	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU, CPs beneficiary to the EcAP MED II project, CORMON Meetings	Coast and Hydrology components of national IMAP's further updated and implementation started	0 €	30.000 €	30.000 €	20.000 €		EcAp Med II
Total 4.4							25.000 €	35.000 €	60.000 €	567.000 €	0 €	

MTS. Number	Key Outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
4.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building												
4.5.1.	Capacity building for the application of tools for assessing interactions and integrating them in planning/management of coastal and marine environment implemented	1 Undertake capacity building for improved sub-regional environmental management through implementation of demonstration marine spatial plans	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components, National and local authorities and institutions of the two project countries (Albania and Montenegro), other CPs	a) Second IMAP training workshop organized; b) Two tailor-made training sessions on MSP for Albania and Montenegro organized.	0 €	0 €	0 €	634.000 €		GEF Adriatic project
		2. Develop a knowledge management, stakeholder involvement and communication strategy	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and other Components, National and local authorities and institutions of the two project countries (Albania and Montenegro), other CPs	National data bases updated in the project countries: Albania and Montenegro	0 €	0 €	0 €	99.000 €		GEF Adriatic project
Total 4.5							0 €	0 €	0 €	733.000 €	0 €	
4.6 Enhanced cooperation at regional, sub-regional and national levels.												
4.6.1.	Networks of CAMPs and other ICZM Protocol implementation activities established and cooperation undertaken with other partners to promote the exchange of data, experience and good practices established.	1. Support the implementation of the network by developing guidelines and methodologies for its functioning, and organizing on-line and face-to-face exchanges	In-house coordination and management, external expertise, meetings	PAP/RAC	CU and INFO/RAC, CPs and all other relevant stakeholders	Support to new CAMPs provided, exchange of experiences and information facilitated and human and knowledge base strengthened for the ICZM implementation	0 €	0 €	0 €	40.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS- Italy.
Total 4.6							0 €	0 €	0 €	40.000 €	0 €	
							TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
							100.000 €	100.000 €	200.000 €	1.790.000 €	0 €	

Theme 4	Total 2018	Total 2019	Total	External Secured	External Non-Secured
Coordinating Unit			-		
MED POL			-		
REMPEC	-	-	-	-	-
PB/RAC	25.000	5.000	30.000	130.000	-
SPA/RAC			-		
PAP/RAC	75.000	95.000	170.000	1.660.000	-
INFO/RAC			-		
SCP/RAC			-		
TOTAL	100.000	100.000	200.000	1.790.000	-

Footnotes

The indication of a Component/Partner does not necessarily imply allocation of funds.

