Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area, concluded under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Accord sur la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la zone Atlantique adjacente, conclu sous l'égide de la Convention sur la Conservation des Espèces Migratrices appartenant à la Faune Sauvage (CMS)

REPORT OF THE TENTH MEETING OF THE SCIENTIFIC COMMITTEE OF ACCOBAMS

Nice, France, 20-22 October 2015

REPORT OF THE TENTH MEETING OF THE SCIENTIFIC COMMITTEE OF ACCOBAMS

AGENDA ITEM 1 - OPENING OF THE MEETING

1. The Tenth Meeting of the Scientific Committee (SC10) of ACCOBAMS was convened in Nice from the 20 to 22 October 2015. It was attended by Members of the Scientific Committee and Representatives from International Organizations and Observers, including Partners of ACCOBAMS.

2. The full list of participants appears as **Annex 1** to this report.

3. Florence Descroix Comanducci, Executive Secretary of ACCOBAMS, welcomed the participants and thanked CIESM and IUCN for their support. She indicated that this is the last meeting of the Scientific Committee for the triennium and its results and recommendations will be used for the preparation of the Meeting of Parties in November 2016. She recalled the role of the Scientific Committee as stated in Resolution 5.3 and reminded the experts that they were selected for participating to the Scientific Committee as qualified individuals and not as representatives of their organization or country.

4. Simone Panigada, the Chair of the Scientific Committee, also welcomed the participants and opened the Meeting at 9:00 am, Tuesday 20 October 2015, at the Hotel Aston La Scala (Nice, France).

AGENDA ITEM 2 - ADOPTION OF THE AGENDA

5. The provisional agenda of the Meeting contained in the Document ACCOBAMS-SC10/2015/Doc01 was presented and the participants were invited to review and comment it.

6. The Scientific Committee approved the proposal and adopted the agenda, as it appears in **Annex 2**, and the proposed timetable.

AGENDA ITEM 3 - SCIENTIFIC COMMITTEE

3.1 Report of Regional Representatives

7. The Chair recalled that in accordance with the rules on the Scientific Committee adopted by MOP5, each regional representative should provide a report to the Meetings of the Scientific Committee on the conservation status of cetaceans and relevant activities in the region he or she has the responsibility of. He invited the regional representatives to introduce their respective reports contained in the following documents :

- ACCOBAMS-SC9/2015/**Doc 04 :** Report on the conservation status of cetaceans and relevant activities in Western Mediterranean and contiguous Atlantic area, Central, Eastern Mediterranean and in the Black Sea;

8. Marina Sequeira, the Regional representative for the Western Mediterranean and contiguous Atlantic area, recalled that the ACCOBAMS Western region includes the following countries: Algeria, France, Monaco, Morocco, Portugal and Spain. She added that major recent projects implemented in the region include :

    - Algeria – Development of a study on the extent of incidental catches and depredation along Algerian coasts. Main objective is to identify the interactions between fisheries and endangered marine species and to determine the parameters that influence depredation in fishing nets.

    - France - Some of the projects developed by France in its Mediterranean waters include the monitoring of bottlenose dolphin populations, studies on the structure and dynamics of the fin whale and sperm whale populations, study on the impact of microplastics on fin whales and detection and monitoring of sperm whales and Cuvier beaked whale using Passive Acoustic Monitoring.

    - Monaco – Monaco collaborated with the Secretariat of ACCOBAMS in implementing communication and awareness campaigns which include organizing a photographic exhibition, several meetings and the « ACCOBAMS Cetacean Day ». Monaco was also involved in the establishment of a partnership for implementing of the use of the High Quality Whale Watching Logo.

    - Morocco – Implemented trainings on techniques and procedures for necropsies and releasing of accidentally bycaught cetaceans. Three projects area currently in place : i)reinforcement of the stranding network and establishment of a tissue bank, ii) reduction of the impact of bottlenose dolphins depredation on the purse seine fishery and iii) reduction of the impact of killer whale depredation on tuna fishery.

    - Portugal - During the period 2014 – 2015 the Portuguese research institutions continued to develop the project LIFE+ MarPro aimed at designating MPAs for cetaceans listed under the Habitats Directive (bottlenose dolphin and harbor porpoise) in off-shore areas. The technical report has been submitted to the national authorities in September 2015 and a final decision and approval by the government for submission to the EU is expected in the beginning of 2016.

- Spain - In 2015 the Spanish Government will support the following projects:
  - A workshop to develop a national protocol to attend cetacean strandings.
  - The elaboration of a technical-scientific document to update the knowledge of the unit of management of the Killer Whales of the Strait and the Gulf of Cadiz.
  - Study of the winter spatial distribution of killer whales off the Strait and the Gulf of Cadiz by remote monitoring.

9. Mehdi Aissi, the Regional representative for the Central Mediterranean, emphasized that the main activities carried out during the last three years in the central Mediterranean Sea regarding cetacean were subdivided into four different zones as:
   - the Pelagos Sanctuary and adjacent waters,
   - the Tyrrhenian Sea,
   - the Sardinia Sea and the Strait of Sicily,
   - the Adriatic Sea.

10. In the **Pelagos Sanctuary**, several organizations were involved in monitoring cetacean population estimates and distribution. The activities included satellite tracking for fin whale and promoting citizen science initiatives, in particular through the ongoing Cetacean Sanctuary Research project by the Tethys Research Institute that started in 1988 involving citizens in monitoring cetaceans.

11. A network of cetacean monitoring on board ferries is developed with the participation of scientists from five different countries: Italy, France, Spain, Tunisia and Greece. The population size estimate of the “shy species” Cuvier’s beaked whale *Ziphius cavirostris* is still ongoing by CIMA Research Foundation. Population structure, age classes, sex ratio, residency patterns, site fidelity and home range of individuals belonging to the studied population were identified. Recent cooperation with the University of Copenhagen is expected to assess the degree of genetic separation between the Atlantic and Mediterranean Cuvier's beaked whale populations.

12. In the **Tyrrhenian Sea**, line transect technique was developed using both aerial and boat survey to estimate abundance of the most common cetacean species.

13. The projects developed In the **Sardinia Sea and the Strait of Sicily** included the use of ferries as platform of observation, the monitoring of the bottlenose dolphin population in the northern Tunisian coast, the assessment of the interactions between endangered marine species and fishing activities and the strengthening of the cetacean stranding network in Tunisia.

14. Satellite tagging of fin whales present in the winter off Lampedusa confirmed the importance of the Strait of Sicily as a feeding area and a likely migration corridor.

15. The MEPA (Malta Environment and Planning authority) is assessing the population status of *Tursiops truncatus* and *Caretta caretta* in Malta and identifying important areas for them. In addition, the University of Malta is going on with its yearly boat monitoring that started in 1997.

16. In Libya, an initial survey on cetacean distribution and density in the western waters of Libya was started in 2014, but the work was stopped because of the security conditions prevailing in the country.

17. In the **Adriatic Sea**, the most of the cetacean conservation activities have been implemented in the scope of the EU IPA Adriatic project *Network for the Conservation of Cetaceans and Sea Turtles in the Adriatic* - NETCET (www.netcet.eu). The main objective of the project is to develop common strategies for the conservation of cetaceans and sea turtles in the Adriatic through regional cooperation. The project is implemented from 2012 – 2015 by 13 partners from majority of the Adriatic states: Albania, Croatia, Italy, Montenegro and Slovenia.

18. Recommendations received from ACCOBAMS partners are mainly regarding the consolidation of collaboration between neighboring countries. The use of a common database should be promoted in population estimates in the Mediterranean Sea.

19. Ana Štrbenac presented the *Strategy on the conservation of cetaceans in the Adriatic Sea for the period 2016 – 2025*. The Strategy was prepared in the scope of the above mentioned EU IPA Adriatic NETCET project.

20. The basis for the Strategy preparation was the *overview of the present state of cetaceans* in the Adriatic, including information about abundance, distribution, threats and existent human response (national legislations, institutional frameworks, existing conservation mechanisms and the related implementation systems). Ideally, in the future the Adriatic Sea should be a safe place for cetaceans and humans to coexist. This *vision* can become reality if the eight *objectives* and accompanying targets are accomplished within the next 10 years. These include the improvement of knowledge about cetaceans, the reduction of impacts of threats, enhanced cooperation between different stakeholders, the establishment of a common conservation legislation framework in the Adriatic, the effective conservation of important habitats, the improvement of capacities for conservation issues, raising public awareness and ensuring adequate funding. These objectives are linked to global and regional strategies, including the ACCOBAMS strategy 2014 – 2025. The *Action plan* includes 57 actions that should be implemented to achieve these objectives.

21. Due to absence of institution with the appropriate mandate to develop, *implement* and *revise* the Strategy, it is important to make sure that elements of the Strategy are included in the future relevant regional strategies and plans, including f.e. Conservation plan for the bottlenose dolphin

in the Mediterranean Sea developed under scope of ACCOBAMS. In addition, the Strategy should be used as guideline for development of the National Action Plans, also prepared under the NETCET project. In this respect, ACCOBAMS was asked to support and recognize the Strategy.

22. Konstantin Mikhailov, the **Regional representative for the Black Sea,** presenting his report informed the meeting that Aerial and shipboard surveys were conducted in the Western Black Sea in 2013 and also in the Bulgarian EEZ in 2014-2015, and monitoring of distribution of the three cetacean subspecies (*D.d ponticus, P.p. relicta and T.t ponticus*) in 2014-2015 in Georgia. The outcomes were assessments of cetacean abundance and distribution, mapping, by-catch hot spots and critical habitats, rates and limits, population structure and respective recommendations were made. Projects on building capacities started in all relevant countries in 2015 to enhance public awareness and involve volunteers in data collection. A marked increase in the frequency of cetaceans stranded in July-August in the western part of the Black Sea (Bulgaria and Romania) was reported, discussed and measures were outlined.

23. Recommendations were made to extend observer programs for assessing cetacean by-catches, maintain long-term monitoring and training on necropsy to adequately response to mass die-offs. Research on IUU fishing is essential as it poses major threat to cetacean populations and fisheries sustainability.

24. Ayaka Amaha Ozturk provided additional information of mass-die offs of harbour porpoises on the western Black Sea coast was presented by the Turkish Marine Research Foundation. During the stranding surveys in the 22km coast of the western Turkish Black Sea coast in May-August 2015, 14 neonates were recorded. In total 29 harbour porpoise individuals were found, and the peak month was in July. The stranding rate of neonates is high compared to other normal years. The intense turbot fishing in the area may cause the bycatch of mother porpoises, which may result in the mortality of neonates. The other possible causes, however, need to be further investigated.

25. Mohamed Abdelwarith, the Regional representative for the Eastern Mediterranean, briefly presented the important points of the Eastern Mediterranean report about the activities concerning the cetacean conservation. He emphasised that although the cetacean conservation process in the eastern Mediterranean was still limited there were recent positive initiatives.

26. In Egypt there were efforts coordinated with by RAC/SPA and ACCOBAMS to implement the first project aimed to collect and expand knowledge on the status of cetacean populations and the interaction with fisheries in Damietta coast.

27. There were also many activities in Greece: a scientific committee has recently been set up in Greece for dealing with stranding network. Also, a project on surveillance of conservation status of marine habitat types and species was running since the beginning of 2014. This project updated the conservation status assessment (national level) of all cetacean species regularly present in Greece, provided an update on the evaluation of the degree of conservation of cetacean species covered by Natura 2000 and submitted proposals for the conservation of these species, including enlargement of the marine Natura 2000 network.

28. Regarding Awareness activities, a video was produced in Greece by the LIFE information project which was running from 2010-2013. It was projected at the Ministry of Environment and Energy at the Cetacean Day 2015.

29. Recalling that during its previous meeting the Scientific Committee recommended to revise the template for the reports of RR, the Executive Secretary informed the meeting that the Secretariat collaborated with the working group established to revise the template. Marina Sequeira, coordinator of the Working Group, presented the proposed new template contained in document ACCOBAMS-SC9/2015/Inf04. She indicated that following a recommendation of the ACCOBAMS/Pelagos Worshop on Live Stranding (Monaco, 29-30 October 2014), the template included a section on “Strandings that could have transboundary impacts”.

30. Following the discussion on this agenda item, the Chair of the Scientific Committee stressed that the Regional Representatives faced difficulties in collecting the needed information for their reports. In this context, he suggested to establish, in consultation with the Focal Points, a list of scientists in the countries that could be contacted by the RR in order to have the reports as much complete as possible. The list may be available on the web site of ACCOBAMS. The Scientific Committee recommended to further finalise the template with the view to make it simple and eventually similar to that developed by the IWC.

AGENDA ITEM 4 - CONSERVATION ACTIONS

4.1- Improve knowledge about state of cetaceans

4.1.1 Cetacean population estimates and distribution

31. The Executive Secretary, stressing the close link between the ACCOBAMS activities related to population estimates and the activities undertaken under the EcAp process of the Barcelona Convention, informed the meeting that the Contracting Parties to the Barcelona Convention launched in 2012 a process for moving towards more effective ecosystems-based management in

the Mediterranean (EcAp Process). In this context, they adopted 11 ecological objectives defined through a series of consultation meetings involving the Parties and MAP Partners. The Secretariat of ACCOBAMS was invited to attend most of these meetings. Given the significant contribution that the "ACCOBAMS Survey Initiative" could provide for the implementation of the EcAp process regarding cetacean monitoring and in order to guarantee a harmonized methodological approach between the EcAp monitoring process for cetaceans and the ASI, the ACCOBAMS Secretariat was collaborating with the UNEP/MAP system on this issue. In this regard, the RAC/SPA collaborated with the SC Task Manager on "cetacean population estimates" for preparing the monitoring guidelines presented in document ACCOBAMS-SC10/2015/Doc05.

32. The Task Manager on cetacean population presented the document ACCOBAMS-SC10/2015/Doc 05 addressing the methodological requirements for the monitoring of cetacean species by visual line transect surveys (conducted from boat and airplane) and by acoustic survey methods (boat- and ship-based surveys) and passive acoustic monitoring (PAM). This document was elaborated based on the documents prepared by the ACCOBAMS Scientific Committee that has worked for several years on the definition of the most appropriate methodologies for collecting data on cetaceans at the Mediterranean Sea scale, taking into account the protocols used in other regional contexts. It presents specific information on monitoring by visual line transect surveys (conducted from boat and airplane) and by acoustic survey. The document does not address all the tools and methods that could be used for cetacean survey, neither new technologies that are currently experimented (i.e. drones and satellite imagery). Significant information also comes from stranding networks. Lastly, this document is considering surveys using large ships, but the shipboard cetacean surveys conducted from small vessels would also make use of this document. Five different approaches are considered in the document:
    - Visual surveys from ship, aircraft or land observation platforms (LOP).
    - PAM carried out during ship surveys with towed hydrophones.
    - PAM performed by means of static acoustic monitoring, e.g. using T-PODs.
    - Photo-identification and mark-recapture analysis.
    - Satellite telemetry to track individual animals.
    - A combination of all or some of the above methodologies.

33. He then introduced the document ACCOBAMS-SC10/2015/Inf 05 addressing his contribution to the development of the ACCOBAMS Survey Initiative (ASI) and about new aerial surveys planned in the Central Mediterranean (Strait of Sicily). The TM participated to the meeting of the Steering Committee for the ACCOBAMS Survey Initiative in Gland (Switzerland) on 5-6 March 2015. The main goals of the meeting were:

- review comments received on the Project Identification Form compiled by ACCOBAMS Parties;
- discuss/elaborate a strategy for approaching donors.

34. During the workshop the total budget of the project based on the estimates prepared during the workshop held in Rome was reviewed and updated. It was also discussed whether consider the inclusion of turtles and sea birds surveys or some complementary activities (e.g. water sampling for microplastics?). A discussion on how to identify and secure the sources of funding followed, in particular:
    - how to confirm with Parties and Range States their contribution (in-kind or financially);
    - how to approach some funding agencies and International Foundations (e.g., the European Commission, the Mava Foundation, the Prince Albert II Foundation, etc.).

35. He also presented an update on a scientific programme based on line transect aerial surveys in the waters of the Strait of Sicily, between Northern Tunisia and the Island of Sicily planned for the next months. The choice for this particular area was based on the fact that, to date, extremely limited information exists on the occurrence of cetaceans, and accordingly, on their conservation status and presence of threats, to support the implementation of adequate protection schemes. Historically no extensive and/or long term surveys have ever been carried out in the area, and in general, cetacean research has always been sporadic and limited in space and time. This project will also contribute to the implementation of the EU Marine Strategy Framework Directive (MSFD; 2008/56/EC), particularly with respect to monitoring activities and achieving 'good environmental status' (GES), addressing Descriptors n° 1 (Biological diversity is maintained and Descriptor n° 4 (All elements of the marine food webs occur at normal abundance and diversity).

36. This effort will also provide concrete inputs to the ongoing effort by UNEP/MAP-RAC/SPA for the development of SPAMIs for the neighbouring countries of the Sicily Channel/Tunisian Plateau open seas.

37. The Secretariat presented the document ACCOBAMS-SC10/2015/Inf 06 on the progress made so far in the development of the "ACCOBAMS Survey Initiative" project including the preparation of the Project Identification Document. It informed the Meeting that the contacts were with external funding organizations and that the MAVA Foundation has already agreed to provide a financial support of 1.7 million Euros, provided that the countries of the region, beneficiaries of the project, confirm their effective commitment. The Secretariat contacted formally all Parties and Range States seeking a written commitment regarding their involvement in the project and the national contributions – financial and/or in-kind - they could provide to the project.

38. Alain Jeudy de Grissac, representative of IUCN, informed the meeting about the deep sea scientific/research survey offshore Lebanon coasts (200-1500 m) planned to take place in September-October 2016 through cooperation between the Lebanese Ministry of Environment, OCEANA, the UNEP/MAP represented by the RAC/SPA and IUCN-Mediterranean, with funding provided by MAVA. This project, to be called Deep-Sea-Lebanon, will include and international boat for using ROVs and a national boat for additional data such as water column, sediment collection and deep or surface observation of megafauna (marine mammals in particular) and marine debris. The ACCOBAMS Secretariat will be informed on further development.

39. The Secretariat and the RAC/SPA representative informed the meeting respectively about a recent tender launched by Cyprus to survey cetaceans in the Cyprus waters and about a survey planned in the Mediterranean waters of Egypt.

40. The Scientific Committee, considering that the planned surveys cannot be delayed to take place in the same time with the ASI, recommended that these surveys should use the methodology developed for the survey in order to ensure compatibility of their data with the data to be collected during the ASI.

41. The representative of OceanCare raised concern about difficulties and restrictions her organisation faced in conducting non-invasive research (based on acoustic passive detections) on the spatial distribution of cetaceans, in particular sperm whales, in the French part of the Pelagos Sanctuary.

42. Following the comments from Oceancare, the Executive Secretary of the Pelagos Sanctuary informed the participants that a document describing the administrative procedures to follow (authorisation/derogation from the ministries, etc.) for implementing scientific activities in the Pelagos Sanctuary is currently under preparation and will be submitted to the next 6th CoP of the Pelagos Agreement (Hyères, 15-16 December 2015). Final and adopted version of that document would be published on the Pelagos website in order to facilitate granting administrative procedures for authorisation/derogation for organizations that would like to carry out research activities in the Pelagos Sanctuary.

43. The Scientific Committee, recalling Resolution 2.11 (Facilitation of scientific research campaigns and programs), stressed that scientific research and monitoring in the Agreement area remain essential to identify population status, population trends, human-cetacean interactions, threats and to address the conservation priorities. It also stressed the advantages of passive acoustic monitoring.

44. Making reference to document ACCOBAMS-SC10/2015/Inf 07, Konstantin Mikhaylov presented the Final report of project funded by the European Commission addressing adverse fisheries impacts on cetacean Populations in the Black Sea. He emphasized that during July 2013 combined aerial and boat line transect surveys of cetacean population distribution and abundance were completed under EC DG MARE Project for the western Black Sea, including all waters under jurisdiction of Bulgaria, Romania and waters of Ukraine to the west of Crimea. An additional opportunistic survey was conducted using ferry routes between Ukraine and Georgia. Distribution was determined and values for density and abundance of the three cetacean subspecies (*D.d ponticus, P.p. relicta and T.t ponticus*) were estimated for the western Black Sea. Rough estimates of total abundance values for the Black Sea as a whole were obtained too. Some shortcomings regarding the estimates were discussed with conclusions that the results need to be validated when a proper systematic survey is performed in the entire basin.

45. The Chair informed that the full report with its annexes is available on the web site of the European Commission.

46. Following the debates within the framework of this agenda item, the Scientific Committee adopted the Recommendation on the cetacean population estimates appearing in the **Annex 3** to this report.

4.1.2 Population Structure

47. The Chair presented document ACCOBAMS-SC10/2015/Inf 08, with an Update on the available information related to population structure, based on bibliography and on ongoing projects. The document mainly deals with striped and bottlenose dolphins from the Mediterranean Sea and presents a summary of recently published papers.

48. The Chair presented the document ACCOBAMS-SC10/2015/Inf 08 prepared by Stefania Gaspari and providing an update on the available information related to population structure, based on bibliography and on on-going projects. The documents contained summary of the following research papers:
    - Drivers of population structure of the bottlenose dolphin (*Tursiops truncatus*) in the Eastern Mediterranean Sea.
    - Population genetic structure of common bottlenose dolphins (*Tursiops truncatus*) in the Adriatic Sea and contiguous regions: implications for international conservation
    - Genetic plasticity as key to survival: Mediterranean striped dolphin (*Stenella coeruleoalba*) through morbillivirus epizootics as a model

- The Pelagos Sanctuary for Mediterranean marine mammals: Marine Protected area (MPA) or marine polluted area? The case study of the striped dolphin (*Stenella coeruleoalba*).

49. Marina Sequira informed the meeting that recent scientific data indicated that the population of harbour porpoise of Portugal, Spain, Morocco and Mauritania, may be considered as a sub species and she proposed to address this in the programme of work.

50. The Scientific Committee stressed the importance of population structure within the ACCOBAMS area as a basis for conservation efforts. It was suggested to refer to the recommendation presented in the report of the ECS workshop on population structure (held at the occasion of the 27th ECS Annual Conference in Portugal, April 2013) to focus on some specific actions for the next triennium. In this context, the Scientific Committee adopted the Recommendation on population structure appearing in the Annex 3 to this report.

4.1.3 Monitoring cetaceans status

51. Renaud De Stephanis, presenting a progress report about the IUCN Red Listing of cetacean species for the ACCOBAMS area, emphasised that (i) according to the IUCN Centre for Mediterranean cooperation there is no new assessment done in the last two years for the IUCN red list data deficient cetacean species in the Mediterranean Sea and (ii) the killer whale is still not included in the Mediterranean IUCN Red List, despite the evaluation done in collaboration between IUCN and ACCOBAMS in 2006 (Res 3.19).

52. Following its debates on this agenda item, the Scientific Committee agreed on the elements included in the Recommendation on the assessment of IUCN conservation status appearing in the Annex 3 to this report.

53. Lobna Ben Nekhla, representative of RAC/SPA, presented the Progress Report on the Mediterranean Database of Cetacean Strandings (MEDACES) contained in document ACCOBAMS-SC10/2015/Inf 09. She informed that the report recalled in its first party the history of MEDACES and how to obtain data. MEDACES currently contains 16,185 data from the coast of twenty riparian countries to the Mediterranean and Black Seas. The analysis of these data showed that France, Greece, Italy, Spain, and Ukraine were the countries with the highest number of submitted records. Data analyses presented in this report have identified the occurrence of unusual stranding rates in the Mediterranean in recent years. Several species have been affected: striped dolphins, common dolphins, harbour porpoises and bottlenose dolphins. The number of striped

dolphins and pilot whales stranded was significantly higher in 2007 and 2008, due to the mortality caused by a morbillivirus infection.

54. She recommended that the National Focal Points should increase the support to the national organizations and institutions working in stranding networks. This should be conducted through RAC/SPA and/or ACCOBAMS.

55. Introducing the information note contained in document ACCOBAMS-SC10/2015/Inf 10 "Assessment of the role/interest/importance of MEDACES", the Secretariat informed the meeting that During the Fifth Meeting of Parties to ACCOBAMS (5-9 November 2013, Tangier) the Spanish delegation informed the Meeting that MEDACES was not operational since June 2012 because of financial constraints. It also informed the Parties that Spain was willing to continue its support to the MEDACES by covering part of the financial needs, hoping that the rest of the necessary budget will be provided by both the ACCOBAMS Secretariat and the RAC/SPA.

56. To assess the usefulness of providing financial support from ACCOBAMS to MEDACESS, the Bureau of ACCOBAMS, during its 9th Meeting held in Paris in December 2014, requested that an evaluation be made by the Scientific Committee regarding the functioning of the current database and its utility for ACCOBAMS. The SC is therefore expected to assess the achievements of MEDACES, its functioning and its future utility for the implementation of ACCOBAMS and to provide clear scientific opinion regarding the role, interest and importance of MEDACES.

57. It has emerged from the debate of the meeting that there was a consensus about the usefulness of MEDACES for the implementation of ACCOBAMS, although some participants expressed concerns about the low level of data flow and about the procedure for accessing the data. The meeting agreed to propose the Recommendation on MEDACES appearing in the Annex 3 to this report.

4.2 Reduce human pressures on cetaceans, in particularly those related to bycatch, habitat loss and degradation (pollution)

4.2.1 Interaction with fisheries

58. The Task manager on Interaction with fisheries presented a progress report on bycatch and depredation. He emphasised that four new papers, included in a PhD that will be defended during the month of December 2015 in Cadiz, will be available by 2016 describing the effects of the interactions between the killer whale population and the blue fin tuna fishery in the Gibraltar Strait area.

59. He informed the meeting that the Spanish Ministry of Environment was planning to adopt in the following weeks a Conservation plan for killer whales in the south of Spain including the 3 main following points:
    - Regulation of the killer whales whale watching in the Strait of Gibraltar and Gulf of Cádiz with the objective of implementating the ACCOBAMS High Quality Whale-Watching® certificate in Spain.
    - Consider the allocation of a special quota of blue fin tuna for the Spanish Fishermen. This quota would not be for sell to the purse seiners, nor to other fishers, and it would be limited to July and August.
    - Zonification of the Strait of Gibraltar to ensure no noise in the special exclusion area for killer whales.

60. The Secretariat presented the document ACCOBAMS-SC10/Inf 12 on the progresses made so far in the implementation of the joint ACCOBAMS/GFCM project on mitigating the negative interactions between threatened marine species and fishing activities funded by the MAVA Foundation. It informed the Scientific Committee that the project kick-off meeting was organized on 7 and 8 April 2015 in Tunis (Tunisia) with national partners. Since then, the Secretariat has been working with the national partners for further defining the content of their pilot actions that were identified during a consultation workshop organized in Tangier, Morocco, in April 2013. The fisheries addressed by the project pilot actions are:
    - Purse seine for small pelagic species in the Moroccan Mediterranean Sea
    - Bluefin tuna artisanal fisheries in the Strait of Gibraltar
    - Swordfish and albacore pelagic longlines in southern Spain
    - Bottom and surface longlines in the Gulf of Gabès
    - Purse seine for small pelagic species in Kelibia
    - Gillnet fisheries in southern France and in Balearic Islands.