THEME 5: Integrated Coastal Zone Management (ICZM)												
Long-Term Targeted Impacts:												
1. The sustainable development of coastal zones is facilitated by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development;												
2. The sustainable use of natural resources is ensured, particularly with regard to water use;												
3. The coherence is achieved between public and private initiatives and between all decisions by the public authorities, at the national, regional and local levels, which affect the use of the coastal zone.												
Strategic objectives:												
1. Support the effective implementation of the ICZM Protocol at regional, national and local levels, as stipulated in the Action Plan 2012-2019;												
2. Strengthen the capacities of Contracting Parties to use in an effective manner ICZM policies, instruments, tools and processes.												
2018-2018 Indicators:						2018-2019 Targets:						
1. Number of regional policies and action plans streamlining ICZM Protocol objectives and principles;						1. 2 regional policies/action plans;						
2. Number of MedOpen Training Courses;						2. 2 courses;						
3. Number of countries reporting updated/new national policies and action plans, which mainstream climate change adaptation and SCP measures;						3. At least 2 countries;						
4. Number of ICZM coordination mechanisms established;						4. ICZM platform functioning.						
MTS. Number	Key Outputs	Main Activities	Means of Implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
5.1 Strengthening regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans												
5.1.1.	The Mediterranean Regional Framework for Integrated Coastal Zone management is defined and put into effect	1. Develop and submit for adoption by COP21 the full text of the Common Regional Framework for ICZM, based on its initial structure adopted by COP20	In-house coordination and management, active participation of interested CPs in the drafting group, external expertise and services, meetings	PAP/RAC	CPs, CU and other Components	Full text of the Common Regional Framework for ICZM developed, supported by an Initial Legal Impact Assessment, and adopted by COP21	10.000 €	10.000 €	20.000 €	80.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS-Italy.
5.1.2.	SAP BIO, SAP MED, Offshore Action Plan and Strategy to combat pollution from ships implemented in an integrated manner, including through the Mediterranean regional framework, as set out in ICZM Protocol to enhance the sustainable use of marine and coastal resources.	1. Ensure synergies and coherence during the implementation of the ICZM Protocol and other UNEP/MAP Regional Strategies/Policies	In-house and external expertise, meetings	PAP/RAC	CPs, CU and other Components	Framework for the revision of SAP BIO in coherence with the Common Regional Framework for ICZM provided	0 €	0 €	0 €	60.000 €	0 €	The external funding is from the bilateral cooperation agreement with IMELS-Italy.
5.1.3.	Action Plan for the implementation of the ICZM Protocol further implemented; Status of Implementation reported	1. Examine enabling factors for and threats to sustainability of tourism	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and Plan Bleu, Region of East Macedonia & Thrace, CRPM, University of Thessaly, Emilia-Romagna Region, FEPORTS, Po Delta Park, Dubrovnik- Neretva and Split-Dalmatia Regional Development Agencies, Departement of Herault, University of Venice, CNR-ISMAR	Enabling factors for and threats to sustainability of tourism activity examined at the Mediterranean level and verified at the level of several demonstration sites on the Northern Mediterranean rim	0 €	0 €	0 €	160.000 €		INTERREG MED CO-EVOLVE project
		2. Prepare the Final Report on the Action Plan implementation	In-house expertise	PAP/RAC	CPs, CU	Final Report summarising the achievements in the period 2012-2019 covered by the Action Plan prepared and submitted to CPs for approval	0 €	0 €	0 €			Administrative costs only
Total 5.1							10.000 €	10.000 €	20.000 €	300.000 €	0 €	

MTS. Number	Key Outputs	Main Activities	Means of Implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
5.2 Development of new action plans, programmes and measures, common standards and criteria, guidelines												
5.2.2.	Methodological framework for land and sea interactions, considering in particular MSP and ICZM, developed and applied.	1.Develop a conceptual methodology for transboundary MSP in the Western and Eastern EU Member States	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and INFO/RAC; EASME funded projects SIMWESTMED and SUPREME projects' partners (see 4.2.2)	A conceptual methodology for transboundary MSP in the Western and Eastern EU Member States with operational details developed based on the Regional Framework for ICZM and MSP	0 €	0 €	0 €	140.000 €		Two EU-funded projects on MSP: SIMWESTMED for the Western Mediterranean EU MS and SUPREME for the Eastern Mediterranean EU MS
Total 5.2							0 €	0 €	0 €	140.000 €	0 €	
5.3 Strengthening national implementation												
5.3.1.	National ICZM Strategies including streamlining pollution, biodiversity, adaptation to climate change and SCP, land and sea interaction as well as sustainable cities prepared and applied	1.Mobilise resources and initiate the preparation of national ICZM strategies	In-house coordination, meetings	PAP/RAC	CPs; CU and other components	Upon request by CPs and pending on the availability of resources, baseline studies prepared for the preparation of national ICZM strategies	0 €	0 €	0 €		150.000 €	MedProgramme
5.3.2.	Countries assisted in carrying out gap analysis on national legal and institutional frameworks for ICZM in order to streamline as need be the ICZM Protocol provisions into national legislations.	1.Ensure synergies and coherence in the implementation of the ICZM Protocol and other BC-driven strategies and policies	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CPs; CU and other Components	One CP assisted in reviewing and harmonizing national strategies and actions plans prepared following the BC requirements	12.000 €		12.000 €			
Total 5.3							12.000 €	0 €	12.000 €	0 €	150.000 €	
5.5 Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building												
5.5.1.	MedOpen Training Programme on ICZM regularly updated and implemented, in coordination with the relevant NFPs.	1.Organise advanced training courses on ICZM (also see Key Output 1.4.5).	In-house coordination and management, external expertise and services	PAP/RAC	CPs	a) MedOpen updated to include up-to-date learning material, including CAMP outputs; b) One advanced training session in English and one in French delivered.	25.000 €	10.000 €	35.000 €			
Total 5.5							25.000 €	10.000 €	35.000 €	0 €	0 €	
5.6 Enhanced cooperation at regional, sub-regional and national levels												
5.6.1.	ICZM coordination enhanced through: (i) Mediterranean ICZM Platform; (ii) national ICZM coordination bodies.	1.Ensure and maintain the functioning of the Mediterranean ICZM Platform	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU and INFO/RAC, CPs and all other relevant stakeholders	a) Work of the ICZM Platform coordinated and facilitated through up-to-date information and knowledge; b) National coordination bodies responsible for the implementation of the ICZM Protocol supported	5.146 €	3.735 €	8.881 €			
Total 5.6							5.146 €	3.735 €	8.881 €	0 €	0 €	