61. The task manager on Interaction with fisheries explained that in his opinion no enough scientific support had been included in the project.

62. Following the presentations made within the framework of this agenda item, the Scientific Committee recommended to hold a workshop to coordinate killer whale conservation efforts in the area to which the following stakeholders will be invited:
    - representatives of the fishermen community;
    - representatives of the relevant administrations at local, regional and national levels of Spain and Morocco,
    - killer whales and blue fin tuna researchers of both borders of the Strait of Gibraltar,

- representatives of the whale watching operators,
- relevant NGOs,
- representatives of relevant organisations (ACCOBAMS, ICAAT, IUCN, GFCM).

63. The Scientific Committee also recommended that the joint ACCOBAMS/GFCM project interact more with the SC and with external scientist experts in depredation and by-catch.

64. The Secretariat informed the meeting that during a meeting held in Morocco (Rabat, 8 October 2015) representatives of the fishermen community expressed frustration and distress regarding the impacts of Bottlenose Dolphin depredation in nets targeting small pelagics in the Mediterranean waters of Morocco. The Secretariat stressed the need of considering the concerns of the fishing community regarding this issue which, besides its adverse impacts on the fishermen income, may undermine the cetacean conservation efforts, in this country, although if the relevant authorities expressed clearly their commitments to comply with the ACCOBAMS provisions.

65. Debating the information, the Scientific Committee stressed the importance of taking into account the social and economic aspects linked to the conservation management and recommended that the Secretariat provides assistance to the relevant institutions in Morocco in addressing this issue using, where possible and appropriate, the resources available from the Joint ACCOBAMS/GFCM project funded by MAVA Foundation. All activities undertaken in this context should be in line with the objectives of ACCOBAMS.

66. Heidrun Frisch, ASCOBANS Coordinator and CMS Marine Mammals Officer, emphasised that Bycatch is a major threat in the ASCOBANS region, and following guidance from the 21st Meeting of the Advisory Committee in 2014 several related processes have been taken forward in the last twelve months (more information available on http://www.ascobans.org/en/species/threats/bycatch):
    - Workshop on Requirements of Legislation to Address Monitoring and Mitigation of Small Cetacean Bycatch (January 2015). The workshop focused mainly on ASCOBANS Area, but recommendations are applicable for the whole EU. In an iterative process, the recommendations were since further elaborated, and are due to be sent to the European Commission soon. Recommendations cover three main sections: i) recommendation on legal setting (i.e. not only subsumed in DCF and TMF, but specific legislation); ii) proposed strategy for assessing and managing cetacean bycatch (i.e. management framework) and iii) way to address regional specifics.
    - Workshop on Further Development of Management Procedures for Defining the Threshold of 'Unacceptable Interactions' (July 2015). This workshop is part of a wider

process discussing the potential applicability of setting bycatch limits, e.g. through CLA/PBR or similar, and the implications, e.g. what does it mean in relation to the ultimate aim to reduce bycatch to zero. The process will continue, examining whether this kind of approach is suitable for a conservation agreement, and what the practical and financial implications would be.

- Workshop on Remote Electronic Monitoring with Regards to Bycatch of Small Cetaceans (October 2015). The main aim of the workshop was to come up with best practice guidance on the use of cameras on boats for bycatch monitoring. Participants discussed challenges and ways to overcome them with respect to topics such as stakeholder involvement, acceptance by fishermen, practical and technical issues of installation, data processing etc.

67. The representative of WDC introduced document ACCOBAMS-SC10/2015/Inf 34 proposing elements towards an EU Action Plan on Cetacean Bycatch. The document recommended that the proposed Action Plan be articulated accoprding to the 3 following components
    - Bycatch monitoring and population surveillance
    - A framework for bycatch mitigation towards zero
    - A regionalised, stakeholder and evidence-based approach to mitigation

4.2.2 Anthropogenic noise

68. Yanis Souami, Co-Chair of the Joint CMS/ACCOBAMS/ASCOBANS Noise Working Group, presented document ACCOBAMS-SC10/2015/Inf13 on the history and actions undertaken by the Working Group following the work programme that was established. He highlighted that valuable work from the JNWG increased knowledge on noise and potential noise impact in the ACCOBAMS area, and strengthened cooperation with Regional Seas Conventions (Barcelona Convention, OSPAR) and the EC (TG-Noise). During the discussion, it was recalled that the JNWG is an email-based working group and works on a voluntary basis.

69. Yanis Souami also presented document ACCOBAMS-SC10/2015/Inf15 with the statement of concern about past, ongoing and future noise-producing human activities in the Adriatic Sea. The document includes a reminder of ACCOBAMS, CMS, CBD and EU commitments related to noise, impact assessment and protection of the marine environment, as well as recommendations for offshore exploration activities in the Adriatic Sea. He explained that similar documents are in development for other relevant regions of the ACCOBAMS Area.

70. The representative of UNEP/CMS informed the Meeting that thanks to the generosity of the Principality of Monaco, CMS is in a position to advance work related to developing Environmental

Impact Assessment Guidelines for noise-generating offshore industries. CMS, ACCOBAMS and ASCOBANS all have resolutions calling for EIAs to take into account the effects of generated noise on our species, but no international guidelines exist to help Parties implement this action.

71. The Chairs of the CMS Scientific Council, Aquatic Mammals Working Group, ACCOBAMS Scientific Committee, ASCOBANS Advisory Committee, Joint Noise Working Group and the convener of the 2014 Workshop on EIAs have been given opportunity to comment on the draft terms of reference. The aim of this initiative is to develop guidelines for use by all three instruments. Timelines will be specified when the advertisement is placed, in the expectation to have the draft report and guidelines ready in time for the next meeting of the CMS Scientific Council (most probably in the first quarter of 2016). In order to meet these timelines, the contract will be advertised as soon as possible. The Terms of Reference are also available online as ASCOBANS AC22/Inf.4.2.b.

72. Niki Entrup, on behalf of NRDC and OceanCare, stressed the necessity that the Scientific Committee recalls on Parties to impose EIAs prior to projects involving anthropogenic noise, in particular impulsive noise activities. Such request is based on various previous decisions by ACCOBAMS, but also other international agreements and legislative frameworks, such as the EU EIA Directive 2014/52, Espoo (EIA/SEA) Convention Principle 17, CBD Decision XII/23, CMS Resolution 10.24. etc. He welcomed the CMS process to look into the development of a proper & comprehensive EIA manual to provide guidance to countries providing detailed information and criteria for how such an EIA needs to be undertaken and what issues to be looked it when it comes to review an application for undertaking seismic activities.

73. He underlined that it is important to also take behavioural impacts into account in reaction, in particular, to impulsive sound. The ideal option for addressing this aspect and generate in depth understanding of how to develop guidance in respect, would be to encourage the Technical Group on Noise at EU level to discuss the development of an impact indicator as already proposed by some Members of TG Noise and supported by some EU Member States. Such an initiative should certainly be encouraged and welcomed by the ACCOBAMS Scientific Committee.

74. Alessio Maglio presented document ACCOBAMS-SC10/2015/Doc 07 on the Mediterranean noise monitoring strategy, based on TG-Noise guidance for Descriptor 11. Two indicators are proposed, one for impulsive noise and one for ambient noise. Concerning impulsive noise, it is recommended to inventory impulsive noise source use in order to understand their distribution in space and time. Therefore, to assess the environmental status of a sea area we need to set a spatial grid where to locate and count noise events during a calendar year. A spatial grid of 20x20 km is initially proposed. Environmental status can be assessed after establishing a spatial and a temporal threshold for impulsive noise distribution. About ambient noise, it is proposed to monitor levels

and trends in selected 1/3 octave bands (centred at 20, 63, 125, 250, 500 and 2000 Hz). It is proposed to identify and use a threshold in dB for environmental status assessment related to ambient noise.

75. Comments and discussions on this document addressed the following issues:
    - The dimensions of the spatial grid for the impulsive noise indicator. Attention was brought on a study in the Ligurian Sea using a 5 x5 km spatial grid to assess the impact of noise on beaked whale.
    - The possibility to include further metrics than those proposed in the strategy concerning ambient noise
    - Harbour porpoise are quite regular in the northern Aegean Sea and hence some paragraphs should be modified to include this information.
    - The need to find out thresholds for proposed indicators
    - The urgent need to start working on an international impulsive noise registry for the Mediterranean Sea
    - It was also recommended that submission of data should be mandatory and include data about planned projects to make it possible to impose certain management actions prior to the actual activity.

76. Alessio Maglio presented document ACCOBAMS-SC10/2015/Doc 13 on the results of the project "Overview of the noise hotspots in the ACCOBAMS area", which contributes to meet the objectives of noise-related Conservation Actions of the ACCOBAMS Working Programme 2014-2016. The project produced a first inventory of noise-producing human activities, identified areas where such activities are carried out, and obtained cumulative maps of noise-producing human activities and proposed a first identification of noise-cetacean interaction hotspots. Finally, the project proposes a methodology for implementing an international noise registry, based on the experience gathered during the data collection phase.

77. Comments and discussions on this document addressed the following issues:
    - The final version of the document should reflect in its title that only the Mediterranean part of the ACCOBAMS area was addressed, as a first phase.
    - Further efforts should be focussed on gathering knowledge for the Black Sea and the ACCOBAMS area in the Atlantic, as well as increasing data for the area studied in the current project. The Sections about methodology and origin of data needs to be further progressed including a review about data gaps and participation in data gathering.
    - The possibility to include marine traffic layer in the cumulative map of noise-producing human activities

- The CoCoNET project should be approached again concerning Wind Farms in the Agreement area.
- Additional information on human pressures in the Adriatic Sea could be taken from the NETCET project

78. Léa David presented documents ACCOBAMS-SC10/2015/Doc 8 to Doc 12 related to the development of a Marine Mammals Observers (MMO) scheme for the ACCOBAMS area. She explained that EcoOcéan Institut (EOI) made an inventory of existing national training and legislation in all countries and that nothing exist officially. In this context, EOI proposed a scheme to ensure High quality MMO in the ACCOBAMS area on a voluntary basis. This scheme would be an accreditation of trainer organism relying on some constraints, and an undertaking of trained MMO to use standards, and send a report as feedback to the ACCOBAMS Secretariat after getting aboard a vessel as MMO. The whole process needs to be strengthening through good communication and clear links between different actors. She concluded informing the Meeting that those points would be discussed during a workshop to be held at the next ECS conference in Madeira in 2016.

79. Comments and discussions on this document addressed the following issues:
    - ACCOBAMS could propose to Parties that do not have the issue of anthropogenic noise covered by national legislation to produce an adequate legal framework under which the companies involved in seismic prospection or any type of noise producing activity that employ MMO should send official reports to the national entity responsible for nature conservation matters. This could subsequently be submitted to the ACCOBAMS Secretariat by the concerned Party.
    - Assuming that MMO qualification will be in place, particular attention should be given to MMO's responsibility. This is particularly important given that most MMOs work on their own, thus making them more susceptible to be easily dominated by companies involved in prospection activities. Particular attention should be given to ethical and technical responsibilities of the MMOs and the consequences of a poor job or non compliance with the working protocol that should be set for an MMO.
    - It was recommended not to only reference the JNCC Guidelines exclusively, but to reference also other existing schemes and assure that any such Guidelines are to be reviewed and the best practise criteria which meet ACCOBAMS objectives, are selected from the individual Guidelines.

80. The different discussion points lead to the establishment of a Working Group on this item. The Terms of Reference of the MMO Working Group are in the annexes of this report (Annex 4).

81. The representatives of NRDC and OceanCare expressed their interest to join this Working Group.

82. Alessio Maglio presented document ACCOBAMS-SC10/2015/Doc 26 with a proposal for the implementation of an "ACCOBAMS School (AS)" for MMOs and PAM operators. Starting from existing effort on developing an MMO certification for training centres, this proposal adds further ideas concerning the development of the MMO/PAM issues. The core ideas included:
    - the involvement of all relevant stakeholders from the scientific and industrial sectors in the AS
    - the organisation in teaching modules covering all relevant disciplines and topics (i.e. cetacean ecology and biology, underwater acoustics, noise impact, regulation and guidelines, visual observation techniques, PAM procedures, mitigation procedures, reporting protocol etc.)
    - An organisation in different levels: an MMO and PAM basic training (level 1); a level addressed to a leadership role (level 2); and finally update courses, addressing new knowledge, technologies, mitigation measures etc. (level 3)
    - The delivering of a certificate after an evaluation of the attendees based on both the theoretical and practical procedures at the end of every level.

83. Comments and discussions on this document addressed the following topics:
    - As the term 'School" has a large scope, more topics might be addressed within the school, such as bycatch and whale watching (e.g. concerning the WW High Quality certification).
    - It was acknowledged that the involvement of experts from the industrial sector is of high importance for the implementation process.
    - An economic study linked to the implementation of such a tool would be necessary to support the discussion.

84. Niki Entrup, on behalf of NRDC and OceanCare, introduced document ACCOBAMS-SC10/2015/Inf 36 on concerns over Naval Sonar, in particular the NATO Submarine Warfare Exercise DYNAMIC MANTA 2015.

85. Following the debates within the framework of this agenda item, the Scientific Committee adopted the Recommendation on noise appearing in the Annex 3 to this report.

4.2.3 Ship strikes

86. The Chair presented document ACCOBAMS-SC10/2015/Inf 16, with an Update of the current effort to mitigate ship strikes in the ACCOBAMS area in collaboration with the Ship strikes Working Group.

87. ACCOBAMS and the International Whaling Commission (IWC) have been addressing the problem of ship strikes for many years and have taken a leading role in this issue. Both Scientific Committees (SC) consider methods of estimating the number of whales killed from ship strikes; there is also the need to foster the dialogue between researchers, authorities and the shipping industry and thus taking part in developing mitigation measures.

88. The IWC has developed a global database to report collisions between vessels and whales. The database is open for anyone to submit data on collision events, including both information on whales (e.g., species, size, observed injuries, etc.) as well as on vessels. The objectives of the database are to deliver estimates of mortality and injuries, to help detect trends over time, to allow better understanding of risk factors (e.g., vessel type, speed, size), and to identify high risk or unsuspected problem areas. The database provides an on-going facility for collecting new information, and most importantly, it relies on scientists and mariners providing information. Therefore, any report of a ship strike is particularly important.

89. Several members of the SSWG have provided inputs for the documents, including an update on effort carried out regarding the REPCET system: near real time habitat maps, developed by the Joint Research Centre of the European Commission, describing fin whales potential feeding areas in relationship with chlorophyll-a fronts, could be inserted in the REPCET system or made available to the vessels, to facilitate identification of high density areas and raise awareness.

90. The Mediterranean Fixed Line Transects (Med-FLTs) net was also presented. This is a network established in 2007 that carries out systematic monitoring of cetaceans and their relationship with marine (threats) traffic, with a research protocol that uses ferries/large vessels (speed between 18-30 kn) as platform of observations to collect data both on ship strike and near miss.

91. Data on fin whales equipped with location-only satellite transmitters in the Pelagos Sanctuary for Mediterranean Marine Mammals in September 2012, and off the Island of Lampedusa, in the Strait of Sicily, in March 2013 and 2015 were also presented. An overall analysis of the movements of the eight whales equipped with satellite transmitters underlines the fundamental importance of the waters of the Pelagos Sanctuary, and secondly, of the waters of the French Exclusive Economic Zone in the Gulf of Lion, and the waters adjacent to Spain. These results confirm that the habitat of fin whales extends westward of the Pelagos Sanctuary area, affecting French and

Spanish waters, suggesting the opportunity to consider ways to extend protection from anthropogenic threats such as maritime traffic to those waters, also.

92. The data presented provide further evidence for the importance that the Strait of Sicily plays in the central Mediterranean Sea and strongly support the proposition to establish an effective seasonal/dynamic protection regime in the Strait of Sicily area, in terms of a Marine Protected Area or a SPAMI, with a designated action plan to address actual and potential threats.

93. It was suggested that telemetry data may be particularly useful to assess fin whales critical habitats and areas of high habitat use, where concentrate effort to mitigate human induced threats such as ship strikes. These results suggest how a coordinated and dynamic management scheme – as foreseen by the Marine Spatial Planning (MSP) - is necessary to effectively protect fin whales in the Mediterranean, emphasizing the urgency of addressing marine mammals' conservation issues at large scale. Furthermore, this knowledge is essential to identify fin whales' critical habitats, and hence to define Important Marine Mammal Areas (IMMAs), Specially Protected Areas of Mediterranean Importance (SPAMIs) under the framework of the Barcelona Convention and Ecologically or Biologically Significant Area (EBSAs) within the Convention on Biological Diversity, where focus on cetaceans' threats mitigation.

94. The Hellenic Trench was identified as a high risk area for ship strikes to sperm whales at a joint ACCOBAMS and IWC workshop in 2010. A recent analysis found that over 50% (12 out of 23) sperm whale strandings examined between 1992 and 2014 along the coast of Greece showed propeller marks and cuts that indicate a ship strike. In 2014, the IWC Scientific Committee considered an analysis of sperm whale and shipping distribution patterns in the Hellenic Trench, Greece, which noted that the potential for small changes in shipping routes to dramatically reduce risk in these high risk areas suggested considerable scope for effective mitigation. The areas where routing measures are being considered are also included in proposals by the Pelagos Cetacean Research Institute for new candidate Natura 2000 sites. In 2015 the IWC Scientific Committee reviewed available information on fin whale distribution in the area and concluded there was no reason to expect that routing measures designed to reduce risk to sperm whales would increase risk to fin whales. The Committee therefore recommended that the Secretariat works with interested parties (including Greece, ACCOBAMS and the shipping industry) and now move forward with Greece in order to develop a proposal for routing measures to reduce risks to sperm whales.

95. An update on effort carried out at the Canary Islands was finally presented, with information on the stranding network in the islands since 2000. The stranding network involves two NGOs, Tenerife Conservación (which samples and analyses the biological data collected on the western

Isles) and the Sociedad para el Estudio de los Cetáceos en el Archipiélago Canario-SECAC (which samples and analyses the biological data collected on the eastern islands) and one university, Universidad de Las Palmas de Gran Canaria (the Faculty of Veterinary-Animal Health Institute, ULPGC-IUSA) that carries out the necropsies to determine the cause of death. This work is carried out with the support of the councils that area also involved in assisting the strandings and the removal of the carcasses.

96. Morgane Ratel, representative of the NGO "Souffleurs d'Ecume", informed the Meeting that three new boats were equipped with the REPCET system and that efforts were undertaken for extending REPCET to Italy. She also informed the Meeting about the development of an application for smartphone for collecting sightings, underlining that the users cannot receive information on the localisation of the animals in order to avoid harassment.

97. The Executive Secretary of the Pelagos Sanctuary informed the participants about the recommendation from the 8th Technical and Scientific Committee of the Pelagos Sanctuary (Genoa, 14 October 2015) and related to the marine traffic:

> "*Technical and Scientific Committee of the Pelagos Sanctuary recommends to the Parties to discuss between Parties the idea of testing a comprehensive and adaptive management approach for the implementation of ship strikes avoidance and/or reduction tools (in collaboration with IMO, IWC, ACCOBAMS, etc.), including Areas to be Avoided, Mandatory reporting system, dynamic management areas, static management areas, Traffic Separation System (TSS), etc*".

98. She emphasised that the recommendation will be submitted to the 6th Conference of the Parties to the Pelagos Agreement.

99. Aurélie Moulins, CIMA representative, informed the Meeting about the project "Noise impact on sperm whale (*P. macrocephalus*) and Cuvier's beaked whale (*Z. cavirostris*) estimated from the marine trafic" financed by the Permanent Secretary of the Pelagos Sanctuary. This project was dedicated to create a catalog of maps of the indicators describing the marine trafic. She underlined that the results give the spatial and temporal uses of the area by 6 different types of vessels (passenger, tanker, cargo, pleasure, fishing and services) and that these data could be used to mitigate ship strikes.

100. Greg Donovan, the representative of IWC, informed the Meeting about the Joint IWC-SPAW Workshop to Address Collisions between Marine Mammals and Ships with a Focus on the Wider Caribbean held from 18-20 June 2014 in Panama.

101. Following the debates within the framework of this agenda item, the Scientific Committee adopted the Recommendation on ship strikes appearing in the Annex 3 to this report.

4.2.4 Cetacean watching

102. Marina Sequeira, Coordinator of the Working Group on Whale Watching, presented document ACCOBAMS-SC10/2015/Doc 14 proposing Guidelines for monitoring programs aimed at maximizing the chance of detecting potential adverse impacts on individual cetaceans and on populations, taking into account the existing work on this issue elsewhere in the world.

103. She emphasized that whale watching is an important economic activity in many areas of the ACCOBAMS area. Although several countries in the region have already implemented specific codes of conduct and national legislation aimed at regulating and monitoring the activity, this particular tourism activity is not necessary benign, and thus it should be carefully monitored in order to maximize the chance of detecting potential adverse impacts on cetaceans. Referring to document ACCOBAMS-SC10/2015/Doc 14, she added that several tools and approaches should be considered for minimizing the risk of adverse impacts of cetacean watching and ensuring the sustainable development of such activities.

104. She also presented document ACCOBAMS-SC10/2015/Doc 15 including a common data collection system for whale watching vessels to be implemented in the ACCOBAMS area.

105. Aurélie Moulins, representative of CIMA Foundation, informed the Meeting about the collaboration between scientific research institutions and Ligurian whale watching operators for collecting their sighting data using a shared protocol through a tablet application. The data are digitally uploaded with a continuous track and sighting positions. A next step will be undertaken when uploading data on different WebGIS platforms (such as INTERCET and SEAWETRA). She emphasized that the use of this open-source application is a positive strategy that facilitates the transfer of data from the operators.

106. After some discussion, it was decided to revise the form contained in document ACCOBAMS-SC10/2015/Doc 15 and to test it in some pilot areas (e.g. Pelagos Sanctuary, Strait of Gibraltar) before its formal submission to the Parties for adoption / adaptation to the entire ACCOBAMS area.

107. The Secretariat presented document ACCOBAMS-SC10/2015/Inf 17 on the ongoing whale watching activities in the ACCOBAMS area and document ACCOBAMS-SC10/2015/Inf 18 on the implementation status of the "*High Quality Whale-Watching ®*" certificate in the ACCOBAMS area.

108. The Secretariat informed the Meeting that two framework Conventions "Partner Whale Watching High Quality" with private organizations were signed in July 2014 with a French NGO and in February 2015 with a Monaco NGO. These NGOs are now authorized to use the certificate in the

French Mediterranean and in Monaco, upon conditions of compliance with the terms contained in the Convention and according to the regulations governing the use of the logo.

109. Sylvia Frey, representative of OceanCare, brought information to the attention of the Scientific Committee about recent swim-with cetacean activities taking place in the Pelagos Sanctuary for marine mammals. The commercial swim-with activities resulted in harassment of a group of pilot whales over several hours. Furthermore, apart from the tourist boats an airplane was involved in spotting cetaceans. She underlined that, apart from the detrimental effects of irresponsible whale watching activities on the wellbeing of cetaceans, such activities contradict the Whale Watching Guidelines that have been established by this Scientific Committee and adopted by the ACCOBAMS Parties, through Resolution 4.7. They also compromise the recent joint efforts by ACCOBAMS and the Pelagos Sanctuary to establish a High Quality Whale-Watching® label.

110. The Executive Secretary of the Pelagos Sanctuary confirmed that the text of the Pelagos Agreement stated that "*Parties regulate touristic whale watching activities*" and reminded that the activity of "swim with cetaceans" is already excluded by the label "High Quality Whale Watching®" ACCOBAMS/Pelagos

111. She informed also the meeting that the French decree of the 1st of July 2011 forbided the notion of "intentional disturbing" of marine mammals, and that the Scientific Committee of the Pelagos Agreement is currently working on the qualification of that notion, in particular in order to facilitate the operational control at sea conducted by national authorities. For information, the Executive Secretary confirmed that French scientists community of the Pelagos Sanctuary, in particular the national Park of Port-Cros trough the volume 28 of its scientific reports, already recognized that the "swim with cetaceans" is a disturbing activity for marine mammals and dangerous activity for people.

112. The representative of IUCN briefed the meeting about the project being developed for the Analysis of the economic activities in the Strait of Gibraltar and in particular in the area of the Intercontinental Mediterranean Biosphere Reserve (IMBR - Morocco-Spain). A specific action will analyse the evolution of whale watching activities (past, present and future). The objective is to collect the relevant information for the preparation of a management plan for the IMBR.

113. Heidrun Frisch, ASCOBANS Coordinator and CMS Marine Mammals Officer, informed the Meeting that CMS in November 2014 passed Resolution 11.29 – Sustainable Boat-Based Marine Wildlife Watching. It urges Parties to adopt appropriate measures, incl. if necessary binding regulations, to promote ecologically sustainable wildlife watching, covering all species potentially affected by such activities. The Resolution recommended that Parties take into account as guiding principles

that a) the activities should not have negative effects on the long-term survival of populations and habitats; and b) the activities should have minimal impact on the behaviour of watched and associated animals. It outlined provisions to include as appropriate depending on the target species, e.g. with respect to licensing and training of operators, level of activity, approach and navigation, interaction, and recommends that measures also cover opportunistic wildlife watching during other commercial and private boat-based activities.

114. She added that the CMS Scientific Council was requested to develop guidelines for different taxonomic groups. For cetaceans, there was strong interest to collaborate closely with ACCOBAMS and IWC and to take into account fully the extensive body of work that has been done.

115. Following the debates within the framework of this agenda item, the Scientific Committee adopted the Recommendation on cetacean watching appearing in the Annex 3 to this report.

4.2.5 Marine debris

116. The Chair of the Scientific Committee presented document ACCOBAMS-SC10/2015/Inf 19 on a proposal sent to the MAVA Foundation by the University of Siena on behalf of a number of partners. The main objective of this project is to investigate marine litter in the Mediterranean Sea, evaluating its sources, presence and effects in the North-Western Mediterranean ecosystems and investigating the impact of plastics on endangered species, applying a new integrated monitoring tool. Particular attention will be given to the identification of potentially “hot spot areas” such as “gyres” and “fronts” where plastics could accumulate and marine organisms live and feed. The project will focus on an area of high ecological interest, the North-Western Mediterranean Pelagic Ecosystems EBSA as defined by CBD. Particularly, four different sub-areas characterized by the presence of fronts and gyres will be monitored: a) Ligurian Sea, b) Tyrrhenian Sea, c) Corsica Sea and d) Balearic Sea (see the attached map). The target species will be pelagic species of particular conservation interest: fin whales (*Balaenoptera physalus*, Vulnerable-IUCN), sperm whales (*Physeter macrocephalus*, Endangered-IUCN), Cuvier's beaked whales (*Ziphius cavirostris*, Data Deficient-IUCN) and loggerhead sea turtle (*Caretta caretta*, Endangered-IUCN).