MTS. Number	Key Outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non-secured	
							TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
							52.146 €	23.735 €	75.881 €	440.000 €	150.000 €	

Theme 5	Total 2018	Total 2019	Total	External Secured	External Non-Secured
Coordinating Unit			0		
MED POL			0		
REMPEC			0		
PB/RAC			0		
SPA/RAC			0		
PAP/RAC					
	52.146 €	23.735 €	75.881 €	440.000 €	150.000 €
INFO/RAC			0		
SCP/RAC			0		
TOTAL	52.146	23.735	75.881	440.000	150.000

Footnotes

The indication of a Component/Partner does not necessarily imply allocation of funds.

Theme 6: Sustainable Consumption and Production (SCP)												
Long-Term Targeted Impacts: 1. A prosperous Mediterranean region is established, with non-pollutant, circular socially inclusive economies-based on sustainable consumption and production patterns, preserving natural resources and energy, ensuring the well-being of societies and contributing to clean environment and healthy ecosystems that provide goods and services for present and future generations.												
Strategic objectives: 1. Support the effective implementation of the SCP Regional Action Plan and its Road map of (2016-2021); 2. Strengthen technical capacities and facilitating access to funding to businesses, entrepreneurs, financing agents, and civil society organizations to implement SCP solutions.												
2018-2019 Indicators: 1. Number of new/updated guidelines and other implementation tools addressing SCP tools for key sectors and areas of consumption and production; 2. Number of training and capacity building activities in application of the SCP Action Plan; 3. Number of businesses, entrepreneurs, financial agents and civil society organizations trained and capacitated to provide SCP solutions and joining the Mediterranean SCP Action Network, the Switchers Platform and the Green Impact Investment Network; 4. Number of projects implementing the SCP Action Plan engaging different stakeholders identified by the facilitators.						2018-2019 Targets: 1. 2 guidelines; 2. 5 activities; 3. Over 2500 trainees; 4. 2 projects.						
MTS. Number	Key Outputs	Main Activities	Means of implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			EXTERNAL RESOURCES		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non-Secured	
6.1: Development of new action plans, programmes of measures, common standards and criteria, guidelines and implementation of current ones												
6.1.1	Selected actions of the SCP Action Plan directly contributing to prevent, reduce and eliminate marine pollution and protect/enhance biodiversity and ecosystems as well as address climate change in the marine and coastal areas of the Mediterranean identified and implemented.	Capacity building activities and development of SCP NAPs	Regional Workshop	SCP/RAC,	MED POL SPA/RAC	a) Experience on SCP Action Plan development and implementation shared b) Contracting Parties capacities enhanced in four countries, namely Albania, Bosnia and Herzegovina, Montenegro, and Turkey	20.000 €	0	20.000 €		200.000 €	
Total 6.1							20.000 €	0	20.000 €		200.000 €	
6.2: Monitoring and assessment												
6.2.1	SCP Action Plan indicators aligned with MSSD relevant work, identified, selected and factsheets developed	1. Follow-up of SCP indicators under the framework of the SCP Action Plan and MSSD implementation	Experts, coordination meetings	SCP/RAC	MAP CU	A follow-up document on SCP trends based on the framework of indicators is established to feed the SoED Report and to review the implementation of SCP in the Med. Coordination mechanisms with the Mediterranean Sustainability Dashboard are established.			0 €	0 €		Implementation of SDG 12 and 14; Implementation of the SCP Action Plan and the Strategic directions 5.1, 5.3, 5.4 and 5.5 of the MSSD.
Total 6.2							0 €	0 €	€	0 €	0€	
6.3: Enhanced capacity at regional, sub-regional and national levels including technical assistance and capacity building												
6.3.1	Training and support programme for green entrepreneurs, SMEs and civil society as SCP drivers	1. Undertake training and support programme for green entrepreneurs, start-ups and SMEs 2. Undertake training and support programme for CSO's initiatives on SCP	SCP/RAC staff, external trainers and mentors, external technical assistance providers	SCP/RAC	UfMS	Over 2500 green entrepreneurs trained; 40 provided with technical and financial advice to become start-ups; over 5 green SMEs supported in upgrading their businesses			0 €	240.000 €	200.000 €	Implementation of SDG 8, 9, 12 and 14; Implementation of the SCP Action Plan and the Strategic directions Strategic directions 5.1, 5.2, 5.3, 5.4 and 5.5 of the MSSD. Activities funded by SwitchMed until 2018. External funding needed to scale-up the programme, increase its impact and extend it to Med countries not funded by SwitchMed.
			SCP/RAC staff, external mentors, external technical assistance providers	SCP/RAC	UfMS	150 CSO trained to launch or consolidate their SCP initiative			0 €	20.000 €		
Total 6.3							0 €	0 €	0 €	260.000 €	200.000 €	