117. The Scientific Committee endorsed this project proposal.

118. Greg Donovan, the representative of IWC, informed the Meeting about the activities carried out by IWC on marine debris, in particular two Workshops organized in 2013 and 2014.

119. Heidrun Frisch, ASCOBANS Coordinator and CMS Marine Mammals Officer, informed the Meeting that CMS in November 2014 passed CMS Resolution 11.30 on Management of Marine Debris that contained recommendations based on the following three reviews undertaken in 2014:
    - UNEP/CMS/COP11/Inf.27: Migratory Species, Marine Debris and its Management, focusing largely on knowledge gaps
    - UNEP/CMS/COP11/Inf.28: Marine Debris and Commercial Marine Vessel Best Practice
    - UNEP/CMS/COP11/Inf.29: Marine Debris Public Awareness and Education Campaigns

    These documents are available on http://www.cms.int/en/meeting/eleventh-meeting-conference-parties-cms.

4.2.6 Climate change

120. The Executive Secretary presented the Report of the ACCOBAMS expert workshop on the impacts of climate change on cetaceans of the Mediterranean and Black Seas (document ACCOBAMS-SC10/2015/Inf 20). The Secretariat emphasised that the workshop addressed the climate change issues and its impacts on the marine biodiversity, in particular on the cetaceans, in the Mediterranean and Black Sea. It was organized in Monaco on 11th June 2014 and chaired by Mark Simmonds.

121. Seventeen experts from eight countries from across the ACCOBAMS region and beyond attended, including representatives from a number of international organizations and members of the ACCOBAMS Scientific Committee. The importance of the maintenance of long term studies was emphasized along with the value of cetaceans as sentinels of ecosystems health and indicators of climate change.

122. The workshop recognized climate change as a profound threat to the cetaceans of the region and made recommendations for policy makers and for future research topics. The conclusions of the workshop were considered by the Bern Convention as an information document for the Bern Convention workshop on climate change and biodiversity (Strasbourg, 19 June 2014). They were also considered in the CMS Resolution “Programme of work on climate change and migratory species” adopted during the CMS COP 11 in November 2014.

123. The Secretariat informed the Meeting that ACCOBAMS became a member of the CMS Working Group on Climate Change in July 2014.

4.2.7 Species Conservation Plans

124. Greg Donovan, the representative of IWC, introduced the document ACCOBAMS-SC10/2015/Doc16 & Doc18 "Draft Terms of Reference for an ACCOBAMS Conservation Management Plan (CMP) for Fin Whales in the Mediterranean Sea, with guidance for the general development of CMPs within the ACCOBAMS Area". He presented the IWC process for the development of CMPs and he pointed out that similar approach could be applied in the ACCOBAMS context. The document includes also a workplan for the development of a CMP for fin whales. Key components include:
    - support of national authorities
    - involvement of stakeholders at an early stage of development
    - recognition that CMPs complement not replace existing measures
    - clear, achievable goals and objectives
    - practical, prioritized mitigation actions
    - regular monitoring and reporting
    - clear governance structures to coordinate the engagement of key stakeholders.

125. Referring to documents ACCOBAMS-SC10/2015/Doc16 and ACCOBAMS-SC10/2015/Doc 18, Ana Štrbenac suggested some additions to enrich the document, such as a need for more detailed analysis of stakeholders, as a basis for decision about the level and means of their engagement in the development of conservation plans, as well as more thorough analysis of institutional capacities and competences.

126. Heidrun Frisch, ASCOBANS Coordinator and CMS Marine Mammals Officer, informed that ASCOBANS may potentially be interested in using the same template and process for the revision of its existing Recovery Plan for Baltic Harbour Porpoises and a new Conservation Plan for the Common Dolphin which the Advisory Committee (AC22) decided should be developed. This Conservation Plan will include also the area of overlap between ASCOBANS and ACCOBAMS.

127. AC22 established a Steering Group, which will develop a draft Common Dolphin Conservation Plan taking into account the latest knowledge of population structure, status, distribution, and major threats (as detailed in AC22/Inf 3.1), i. taking into account work ongoing in other fora including ACCOBAMS and the IWC Scientific Committee; ii. identifying which concerns and issues are unique to the common dolphin and which also affect other small cetaceans and developing advice accordingly; and iii. developing general recommendations for conservation action for consideration by ASCOBANS MOP8 in 2016. The Steering Group was asked to report on progress to MOP8 (August 2016) and provide a finalised plan to the next meeting of the Advisory Committee (2017) for discussion and endorsement.

128. ACCOBAMS was warmly invited to nominate someone to join the Steering Group, preferably from the area of overlap. Marina Sequeira volunteered to join the Steering Group.

129. Guido Gnone, Coordinator of the Mediterranean Bottlenose Dolphin Conservation Plan (MBCP), introduced document ACCOBAMS-SC10/2015/Doc 17 on the progresses made in the development of the conservation plan and the promotion of the implementation of the Intercet platform.

130. Following the recommendations of the Scientific Committee, a new Mediterranean map, sub-divided in 14 sub-areas, was adopted within the MBCP. The structure of the local coordinators was actualized accordingly with the support of the ACCOBAMS Secretariat.

131. In order to promote the implementation of Intercet in the MBCP, the platform was introduced to the Third Biennial Conference on Cetacean Conservation in South Mediterranean Countries (Jounieh, Lebanon, 21 - 23 October 2014) and a training course was implemented in the last ECS Workshop: Strengthening the cooperation for a better cetacean conservation in the ACCOBAMS Area: Working together with common tools (Malta 21st March 2015).

132. In relation to the connection between Intercet and other analogue platforms, it was agreed to include Intercet in the OBIS SEAMAP dataset produced by the ACCOBAMS and WDCS initiative on: http://seamap.env.duke.edu/partner/ACCOBAMS. A total of 17 partners are now connected to the platform and 13 of these contribute to the common dataset. Guido Gnone, as MBCP and Intercet coordinator, suggested to adopt the same MBCP structure (and map subdivision) for all the Cetacean species regularly present in the Mediterranean, identifying a general coordinator for each species and a local coordinator for each sub-area. Intercet could support the networking process as a common tool for data sharing; each coordinator should then facilitate the data flow to the common platform.

133. Data sharing on a common platform should be encouraged in order to get a picture of Cetacean distribution/abundance/movements and population structure on a Mediterranean level.

134. After some discussion, the Scientific Committee agreed on the following needs:

- to re-establish the Working Group on the MBCP and to revise its terms of reference if needed
- to start considering drafting a conservation plan based on the IWC CMPs
- to consider a regionalization approach for drafting this Action Plan
- for the Working Group, to discuss about the platforms to be used and to find a way to merge the information into one single system.

135. Following the debates within the framework of this agenda item, the Scientific Committee adopted the Recommendation on conservation plans appearing in the Annex 3 to this report.

136. Sylvia Frey, the representative of OceanCare, informed the ACCOBAMS Scientific Committee about an upcoming 1st international workshop: "Conservation and research networking on short beaked common dolphin (*Delphinus delphis*) in the Mediterranean Sea" that will be coordinated by OceanCare, Oceanomare Delphis Onlus and the Biology Conservation Research Foundation (BICREF) and will be held in Ischia Island (Italy) between 13 and 15 April 2016. The aim of the workshop is to promote greater participation, international dialogue and exchange on Mediterranean short-beaked common dolphins, to strengthen local, national and international scientific and conservation efforts for the species. Findings on the ecology, behavior and critical habitats of the species, conclusions and action plans resulting from the workshop are expected to be published as a Special Issue of "Aquatic Conservation: Marine and Freshwater Ecosystems" after an ordinary peer review process.

137. The Scientific Committee thanked OceanCare for this initiative and supported the workshop.

138. The Secretariat introduced document ACCOBAMS-SC10/2015/Inf 21 on the revision of the Action Plan for the conservation of cetaceans in the Mediterranean Sea. He explained that this Action Plan was adopted by the Parties to the Barcelona Convention 10 years before the enforcement of ACCOBAMS and that since then, most of the Parties to the Barcelona Convention have become Parties to ACCOBAMS and have been relying on ACCOBAMS as regards cetacean conservation issues. He underlined that close coordination is ensured between the Secretariats of the two instruments (namely the RAC/SPA for the Barcelona Convention and the ACCOBAMS Secretariat). Referring to the document, he explained that it includes the amended text of the Action Plan which contains actions to be undertaken. These actions are organized in categories and concern:
    - legal and institutional measures,
    - improving the knowledge about cetacean populations,
    - reducing cetacean-fisheries interactions,
    - mitigating the impact of underwater noise,
    - habitat conservation.

139. Niki Entrup, on behalf of NRDC and OceanCare, stressed that while monitoring activities are essential, they themselves are not a mitigation measure per se nor do they prevent negative impacts caused by anthropogenic noise and therefore recommended to adjust the amendments of the Action Plan based on the outcome of recommendations from this Meeting of the Scientific Committee, in particular reflecting the call on:

- Parties and Range States to conduct thorough, comprehensive and mandatory Environmental Impact Assessments (EIA) for all noise producing activities, in particular impulsive sound, in the Mediterranean Sea

- Parties and Range States to declare – in collaboration with the ACCOBAMS Scientific Committee – Specially Protected Areas of Mediterranean Importance (SPAMIs) as "quiet zones" in order to protect species, in particular Cuvier's beaked whales, impulsive anthropogenic noise.

140. Ana Strebnac suggested to make reference to the ACCOBAMS Strategy 2014 – 2025, as the relevant strategic document of the Agreement.

141. Lobna Ben Nakhla, the RAC/SPA representative, took note of these proposals and will search a way to bring these suggestions to the Parties to the Barcelona Convention.

142. Ayaka Amaha Ozturk, on behalf of Black Sea Commission Permanent Secretariat (BSC PS) presented document ACCOBAMS-SC10/2015/Inf22 on the Revision of the Conservation Plan for Black Sea cetaceans.

143. She briefly explained the background and outcome of this initiative: in 2014, BSC PS jointly with ACCOBAMS Secretariat initiated the Revision of Conservation Plan for Black Sea Cetaceans for 2014-2018 (based on the existing Conservation plan developed for 2006-2010), produced ToR and later on the Draft Conservation Plan was prepared by the ACCOBAMS expert, supported by the team of nominated Black Sea experts, in cooperation with BSC PS and ACCOBAMS Secretariat.

144. FOMLR AG considered the draft Conservation Plan for Black Sea Cetaceans for 2014-2018 at its meeting (13th October 2014, Istanbul, Turkey) and recommended it for the adoption of the BSC at its 30th Regular Meeting. At its 30th Regular Meeting (Istanbul, 19–20 November, 2014), the Black Sea Commission appreciated the assistance and efforts of ACCOBAMS in elaborating the draft Conservation Plan for Black Sea Cetaceans for 2014-2018 and requested the CBD and FOMLR AGs to work on further aligning it with relevant BSC documents. The draft Conservation Plan for the Black Sea Cetaceans for 2015-2019 shall be submitted to the Commission for consideration and further adoption at the next BSC Meeting.

145. The 18th FOMLR/CBD AGs Meeting (held 30-31st March, 2015 in Istanbul, Turkey) considered the changes to the draft Conservation Plan, the amended draft was later on circulated and approved by written procedure and proposed for further adoption at the 31st BSC Regular Meeting held 7-8th October, 2015 in Istanbul, Turkey. Resolution to the 31st BSC Regular Meeting states that "The Commission considered the draft Conservation Plan for the Black Sea Cetaceans for 2015-2020. The Commission requested the CBD and FOMLR AGs, BSC PS to further elaborate on the draft Plan

in line with provisions of Bucharest Convention and BS SAP 2009 for submission to BSC by written procedure".

146. Ayaka Amaha Ozturk informed the Meeting that the BSC PS appreciated the support of ACCOBAMS Secretariat and that it will continue steps needed for adoption of the draft Conservation Plan in accordance with above mentioned BSC Resolution. She also suggested that the change of the whole structure of the Plan might be necessary to be accepted by all the Black Sea riparian countries.

147. Since this was the first time the Draft Conservation Plan was presented to the Scientific Committee, Ayaka Amaha Ozturk asked the Members of the Scientific Committee for any comments or suggestion to improve the Plan.

148. The Scientific Committee took note of the information provided during the meeting about the revision of the cetacean Action Plan under the auspices of the Barcelona Convention and the Conservation Plan for Black Sea cetaceans and underlined their interest for the non-Parties to ACCOBAMS. However, for the ACCOBAMS Parties, the Scientific Committee recalled that their obligations already comes from ACCOBAMS and its Conservation Plan and recommended to the Permanent Secretariat in its close link with the two sub regional coordination units to be aware of the risks of the merging of strategies and/or implementation calendars duplicated or non coherent.

4.3 Improve capacities of national organizations and experts

4.3.1 Functional stranding networks and responses to emergency situation

149. The Executive Secretary presented the Report of the ACCOBAMS/Pelagos workshop on cetacean live stranding (ACCOBAMS-SC10/2015/Inf 23) held in Monaco on the 29th and 30th of October 2014. More than 40 experts from 11 Countries of the ACCOBAMS Area, as well as a representative of the Joint ACCOBAMS/ASCOBANS/CMS Noise Working Group, attended the workshop. Elements for a transboundary common procedure were identified for the area of the Pelagos Sanctuary in order to facilitate response to emergency transboundary situations among the 3 countries. That included common definitions, a common alert system based on codes and capacity building.

150. It was proposed that part of the management of cetacean stranding events be inserted in an existing transboundary operational plan (RAMOGEPOL for example) in order to facilitate the information transfer and the pooled use of the human, technical and financial resources. This is currently under discussion within RAMOGE.

151. Experts from areas beyond the Pelagos Sanctuary were also invited to propose elements for the establishment of a harmonized Procedure in case of cetaceans live stranding for all the Parties to ACCOBAMS. One of their main proposals would be to encourage national and regional cooperation between all stakeholders involved in such events.

152. Sandro Mazzariol presented the document ACCOBAMS-SC10/2015/Doc 19 (Recommendations towards a transboundary common procedure for cetacean live strandings). He emphasised that From the workshop organized in Monaco last year related to common transboundary procedures to be used in case of live stranded animals some keywords arise:
    - sharing and compare best practices and common procedures in order to find minimum common elements between at least neighbouring Countries.
    - exchanging information regarding strandings events, rehabilitation procedures and refloating successes could enhance knowledge since animals stranded alive are usually in small numbers per each country.
    - training and capacity building throw dedicated workshop and/or training activity or in periodically organized events to discuss specific cases of strandings and experiences
    - cooperation between neighbouring Countries

153. Following the two presentations, the representative of IWC offered to collaborate on this issue with ACCOBAMS and the representative of ASCOBANS informed the meeting about the drafting group established by her organisation on live strandings and proposed that an expert from ACCOBAMS participate. The Scientific Committee proposed that Sandro Mazzariol join the drafting group as ACCOBAMS representative.

154. The Scientific Committee, taking into account the report of the expert IWC Workshop and the joint ACCOBAMS/Pelagos workshop identified the series of actions with respect to live strandings included in the Recommendation on live stranding adopted by the meeting and appearing in Annex 3 to this report.

4.3.2 Capacity building

155. The Task Manager on Capacity Building presented document ACCOBAMS-SC10/2015/Doc20 providing an overview of capacity building activities carried out in the ACCOBAMS area, with the indication of those supported by the ACCOBAMS. She also asked the floor if it is necessary to include all activities which may be missing from this list. If so, she and the Secretariat may ask all Parties and Partners to submit all capacity building related activities in the future.

156. She also presented document ACCOBAMS-SC10/2015/Inf 24 providing a report on the survey undertaken by the Task Manager on Capacity Building through a questionnaire sent to all members of the Scientific Committee. The survey focused on the following:
    - Identification of activities that were particularly successful and those needing further reinforcement
    - Priorities to capacity building activities (e.g. High priorities to Stranding network, Photo ID training, Low priorities to Cetacean course)
    - Any other suggestion for capacity building.

157. Most of the participants expressed opinions and made suggestions and the Scientific Committee, based on the substantive debate about the questions raised by the report, agreed on the elements presented in the Recommendation on capacity building appearing in the Annex 3 to this report.

4.4 Enhance effective conservation of cetaceans critical habitats

158. Lea David, Task Manager on "Conservation of cetaceans critical habitats", presented her report included in document ACCOBAMS-SC10/2015/Inf 25, highlighting her participation to two workshops held in 2015 and the conclusions of the joint RAC/SPA, GFCM and ACCOBAMS Meeting on Protection of Marine Areas in the Mediterranean and Black Seas (as contained in document ACCOBAMS-SC10/2015/Inf 26).

159. She presented document ACCOBAMS-SC10/2015/Doc 21 on her work carried out for identifying new areas of importance for cetaceans conservation in the ACCOBAMS area. She highlighted that this work was a follow up of previous work done and that there was an interest in developing a threat based management approach in parallel. For that purpose, she collected different kinds of data or information, from raw to experts' synthetic ones, with the view of including them in the ACCOBAMS webGIS. The aim was firstly to get a global vision of what happens in the ACCOBAMS area. The Task Manager underlined that the project was ongoing and she asked for more participation of experts.

160. The discussion encouraged the process, highlighting the interest to lead spatial modeling analysis at this scale when possible. It was also stressed to liaise with the coordinators of the Marine Mammal Task Force of IUCN concerning the IMMA status and to participate to the IMMA meeting during the next SMM Conference in December 2015.

161. Vincent Ridoux informed the Meeting about a workshop on gap analysis on line transect survey effort in the Mediterranean. This workshop will be organised by the Marine Geospatial Ecology Lab, directed by Pat Halpin at Duke University, in the Mediterranean in the spring of 2016. The

objective is to assess the existing spatiotemporal coverage of line transect surveys conducted in the Mediterranean and to prioritize future data collections.

162. Lea David, on behalf of Giuseppe Notarbatolo di Sciara, introduced document ACCOBAMS-SC9/2015/Doc 22 with a handbook for evaluation of effectiveness of place-based conservation for cetaceans in the ACCOBAMS Area.

163. Ana Štrbenac pointed out that this document may serve well to the protected areas managers when developing protected areas management plans, but in order to serve as a handbook for evaluation of effetiveness, some elements and considerations need to be added. It was agreed that these comments are sent to the Secretariat to forward them to the author of the document.

164. The Scientific Committee endorsed the document. The Chair expressed his gratitude to the author and invited Ana Štrbenac to forward her comments to the Secretariat.

165. Lobna Ben Nakhla, the RAC/SPA representative, presented the document ACCOBAMS-SC10/2015/Inf 27 compiling four documents prepared within the framework of the implementation of MedOpen Sea Project which is a joint management Action of EC with UNEP/MAP for identifiying and creating SPAMIs in open sea, including the deep seas. She rececalled that the first phase of this project focused on three priorities areas: Adriatic Sea, Alboran Sea and the Sicily Channel/Tunisian Plateau areas. Thematic reports on fisheries, cetaceans and seabirds were prepared by consultants contracted by RAC/SPA; these documents were presented, discussed and reviewed during consultation meetings between the neighbouring countries of the three priority areas held during 2015. The objective of these meetings was to indicate the way forward in the process to identify, establish and declare SPAMIs in the opean seas.

166. Sylvia Frey, the representative of OceanCare, presented a statement on ‘quiet zones’ for Cuvier’s beaked whales and Mediterranean monk seals for promoting the establishement of protected areas in key regions, as ‘quiet zones’, to prevent anthropogenic noise from further endangering these species and their prey. She recommended that ACCOBAMS Parties work towards establishing Specially Protected Areas of Mediterranean Importance (SPAMIs) to protect Cuvier’s beaked whale critical habitats in the Alboran Sea to Gulf of Lion, the Sicilian Channel, the Southern Adriatic and Ionian Strait, and the Aegean Sea and Hellenic Trench.

167. The Scientific Committee took note of this information and decided to include this matter in its workplan for the next triennium in order to work on the scientific background for defining ‘quiet zones’ within Cuver’s beaked whale critical habitats, in relation with the Mediterranean EBSAs established under the CBD.

AGENDA ITEM 5 - COMMUNICATION AND INSTITUTIONAL ISSUES

5.1 Information and communication

168. The Secretariat presented document ACCOBAMS-SC10/2015/Inf 28 on the progress made in the establishment of the Network on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (NETCCOBAMS), developed in collaboration with WWF France and GIS 3M.

169. The Secretariat informed the meeting that a workshop on this issue was organized during the 2015 ECS Conference (21 March 2015, Malta). Four main recommendations were issued for the implementation of a network in the ACCOBAMS area:

- Importance of the participation of all experts working on the cetacean conservation (the scientific community, managers, members of NGOs, members of IGOs, relevant national and regional administrations, students…).
- Importance of the involvement of NGOs, especially of all the ACCOBAMS Partners in the implementation of a global network for ACCOBAMS.
- Importance of capacity building activities, such as trainings, workshops, transboundary initiatives between ACCOBAMS Partners, etc., to involve a maximum of people in long term community based initiative. Intercet platform is a good example of common tool that could be used easily in the entire ACCOBAMS Area.

170. The Secretariat presented document ACCOBAMS-SC10/2015/Inf 29 on the communication activities implemented by the Secretariat, in particular:

- The implementation of the module on cetacean conservation in Malta in March 2015, the first university to have tested the English-teaching version of the module;
- The 3rd edition of the Biennial Conference on cetacean conservation in Southern Mediterranean Countries (Lebanon, October 2014);
- The organization of the first Photo Exhibition in Monaco (April 20th - June 8th, 2015) back to back with the first edition of the ACCOBAMS Cetaceans Day (June 5th 2015);
- The publication of the 6th issue of the FINS Newsletter, the 7th once to be published in November 2015;
- The participation of ACCOBAMS to the 15th Anniversary of its Partner “Souffleurs d’écume”(Le Lavandou, France, 24-27 September 2015);
- The Participation of the ACCOBAMS Secretariat to the 6th edition of the International Fisheries and Aquaculture Salon in Algeria (Oran, Algeria, 1-4 October 2015).

171. The Chair concluded that the Scientific Committee took note of the presented information and commended the efforts of the Permanent Secretariat in this field.

5.2 Improve the level of implementation of and compliance with ACCOBAMS Resolutions as well as the monitoring of its progress

172. The Executive Secretary informed the meeting that no new letter had been received regarding the improvement of the implementation level of compliance with the ACCOBAMS Resolutions as well as for the monitoring of its progress.

173. She added, however, that there was a serious concern expressed by the WDC and OceanCare regarding the increasing seismic activities in the Eastern Mediterranean, in the Adriatic Sea and in the Western Mediterranean. In this context, and upon the request of the Chair of the Scientific Committee, the Joint Noise Working Group developed a general statement for the Adriatic Sea region on the impact of anthropogenic noise (ACCOBAMS-SC10/2015/Inf 15) and another one is in preparation for the Western Mediterranean region.

174. Finally, she informed the meeting that the first meeting of the ACCOBAMS Follow-up Committee will take place in March 2016, date upon which the Follow-up Committee will decide of its work programme.

175. The IWC representative, Greg Donovan, mentioned that it would be useful for the ACCOBAMS Scientific Committee to have an update on the implementation status of the previously adopted Resolutions before recommending new ones.

176. The Chair requested the Permanent Secretariat to inform the Scientific Committee on the outcomes of the first meeting of the Follow-up Committee in order to write specific recommendations for the ACCOBAMS Parties if needed.

177. Taking into account the overall discussion under this item, the ACCOBAMS Scientific Committee recommended to include at least one member of the Scientific Committee as observer in the Follow-up Committee.

178. The representative of OceanCare/NRDC informed the participants that there was an inquiry by a Spanish organisation which informed the Secretariat about the following occurrence: when observing an atypical distribution of sperm whales off the Balearic Islands, researchers did do acoustic recordings and recorded impulsive sound off the Balearic Islands in summer 2013 most likely arising from seismic surveys. At the time, no permit was granted for such activities by the responsible Spanish authorities. Until today, no information has been provided from any official

authority in Spain. He asked whether the Permanent Secretariat had received any response and if not, he encouraged the Secretariat to approach the Spanish authorities once again. If no information is received, the case should be brought to the attention of the follow-up Committee.

5.3 Cooperation with international organizations

5.3.1 Contribution to the Marine Strategy Framework Directive

179. Vincent Ridoux, co-Chair of the joint ACCOBAMS/ASCOBANS working group on the Marine Strategy Framework Directive (MFSD), introduced document ACCOBAMS-SC10/2015/Doc 24 on the overview to be prepared on the implementation of MSFD (regarding cetaceans) in the ACCOBAMS Area. He explained that a questionnaire consisting of 29 items about cetaceans and the implementation of MSFD was designed and sent to the ACCOBAMS Focal Points both from European Union Member States (MS) and from non-EU countries (non-MS). By October 1st 2015, a total of 11 ACCOBAMS Parties had returned the questionnaires for analysis (8 MS and 3 non-MS). The analysis revealed the existence of substantial heterogeneity among Parties in the implementation of MSFD. This heterogeneity was obvious in the *modus operandi* underlying the national transposition of the MSFD, the perceived saliency of cetaceans as component of GES beyond the main biodiversity descriptor or in the different parts of the MSFD process (IA, GES,…), or in the ambition of monitoring and measure programmes among Parties.

180. He added that the questionnaire was successful in allowing to identify relevant contacts in order to address gaps and further improvements of the MSFD implementation with respect to cetaceans. An obvious improvement would be to foster greater collaboration and leverage among ACCOBAMS Parties. Indeed, monitoring strategies of cetacean populations should have been defined firstly at MSFD marine sub-region scales, and then set out in each national program rather than attempt to converge and monitor cetacean populations at coherent spatio-temporal scale. Multiple national initiatives into a single assessment. Consequently, he recommended conceiving next data acquisition on cetacean populations at transnational scales, which would have the double benefits of satisfying each national commitment to the European Commission.

181. Following the debates within the framework of this agenda item, the Scientific Committee adopted the Recommendation on MSFD implementation appearing in the Annex 3 to this report.

5.3.2 Collaboration with Subregional Coordination Units

182. The RAC/SPA representative, Lobna Ben Nakhla, introduced document ACCOBAMS-SC10/2015/Inf 30 on the activities supported by the RAC/SPA since the Ninth Meeting of the

Scientific Committee included in the implementation of the Action Plan for the Conservation of Cetaceans in the Mediterranean Sea of the Barcelona Convention. She mentionned that a Memorandum of Understanding was elaborated between the RAC/SPA and the ACCOBAMS Permanent Secretariat for the period 2015-2016.

183. She explained that the RAC/SPA supported two field studies carried out respectively in North of Tunisia and around Lampedusa Island. She mentioned that a third mission in north of Egypt was under organisation in order to collect information on the status of cetaceans in collaboration with the ACCOBAMS Permanent Secretariat and the EEAA.