6.4 Enhanced cooperation at regional, sub-regional and national levels to prevent and control marine pollution												
6.4.1	Establishment of networks and initiatives of businesses, entrepreneurs, civil society, providing SCP solutions promoted	1. Scale up SCP solutions in the Mediterranean	In collaboration with the UNIDO headquarters as well as the country offices and with the support of the consultancy company	SCP/RAC	UNIDO, UfMS	Studies to scale-up programmes for supporting eco-efficiency and eco-innovation in industrial SMEs and entrepreneurs prepared and demo activities project proposal developed			0 €	20.000 €	75.000 €	Implementation of SDG 8, 9, 12 and 14; Implementation of the SCP Action Plan and the Strategic directions 5.1, 5.2, 5.3, 5.4 and 5.5 of the MSSD. Activities funded by SwitchMed until mid 2018. The funds will be used for development of the plans till end of 2017. In 2018 any remaining funds might be used for the dissemination of the outcomes. Further funding will be needed to support the implementation of the action plan, in particular the new green and circular business support services as suggested by the scaling up studies and roadmaps of the Green Entrepreneurship.
		2. Establish the Mediterranean Green Impact Investing Network	In house expertise and collaboration with the FEBEA/SEFEA	SCP/RAC	FEBEA/SEFEA and EBRD, UfMS	a) Mapping of financing institutions investing in green entrepreneurship developed; b) Analysis for new financing instruments prepared; spaces for networking between entrepreneurs and investors are organized; c) training programme on eco-design for Local Banks developed.			0 €	15.000 €	60.000 €	Implementation of SDG 8, 9 and 12; Implementation of the SCP Action Plan and the Strategic direction 5.5 of the MSSD. Activities funded by SwitchMed until mid 2018. During second half of 2018 and 2019, at least €60,000 Euro is needed for supporting the implementation of the SwitchersFund grants scheme and development of the loan and equity schemes, as well as sustaining the network of impact investors taking part in the access to finance activities under 6.3.1. linked to the Switch MedProgramme.
		3. Outreach and establish new alliances with key stakeholders for the implementation of the SCP ActionPlan		SCP/RAC		New funding sources for the implementation of the SCP Action Plan are mobilized and new alliances with key stakeholders are established			0 €			
6.4.2	A Mediterranean SCP Hub for knowledge exchange and networking fully operative and performing as connector and lever for new partnerships and initiatives providing SCP solutions	Manage a Mediterranean Community of SCP stakeholders that is a space for the exchange of knowledge on SCP, training, and the establishment of alliances, projects and business opportunities	In house expertise and communications agency support on technical issues	SCP/RAC		a) Mediterranean SCP Community counts on more than 1,000 members and is active in social media through the dissemination of news, communication material, organization of annual gatherings, workshops and webinars; b) The Switchers is consolidated as the reference platform for Mediterranean green entrepreneurs and green companies: populated with up to 300 green entrepreneurs and upgraded with new features providing for training, information, networking opportunities, etc.	20.000 €	40.000 €	60.000 €	250.000 €	65.000 €	Implementation of SDG 8, 9, 12 and 14; implementation of the SCP Action Plan and the Strategic directions 5.1, 5.2, 5.3, 5.4 and 5.5 of the MSSD. Activity funded by SwitchMed until mid 2018. SwitchMed Programme. Follow up is needed for the maintenance of the Mediterranean SCP Hub webplatform, organisation of the annual gathering of the network and participation in regional events linked to the SwitchMedProgramme
Total 6.4							20.000 €	40.000 €	60.000 €	285.000 €	200.000 €	
							TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
							40.000 €	40.000 €	80.000 €	545.000 €	600.000 €	

Theme 6	Total 2018	Total 2019	Total	External Secured	External Non-Secured
Coordinating Unit					
MED POL					
REMPEC					
PB/RAC					
SPA/RAC					
PAP/RAC					
INFO/RAC					
SCP/RAC	40.000 €	40.000 €	80000	545.000 €	600.000 €
TOTAL	40.000 €	40.000 €	80000	545.000 €	600.000 €

Footnotes

The indication of a Component/Partner does not necessarily imply allocation of funds.

Theme 7: Climate Change Adaptation												
Strategic objectives:												
1. To strengthen the resilience of the Mediterranean natural and socio-economic systems to climate change by promoting integrated adaptation approaches and better understanding of impacts.												
2018-2019 indicators:						2018-2019 Targets:						
1. Number of existing regional strategies and action plans streamlining climate change adaptation perspectives;						1. 1 regional strategy and/or action plan;						
2. Number of new action plans, programmes and measures, common standards and criteria, guidelines mainstreaming climate change adaptation;						2. 2 new instruments mainstreaming climate change;						
3. Number of countries adopting/updating National Climate Change Adaptation Strategies and Action Plans taking into consideration related marine and coastal environment issues;						3. 15 countries;						
4. Number of countries enhancing capacity at regional, sub-regional and national levels including technical assistance and capacity building on climate change adaptation issues.						4. 4 countries.						
MTS. Number	Key output	Main Activities	Means of Implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External Resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
7.1: Strengthening the regional implementation of the obligations under the Barcelona Convention and its Protocols, and of programmes of measures in existing Regional Strategies and Action Plans.												
7.1.1	Climate Change Adaptation main activities identified and mainstreamed into the implementation of existing regional strategies, regional action plans and measures.	1. Promote environmental taxation especially for fossils fuel emissions	In house expertise, consultancy	Plan Bleu	CU, MED POL, REMPEC	Report on environmental taxation in the Mediterranean countries			0 €			To be funded with external resources
		2. Establish a regional knowledge platform for sharing and harvesting data from national institutions	IT Services, In house expertise	Plan Bleu	CU, GRID	a) Online knowledge platform with updated data on climate change adaptation; b) Set of information available for the SoED.			0 €			SCCFA-GEF (to be funded with external resources)
		3. Identify potential priority activities for mainstreaming climate change in the implementation of existing protocols, strategies and regional plans including a cost analysis for their implementation including analysis of impacts and costs.	In-house coordination and management, external expertise and services, meetings	PAP/RAC	CU, Plan Bleu, CPs, GWP Med, UNESCO	In cooperation with the eligible CPs, activities identified, developed and launched within the recently approved GEF CVC & ICZM project	0 €	0 €	0 €	0 €	300.000 €	GEF project on ICZM & CVC (Specific activities to be developed)
		4. Cost analysis for the implementation of SAP BIO priority activity on a monitoring network for climate change impact on biodiversity.	Consultancy	SPA/RAC	Plan Bleu, PAP/RAC, Contracting Parties, SPAMI managers and related institutes/universities	Estimation document of annual cost for a monitoring framework embracing five main climate change impact indicators in at least three SPAMIS from different countries	8.000 €	0 €	8.000 €	0 €	0 €	
Total 7.1							8.000 €	0 €	8.000 €	0 €	300.000 €	
7.2: Development of new action plans, programmes and measures, common standards and criteria, guidelines												
7.2.3	Promote integration of ecosystem-based responses in National Climate Change Adaptation Strategies.	Economic valuation of ecosystem services provided by ecosystems located at the land-sea interface in terms of climate change	Workshops, Consultancy, In house expertise, contractual services	Plan Bleu	SPA RAC, EFIMED, IUCN, Tour du Valat, MedSea Foundation Conservatoire du Littoral	a) Mediterranean case studies; b) Methodology to assess the economic value of ecosystem services; c) Support to decision-making process; d) Web platform; e) Policy paper on Nature Based solutions.	20.000 €	3.000 €	23.000 €		70.000 €	Funding: GEF, FFEM, MAVA, Albert II, UNDP Tunisia