184. She recalled that the Mediterranean Action Plan for the conservation of cetacean was updated in close collaboration with ACCOBAMS and that it would be submitted for adoption by 19th Conference of the Parties to the Barcelona Convention, taking into account the comments done during the Tenth Meeting of the ACCOBAMS Scientific Meeting.

185. With reference to Marine Protected Areas, she pointed out that the RAC/SPA and MEDPAN had launched a new round of data collection and analysis in order to assess what had been made since 2012 within the MPAMED database. In addition, a roadmap for a comprehensive coherent network of well-managed MPAs to acheive Aici Target 11 in the Mediterranean had been elaborated and that it would be submitted for consideration by 19th Conference of the Parties to the Barcelona Convention.

186. Ayaka Amaha Ozturk, on behalf of the Black Sea Commission Permanent Secretariat (BSC PS), presented document ACCOBAMS-SC10/2015/Inf 31 on the activities being carried out since the Ninth Meeting of the Scientific Committee in 2015 by the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution in its capacity of the Sub-regional Coordinating Unit for the Black Sea.

187. She mentioned that in 2015 the BSC PS continued its work as Black Sea Sub-Regional Coordination Unit for ACCOBAMS under the BSC-ACCOBAMS MoU and the implementation of the Working Program annexed to this MoU. She further informed the participants on the activities that have been implemented in 2015.

188. She also informed the participants on the outcomes of the 18th Advisory Group on the Environmental Aspects of the Management of Fisheries and other Marine Living Resource FOMLR AG Meeting held back-to-back with conservation on biological diversity CBD AG Meeting (30-31st March, 2015, Istanbul, Turkey). During the meeting, the Countries' representatives reported on the activities implemented during the previous year for cetaceans' protection and took the following relevant decisions:

- the groups welcomed the cooperation with CBD Convention Secretariat (Montreal) and agreed to cooperate on description of Ecologically and Biologically Significant Marine Areas (EBSA process) and possible establishment of EBSA sites for the Black Sea;
- the groups agreed to produce the short annual report of the CBD and FOMLR AGs to the Black Sea Commission (general part and specific part) and agreed on a format of reporting, also taking into account the ACCOBAMS, GFCM and EU MSFD approaches and including the Item "Specimens of Black Sea bottlenose dolphins in captivity" to be reported yearly then to be included as an item the draft Black Sea Integrated Monitoring and Assessment Program (BSIMAP) for 2015-2020;
- the groups considered the Annex II "List of Species of Black Sea Importance" and Annex IV "List of Species Whose Exploitation Should be Regulated by the Black Sea Biodiversity and Landscape Conservation Protocol" to the Biodiversity and Landscape Conservation Protocol, which includes cetacean species, amended the lists and recommended these documents for further submission to BSC (for national consultations) and further adoption in accordance with existing procedure of amendments to the Bucharest Convention and its Protocols;
- the groups considered the draft Black Sea Monitoring and Assessment Program (BSIMAP 2015-2020) and its CBD&Fisheries components, after amendments groups recommended this document for further submission to BSC; and
- the groups considered the draft Conservation Plan for Cetaceans (2015-2020) and asked the BSC PS to align it with BSC documents format and circulate it for approval by CBD and FOMLR AGs by written procedure.

189. She informed the meeting that the FOMLR AG proposed to the Black Sea Commission to introduce into the draft BSIMAP the item "Specimens of Black Sea bottlenose dolphins kept in the captivity" in line with the «Draft roadmap for the assessment and inventory of specimens of Black Sea bottlenose dolphins kept in the captivity» elaborated between the Black Sea Commission and ACCOBAMS Secretariats. The draft BSIMAP is being currently considered by the Black Sea Commission, its revised version was submitted and is planned to be adopted as framework guidelines by written procedure in the nearest future.

190. Regarding the Report on the State of Environment (SoE) of the Black Sea, she thanked the ACCOBAMS Secretariat for indicated the possibility to consider support to draft the relevant chapters of SoE Report on "Cetacean conservation". She also mentioned that the Black Sea Commission Permanent Secretariat had initiated the work on the elaboration of SoE Report for 2009-2015 and is planning the first meeting of the SoE Report group (back-to-back with Black Sea

Day celebrations) on 29th October 2015 in Istanbul, Turkey in order to select the Chief Editor and distribute the work load between experts.

191. Regarding the ACCOBAMS module on the conservation of cetaceans, she informed the meeting that the Black Sea Commission Permanent Secretariat plans to introduce the module in the existing postgraduate programs in Turkey and to enroll the English speaking universities of the ACCOBAMS area. The module should be implemented at the University of Istanbul in early 2016.

192. Finally, she updated the meeting about the outcomes of the 31st Regular Meeting of the Commission on the Protection of the Black Sea Against Pollution (Istanbul, 8th October, 2015). She mentioned that the Black Sea Commission considered the issues related with underwater noise, since noise generated by human activities is considered as pollution for cetaceans. In the relevant Resolution of the 31st BSC Regular Meeting "The Commission took note of the intention of ACCOBAMS to cooperate on the issues of underwater noise and requested the relevant AGs to consider the possibility of such cooperation".

5.3.3 Collaboration with other organizations

193. Patrick Van Klaveren, from the ACCOBAMS Permanent Secretariat, informed the Meeting about the collaboration with other organizations, in particular about the joint strategy being elaborated between ACCOBAMS, FAO/GFCM, UNEP/MAP/RAC-SPA, and IUCN-MED in collaboration with MedPAN.

194. He explained that, as quoted by Lobna Ben Nakhla and Léa David, in the June meeting the five Organisations agreed to investigate ways for using their different expertise and respective mandates in a joint strategy aimed at promoting spatial based management and conservation measures.

195. He also explained that requests for collaboration incitation between the relevant Organisations was not new. Since 1974 it focuses *inter alia* on strengthening collaboration mechanisms to address common regional objectives, partnerships and co-ordinated regional implementation of relevant Multilateral Environmental Agreements, global and regional initiatives by United Nations Agencies. From these times and more close to our concerns, several very valuable attempts have been made to propose important zones for Mediterranean biodiversity management clustering biodiversity indexes, anthropogenic treads. Notwithstanding their interest these multiple initiatives kept the stakeholders in a non-decision situation. More recently integrating the global reflexions on Ecosystem Based Management the main Mediterranean biodiversity related bodies gathered around the concept of Ecological or Biologically Significant Marie Areas (EBSAs)

developed in the Convention on biological Diversity. In a meeting in Malaga (2014), they draft a proposal for the Mediterranean, which was adopted at the Mediterranean level and then quite totally endorsed by the CBD Conference of the Parties.

196. He added that currently every one also has its own Strategy in which none have omitted to include the need of an effective cooperation among them all. As such, involved Organisations can, today, rely on clear decisions on where they have to act. They are ready for a common wording and a common requirement for a common advocacy to draft spatial based management and conservation measures in the frame of EBM for the reduction of cumulative impacts and to propose them to their respective stakeholders.

197. He finally explained that the elaboration of the strategy was currently conducted in three main steps:

- the Preparation of a background document on the mandates, activities and programmes of the 5 organisations;
- the Analysis of commonalities and identification of suitable areas for joining efforts and strengthening collaboration and harmonisation – already finalized and open to comments of the organisations;
- the final step : the Drafting of the joint strategy focusing on deep and open seas and application to the cases of Alboran Sea, Sicily Channel and High Adriatic –for March 2016.

198. He concluded with the hope to have in the next year the bases for a strategical alliance between the five Organisations.

199. Heidrun Frisch, ASCOBANS Coordinator and CMS Marine Mammals Officer, presented document ACCOBAMS-SC10/2015/Inf 32 regarding a proposal for a joint ASCOBANS/ACCOBAMS/ECS Workshop on Conserving Europe's cetaceans through synergy-building between the relevant legislative frameworks. The suggestion came from discussions in the 5th meeting of the ASCOBANS North Sea Group, then presented to the Advisory Committee by the Chair of the North Sea Group (Peter Evans).

200. She explained that the rationale for the workshop was that cetacean conservation in Europe was both mandated and mediated via a number of agreement obligations and legal requirements, including inter alia ASCOBANS, ACCOBAMS, OSPAR, CFP (and other fisheries measures) and the Habitats and Species, Marine Spatial Planning and Marine Strategy Framework Directives. These provide a variety of instruments for cetacean conservation including strict protection through threat-based measures covering, for example, killing and capture, as well as area-based

approaches (protected areas). Overlaps in the conservation aims will be critically assessed, with the workshop seeking to explore and identify scientifically sound synergies in order to achieve an integrated and effective approach to cetacean conservation. There are recognised challenges to spatial management for highly mobile species such as marine mammals, and this workshop will attempt to address ways to integrate both threat-based and area-based conservation measures. The proposal has been submitted to ECS Organizers, and ACCOBAMS experts are invited to join the Steering Group.

201. She added that there was a suggestion from the floor that the Steering Group might consider expanding the mandate to cover not only Europe's cetaceans, but cetaceans in European seas, so have the entire ACCOBAMS region involved.

202. Furthermore, Heidrun Frisch updated the meeting about three Resolutions adopted at CMS COP11 that were not mentioned and also of direct interest to ACCOBAMS:

- CMS Resolution 11.27 – Renewable Energy and Migratory Species, which urges Parties to apply appropriate Strategic Environment Assessment (SEA) and EIA procedures when planning the use of renewable energy technologies, avoiding existing protected areas in the broadest sense and other sites of importance to migratory species. A multi-stakeholder Task Force on Reconciling Selected Energy Sector Developments with Migratory Species Conservation (the Energy Task Force) has been established. It will initially focus on African-Eurasian region, migratory birds, power lines, hydro, wind and solar energy technologies. CMS will involve the cetacean Agreements when more relevant aspects become the focus.

- CMS Resolution 11.22 – Live Captures of Cetaceans from the Wild for Commercial Purposes which calls on countries to develop and implement national legislation prohibiting the live capture of cetaceans from the wild for commercial purposes, in line with the decision already made by ACCOBAMS Parties. It also urges Parties to review their regulations regarding import and international transit of live cetaceans and to consider taking stricter measures than those required under CITES, and urges Parties to actively discourage new live captures from the wild for commercial purposes.

- CMS Resolution 11.23 – Conservation Implications of Cetacean Culture which is the first time an intergovernmental body recognized that a number of socially complex mammalian species, such as several species of cetaceans, great apes and elephants, show evidence of having non-human culture and that this has implications for the efforts to conserve them. The resolution encourages governments to take into

account culturally transmitted behaviours in conservation and management measures and threat assessments, applying a precautionary approach if there is evidence that influence of culture and social complexity may be a conservation issue for a population. The CMS Scientific Council has established an intersessional expert working group dealing with the conservation implications of culture and social complexity, with a focus on, but not limited to cetaceans. Experts from the ACCOBAMS region are also involved.

203. Finally, she updated the meeting on the 22nd ASCOBANS Advisory Committee Meeting held in The Hague, Netherlands, from 29 September to 1 October 2015. As the last Advisory Committee Meeting before the 8th Meeting of the Parties (MOP8, Helsinki, Finland, 30 August - 1 September 2016), focus was on the decisions to be prepared for consideration and adoption at this meeting. Besides the regular resolutions such as the ones adopting the work plan and budget, several topics were agreed upon that drafting groups will now elaborate on: PCBs, underwater unexploded ordnance, managing cumulative impacts on small cetaceans, best practice regarding necropsy and rescue of small cetaceans, and marine renewables. Work would also be carried out in order to update the Recovery Plan for Baltic Harbour Porpoises (Jastarnia Plan), and to advance the development of a Conservation Plan for Common Dolphins, both of which might lead to draft resolutions to be tabled at MOP8. The Advisory Committee also considered the detail, format and frequency of National Reports to be prepared by Parties, which should allow a meaningful review of the progress in the implementation of the Agreement without overburdening Parties with excessive reporting requirements. After considering the wide range of topics on which information should be gathered, the AC recommended that one comprehensive national report should be submitted each MOP-cycle, supplemented by briefer, topic-specific annual reports as determined in advance by the Advisory Committee. This issue will also be brought to the attention of MOP8 for a final decision.

AGENDA ITEM 6 - WORKING PROGRAMME OF THE SCIENTIFIC COMMITTEE FOR THE TRIENNIUM 2017-2019

204. The Chair decided that Scientific Committee Working Programme (ACCOBAMS-SC10/2015/Doc 25) will be discussed by Email exchange.

AGENDA ITEM 7 - ANY OTHER BUSINESS

205. Alain Jeudy de Grissac presented the document ACCOBAMS-SC10/2015/Doc23 on the evaluation of the added value of the proposed extension of the ACCOBAMS mandate to the Red Sea.

206. The ACCOBAMS Scientific Committee reviewed the ecological and scientific aspects of the proposed extension and based on the best scientific evidence available the Scientific Committee concluded that there was no ecological coherence (regarding cetaceans) between the Red Sea and the ACCOBAMS area. In fact it seems more likely that cetaceans in the Red Sea are linked to the Indian Ocean to the south.

207. Despite this, the Scientific Committee is willing to assist in capacity building in the Red Sea region.

AGENDA ITEM 8 - ADOPTION OF THE CONCLUSIONS AND RECOMMENDATIONS

208. The Scientific Committee approved the present report on the basis of a draft prepared by the Secretariat and circulated to participants by email.

209. In addition, the Scientific Committee shared its concerns that it is often presented with material requesting action or endorsement that does not present sufficient scientific background (including scientific papers). The Scientific Committee advised that it will not be able to act or endorse on proposals without associated robust scientific background (e.g. scientific papers, published or working papers).