MTS. Number	Key output	Main Activities	Means of Implementation	Lead: CU or Component	Partners	Expected Deliverables	MTF			External Resources		Comments
							2018	2019	Total	Total 2018-2019 Secured	Total 2018-2019 non secured	
Total 7.2							20.000 €	3.000 €	23.000 €	0 €	70.000 €	
7.4 Monitoring and assessment												
7.4.1	Climate Change vulnerability issues considered in existing monitoring programmes.	1. Develop vulnerability and impact indicators of climate change on biodiversity and natural resources, also addressing socio-economic trends	Workshops, In house expertise, contractual services	Plan Bleu	SPA RAC	a) Dashboard indicators populated and updated with vulnerability and impacts indicators; b) Related factsheets; c) Policy paper (in relation to the MSSD Indicators and data needs for the SoED); d) Case studies, publications.	10.000 €	2.600 €	12.600 €		100.000 €	External resources to be found
		2. Increase the use of harmonized vulnerability and impacts indicators for biodiversity	Consultancies, collaborations with SPAMI managers, related institutes and universities, in house coordination	SPA/RAC	Plan Bleu, Contracting Parties, SPAMI managers and related institutes/universities	Report on cost effective harmonized Climate Change impact indicators tested in SPAMIs from different sub-regions	0 €	10.000 €	10.000 €			
Total 7.4							10.000 €	12.600 €	22.600 €	0 €	100.000 €	
7.5 Enhanced capacity at regional, sub- regional and national levels including technical assistance and capacity building												
7.5.1	Awareness and engagement of key stakeholders on climate change adaptation and on its links with the core themes enhanced.	Improve the adaptation of existing tools such as Imagine to engage stakeholders on climate change adaptation strategies	Workshops, In house expertise, contractual services	Plan Bleu	PAP/RAC, GWP Med (Tunisia)	a) Adapting "Imagine" method to climate change issues with stakeholders (Climagine) and implementation in some areas; b) Case studies, publications			0 €	30.000 €	0 €	SCCFA-GEF
Total 7.5							0 €	0 €	0 €	30.000 €	0 €	
							TOTAL 2018	TOTAL 2019	TOTAL 2018-2019	TOTAL 2018-2019 Secured	TOTAL 2018-2019 Non-Secured	
							38.000 €	15.600 €	53.600 €	30.000 €	470.000 €	

Theme 7	Total 2018	Total 2019	Total	External Secured	External Non-Secured
Coordinating Unit			-		
MED POL			-		
REMPEC			-		
PB/RAC	30.000	5.600	35.600	30.000	170.000
SPA/RAC	8.000	10.000	18.000	-	-
PAP/RAC	-	-	-	-	300.000
INFO/RAC	-	-	-	-	-
SCP/RAC	-	-	-	-	-
TOTAL	38.000	15.600	53.600	30.000	470.000

Footnotes
The indication of a Component/Partner does not necessarily imply allocation of funds.

Appendix I

**General Lines of the Terms of Reference
(to be further defined in line with Classification Guidelines of the UN)
UNEP/MAP Communication and Information Officer**

UNEP/MAP Communication and Information Officer

The Communication and Information Officer will be responsible for implementing and coordinating the MAP communication activities, as follows:

1. Develop and maintain working partnerships with key constituencies to elicit support for and maximize impact of promotional objectives; serve as a spokesperson/principal liaison to media organizations, governmental bodies, national groups, private sector organizations, educational organizations, international organizations, etc.
2. Implement the MAP Information and Communication Strategy in collaboration with INFO/RAC and other MAP Components, including the organization and implementation of special events, press conferences, book launches and other relevant events and potential media opportunities of benefit to MAP.
3. Assist the Management in monitoring and evaluating the implementation of the MAP information and communication strategy, including through ongoing review of press releases, web statistics (hits, referral sites, links), attendance of events, partner support to MAP communication activities, etc. and internalize lessons learnt with a view to help identify priority areas of work and capitalize on existing resources.
4. Develop and maintain a list of environmental and sustainable development partners (institutions, experts, reporters, etc.) for collection and dissemination of relevant information.
5. Produce communication materials to ensure adherence to established standards, common messaging/single brand and consistency, within the framework of UNEP guidelines.
6. Refine/implement a coherent MAP-wide communication mechanism targeting donors/partners, including key national agencies/programmes, in line with the MAP Resource Mobilization Strategy.
7. Help set up a unified and coherent communications structure and practice in MAP by:
 - a. Assisting in overseeing the functioning of a regional communication network across MAP Components,
 - b. Closely liaising with the communication network to coordinate media activities and planned media outputs,
 - c. Soliciting contributions from the MAP Components for the MAP information and communication campaign and assist them in enhancing their own means for communication.
8. Establish and run a centralized MAP Library network with the assistance of Librarian/IT Admin Assistant, with automated access-point to information and data, serving as a gateway to Mediterranean environmental libraries.
9. Consult and coordinate regularly with the Management and concerned staff of UNEP/MAP, UNEP Headquarters and NGOs/MAP Partners in order to obtain information material to be communicated.

10. Conduct research and provide inputs to managers, senior officers and other public information staff on a range of public affairs issues, methods, and approaches; anticipate and suggest remedial action for communications/public relations issues.
11. Keep abreast of the latest developments in the field of communications policies and information technology to ensure UNEP/MAP's media and public information work is cost effective and "state-of-the-art".
12. Act as editor and disseminate it to mobilize support for MAP activities.
13. Develop and maintain the MAP website and upgrade as needed to ensure consistent message/single brand, highlight MAP's role, key projects and partnerships in line with the Mid-term Strategy (MTS). In parallel, and in close cooperation with INFO/RAC monitor the RAC websites and suggest streamlining as needed to ensure consistency of design and messaging.
14. Ensure UNEP MAP publications are compliant with UNEP Head Quarters' publishing policy in liaison with the concerned at Ecosystems Division and UNEP Head Quarters.
15. Identify partners with visibility in media, communication outreach and strong advocacy potential at regional and local level and propose for network of MAP advocacy partners.
16. Support the implementation of initiatives to engage key industry players in Mediterranean environmental issues (including potential partners in shipping, renewable energy and tourism).
17. Serve as focal point for proposing and implementing MAP media campaigns, including release of targeted stories to support the MAP PoW showcasing MAP's successes and making the link to business, environmental and political circumstances.
18. Support any other information and communication activities as agreed by the Management.
19. Performs other duties as required.

**Statement of Income and Expenditure and Changes in Reserve and Fund Balance (MTF)
for the Years 2009-2016 (in USD)**

Statement of Income and Expenditure and Changes in Reserve and Fund Balance (MTF) for the Years 2009-2016 (in USD)									
	2009	2010	2011	2012	2013	2014	2015	2016	ESTIMATION 2017
INCOME									
Counterpart Contributions	7,085,127	7,065,190	7,610,153	7,388,394	7,045,184	6,443,750	8,114,437	6,470,281	6,038,929
Miscellaneous Income		1,347	26,448		47,827	39,041	18,789	63,817	
TOTAL INCOME	7,085,127	7,066,537	7,636,601	7,388,394	7,093,011	6,482,791	8,133,226	6,534,098	6,038,929
EXPENDITURE									
Direct Expenditures	11,116,028	5,290,188	7,631,990	4,125,914	5,173,251	4,266,582	8,323,357	5,071,005	7,006,854
Programme Support Costs	1,478,336	672,880	236,228	389,650	573,413				
TOTAL EXPENDITURE	12,594,364	5,963,068	7,868,218	4,515,564	5,746,664	4,266,582	8,323,357	5,071,005	7,006,854
Prior period adjustment	1,001,425	1,013,191	945,806	53,665	24,120	1,135,892			
Surplus (deficit) for the Period	-5,509,237	1,103,469	-231,617	2,872,830	1,346,347	2,216,209	-190,131	1,463,093	-967,925
Total net assets, liabilities and surplus	-4,507,812	-2,391,152	-1,676,963	1,249,532	2,619,999	5,972,100	5,781,969	7,245,062	6,277,137
WCR							1,100,000	1,100,000	1,126,455
IPSAS Value of Unpaid Assessed Contributions Receivable from 2014						353,587	319,741	320,693	320,000
Actual Value of Unpaid Assessed Contributions from 2014 (exc.rate 0.945)						481,526	629,502	718,847	727,938

Footnotes

The Financial Statements for the fiscal year 2014 onward have been prepared using the Internal Public Sector Accounting Standards (IPSAS).

Up to fiscal year 2016 the figures are based on the audited and certified Financial Statements, while 2017 figures are presented for estimation purposes only.

For the fiscal year 2014 onward, the Programme Support Costs are included in the Direct Expenditures.

From the fiscal year 2014 onward, total net assets, liabilities and surplus include IPSAS value of unpaid assessed contributions receivable, i.e. accounts receivable are reduced by the allowance for doubtful accounts for the contributions in arrears for more than four years.

From the fiscal year 2015 Working Capital reserve is included in the total net assets, liabilities and surplus.

Fiscal Year 2017

2017 figures are a rough estimation, not including accounting items, such as adjustments, exchange rate and loss, etc. which will be only reflected after the closure of the accounts (the difference could be up to plus/minus 2 million USD). Final figures will be only available after the accounts are audited.

2017 Total net assets, liabilities and surplus is overestimated due to the assumptions made below:

2017 Income is calculated based on the assumption of 100% collection rate of the assessed contributions.

2017 Expenditures are calculated based on the assumption of 100% budget consumption rate (The savings from the Staff Costs are not included).

For the biennium 2016-2017 the increase of EUR 25,000 (equiv. USD 26,455) in Working Capital Reserve is recorded in the fiscal year 2017.

The figure includes the estimated IPSAS value of unpaid assessed contributions of \$320,000;

Fiscal Year 2016

The figure of \$7.24 million shown in the 2016 financial statements indicates the net-worth of MAP but is not surplus or disposable cash

The figure includes operating reserve of \$1.1 million which should always be retained in the account to cushion MAP against uneven cash flows;

The figure includes IPSAS value of unpaid assessed contributions of \$320,693;

The figures include cash advances of \$915,790 which will reduce the total net assets once the expenditure is recorded;

The figure contains other accounting items of \$30,612 which should not be considered as part of the cash balance, e.g. depreciation of equipment.

Taking the total of all the four items together (i.e. \$2,367,095) and deducting it from the figure shown on the financial statement leaves us with the "Net cash balance" of \$4,877,966. Taking into consideration the commitments, i.e. agreements with Implementing Partners, unliquidated obligations of \$ 1.9 million, the net cash balance is further reduced.

Note: Information in the top table and WCR up to 2016 from the Financial Statement Rest based on information provided by UNEP 8 December 2017