AGENDA ITEM 9 - CLOSURE OF THE MEETING

210. After the customary exchange of courtesies, the Chair closed the Meeting at 6.30 p.m. on Thursday 22nd October 2015.

ANNEX 1 - LIST OF PARTICIPANTS

MEMBERS OF THE SCIENTIFIC COMMITTEE
CIESM
Dani KEREM Israel Marine Mammal Research and Assistance Center (IMMRAC) The Recanati Institute for Maritime Studies, University of Haifa Mt. Carmel, 31905 Haifa - ISRAEL Tel: +972 4 8249449 – Fax: +972 4 9240493 dankerem@research.haifa.ac.il
Ayaka Amaha OZTÜRK Turkish Marine Research Foundation Advisor Fistikli Yali Sok. N°34/5 Beykoz, 81650 Istanbul – TURKEY Tel: +90 216 3239050 – Fax: +90 216 3239050 ayakamaha@hotmail.co.jp
Simone PANIGADA *ACCOBAMS Scientific Committee, Chair* Tethys Research Institute Vice-President Viale G.B. Gadio2 20 121 Milan – Italy Tel: (+39) 02 7200 1947 – (+39) 02 6694 114 panigada@inwind.it
IUCN
Ibrahim BEN AMER Faculty of Natural Resources and Environmental Science Omar Mukhtar University (OMU) El-Beida - LIBYA P.O. Box 919 El-Beida Tel: +218 92 85 97 651, +44 7901501587 benamer.ly@gmail.com
Léa DAVID EcoOcéan Institut Dr écologie marine cétologie/ornithologie 18 Rue des Hospices - 34090 Montpellier FRANCE Tel : +33 4 67 84 28 87 - Mob : +33 6 09 49 68 39 lea.david2@wanadoo.fr
Renaud DE STEPHANIS *ACCOBAMS Scientific Committee, Vice-Chair* Department of Conservation Biology - Estacion Biologica de Doñana (CSIC) Americo Vespuccio S/N Sevilla 41092, SPAIN Tel: 605998195 Fax: 34 954 621 125 renaud@stephanis.org

REGIONAL REPRESENTATIVES
Mohamed ABDELWARITH *Eastern Region* Marine Environmental Researcher Ministry of State for Environmental Affairs Nature Conservation Sector 4 Ali El Kordy Street, Cairo - Egypt Tel: (+202) 2527 1391 Fax: (+202) 2527 4700 sevejan010@yahoo.com mohamed7j@hotmail.com
Mehdi AISSI *Central Region* Bp 197 Bizerte 7000, TUNISIE Tel: (+216) 98 947 026 mehdi.aissi@gmail.com
Konstantin MIHAYLOV *Black Sea Region* Institute of Fish Resources Head of Ichthyology Dept. 4 Primorski Blvd, 9000 Varna P.O. Box 72, Bulgaria Tel./Fax: +359 52 632 066 kmikhailov@abv.bg, konstantinmikhailov@yahoo.com
Marina SEQUEIRA *Western Region* Instituto da Conservaçao da Natureza e das Florestas, I.P. Divisão de Gestão de Espécies da Fauna e da Flora Av. da República, 16 – 16B 1050-191 Lisboa - Portugal Tel: (+ 351) 21 350 79 00 Fax: (+351) 21 350 79 84 marina.sequeira@icnf.pt
ECS
Tilen GENOV Department of Biodiversity, University of Primorska, Koper, SLOVENIA Morigenos - Slovenian Marine Mammal Society President Kidričevo nabrežje 4 6330 Piran - Slovenia Tel: +386 41 981 990 tilen.genov@gmail.com
IWC
Greg DONOVAN International Whaling Commission 135 Station Road, Impington CB24-9NP - Cambridge - United Kingdom Tel: +44 1223 233971 – Fax: +44 1223 232876 greg@iwcoffice.org

OBSERVERS
ACCOBAMS SUB-REGIONAL COORDINATION UNITS
Lobna BEN NAKHLA UNEP MAP/Regional Activity Centre for Specially Protected Areas (RAC/SPA) Programme officer. RAC/SPA Bd. Du Leader Yasser Arafat B.P. 337 1080 Tunis cedex. Tunisia Tel: +216 71 206485- Fax: +216 71 206490 lobna.bennakhla@rac-spa.org
INTERNATIONAL ORGANISATIONS
UNEP/ASCOBANS, UNEP/CMS **Heidrun FRISCH** UNEP/ASCOBANS Coordinator & UNEP/CMS Marine Mammals Officer UN Campus, Platz der Vereinten Nationen 1 53113 Bonn – Germany Tel: +49 228 815 2418 – Fax: +49 228 815 2440 heidrun.frisch@ascobans.org
International Union for the Conservation of Nature **Alain JEUDY de GRISSAC** Center for Mediterranean Cooperation Marine Conservation Programme Manager IUCN Centre for Mediterranean Cooperation C/Marine Curie 22 29590 Campanillas, Malaga - Espagne Tel/Fax: +34 952 028 430 /145 - Mob : +34 693 803 972 alain.jeudy@iucn.org
Pelagos Sanctuary **Fannie DUBOIS** Executive Secretary Palazzo Ducale Piazza Matteotti, 9 16123 Genoa – Italy Tel: +39 010 570 2201 / +336 50 27 99 33 fanniedubois@sanctuaire-pelagos.org
OTHER ORGANISATIONS / EXPERTS
Boris DANIEL Agence des Aires Marines Protégées Antenne Méditerranée Chargé de mission patrimoine naturel 26 rue de la République F-13001 Marseille Tel : 06 87 91 07 05 boris.daniel@aires-marines.fr
Niki ENTRUP OceanCare & NRDC Consultant Herbeckstr. 19/2 1180 Vienna - Austria Tel: +43 660 211 9963 n.entrup@shiftingvalues.com

Silvia FREY
OceanCare
Director Science and Education
Oberdorfstrasse 16
8820 Waedenswil - Switzerland
Tel: +41 (0)44 79 742 93 23 – Fax: +41 (0)44 780 68 08
sfrey@oceancare.org

Guido GNONE
Research Coordinator
Acquario di Genova
Scientific Research
Area Porto Antico
Ponte Spinola
16128 Genova - Italy
Tel: +39 010 234 5285 – Fax: +39 010 256 160
ggnone@costaedutainment.it

Nicola HODGINS
WDC - Whale and Dolphin Conservation
Head of science and research
Policy Department
38 Brookfield House
SN15 1LJ
Chippenham - United Kingdom
Tel: +44 1249 449 537
Fax: +44 1249 449 501
nicola.hodgins@whales.org

Alessio MAGLIO
SINAY
Chargé d'étude
Bureaux Norlanda
117 Cours Caffarelli
14000 Caen - France
Tel : +33 7 86 17 92 85
alessio.maglio@sinay.fr

Sandro MAZZARIOL
Dipartimento di Biomedicina Comparata e Alimentazione (BCA)
Università degli Studi di Padova
AGRIPOLIS - Viale dell'Università, 16
35020 - Legnaro - Italy
Tel: +39 049 827 2063 – Fax: +39 049 827 2973
sandro.mazzariol@unipd.it

Aurélie MOULINS
CIMA Research Foundation
Senior Researcher
Via Magliotto, 2
17100 Savona - Italy
Tel: +39 019 230 271
Fax: +39 019 230 27240
aurelie.moulins@cimafoundation.org

Morgane RATEL
Souffleurs d'Ecume
Chargée de mission
Hôtel de Ville, 83170 La Celle - France
Tel: +33 4 9469 4493 – Fax: +33 4 9469 4493
morgane.ratel@souffleursdecume.com

Vincent RIDOUX
UMS3419 CNRS – Université de la Rochelle
Directeur du Centre de Recherche sur les mammifères Marins
Pôle Analytique, 5 allée de l'Océan, 17000 La Rochelle – FRANCE
Tel: +33 5 46 44 99 10 – Fax: +33 5 46 44 99 45
vridoux@univ-lr.fr

Massimiliano ROSSO
CIMA Research Foundation
Senior Researcher
Via Magliotto, 2
17100 Savona - Italy
Tel: +39 019 230 271
Fax: +39 019 230 27240
massimiliano.rosso@cimafoundation.org

Yanis SOUAMI
SINAY
Directeur Général
Bureaux Norlanda
117 Cours Caffarelli
14000 Caen – France
Tel : +33 2 50 01 15 50
contact@sinay.fr

Jérôme SPITZ
Université de la Rochelle / CNRS
Observatoire PELAGIS
5 allée de l'Océan, 17000 La Rochelle – France
Tel : +33 54 65 07 669
jspitz@univ-lr.fr

Ana STRBENAC
Croatian Agency for Environment and Nature
Head of the Expertise Division
Radnička cesta 80
10000 Zagreb – CROATIA
Tel: +385 1 5502 912 – Fax: +385 1 5502 901
ana.strbenac@dzzp.hr

ACCOBAMS PERMANENT SECRETARIAT
Florence DESCROIX-COMANDUCCI Executive Secretary Les Terrasses de Fontvieille, Jardin de l'UNESCO MC-98000 Monaco Tel: +37798 98 80 10 / 20 78 – Fax: +377 98 98 42 08 fcdescroix@accobams.net
Célia LE RAVALLEC Project Officer Les Terrasses de Fontvieille, Jardin de l'UNESCO MC-98000 Monaco Tel: +377 98 98 40 74 – Fax: +377 98 98 42 08 cleravallec@accobams.net
Camille MONTIGLIO Communication Officer Les Terrasses de Fontvieille, Jardin de l'UNESCO MC-98000 Monaco Tel: +377 98 98 20 78 – Fax: +377 98 98 42 08 cmontiglio@accobams.net
Chedly RAIS Consultant Menzah VIII, Tunis – TUNISIE Tel: +216 98444629 – Fax: +216 71763533 chedly.rais@okianos.org
Anne TAPPA Administrative Assistant Les Terrasses de Fontvieille, Jardin de l'UNESCO MC-98000 Monaco Tel: +377 98 98 42 43 – Fax: +377 98 98 42 08 atappa@accobams.net
Patrick VAN KLAVEREN Consultant Les Terrasses de Fontvieille, Jardin de l'UNESCO MC-98000 Monaco Tel: +33 6 07 93 65 81 pvanklaveren@libello.com

ANNEX 2 - AGENDA

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2. ADOPTION OF THE AGENDA

3. SCIENTIFIC COMMITTEE

3.1 Report of each Regional Representative

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ANNEX 3 - RECOMMENDATIONS

RECOMMENDATION 10.1 - RECOMMENDATION ON CETACEAN POPULATION ESTIMATES

In 2003, the Scientific Committee first drew the attention of the ACCOBAMS Parties to the fundamental importance of obtaining baseline population estimates and distributional information of cetaceans within the Agreement area as soon as possible through a synoptic summer survey. Without such information (and a suitable subsequent monitoring programme) it is impossible to *inter alia* (1) determine whether ACCOBAMS is meeting its conservation objectives, (2) properly assess and prioritise risk from potential threats and (3) identify and evaluate appropriate mitigation measures and the associated determination of priority actions. The SC agreed then, and has frequently strongly reiterated since, that such work represents the highest priority for research within the ACCOBAMS area and a number of workshops and iterations of the programme, known as the ACCOBAMS Survey Initiative (ASI), have taken place.

Despite several resolutions adopted by the Parties, the ASI has still not occurred and once again the Scientific Committee **strongly recommends** that the Parties ensure that the ASI is undertaken within the next triennium. This survey is fundamental to the ability of ACCOBAMS to meet its objectives and the ACCOBAMS strategy. It will also make a fundamental contribution to initiatives outside ACCOBAMS, including for example the MSFD of the European Commission and the EcAp process of the Barcelona Convention.

In this context, the Scientific Committee makes the following additional and/or reiterated recommendations:

a) it **commends** the effort by the Secretariat to secure funding for the ACCOBAMS Survey Initiative, **recommends** that these continue and **urges** Parties to contribute with financial or in-kind support to facilitate the implementation of this effort as soon as possible;
b) it **recommends** that the Parties, Secretariat and Partners actively promote the visibility of the ACCOBAMS Survey Initiative, underlining its scientific, conservation, education and capacity building components;
c) it **reiterates** the urgent need to hire a scientific co-ordinator, to work in close co-operation with the fund-raiser and the ASI Steering Committee;
d) it **urges** Parties to facilitate the release of research permits for research activities to be conducted in the Agreement area in line with the actions presented in the ACCOBAMS work-plan;
e) it **endorses** the document 'Monitoring guidelines to assess cetacean's distributional range, population abundance and population demographic characteristics' (Annex), **stressing** the importance of having standardized protocols for data collection and analysis.
f) **recognising** that monitoring methodologies evolve and new techniques become available, it also **recommends** that these guidelines be considered as a living document to be reviewed at least every triennium and updated as necessary; and
g) it **recommends** that Parties and Range States ensure that any proposed national programmes on the study of abundance and distribution of cetaceans are compatible with the development of the ACCOBAMS Survey Initiative and the guidelines given in Annex.

ANNEX

MONITORING GUIDELINES TO ASSESS CETACEANS' DISTRIBUTIONAL RANGE, POPULATION ABUNDANCE AND POPULATION DEMOGRAPHIC CHARACTERISTICS

Introduction

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 Mediterranean Sea (the "ACCOBAMS Survey Initiative"). This initiative consists in a synoptic survey to be carried out in a short period of time across the whole Mediterranean Sea and it will combine visual survey methods (boat- and ship-based surveys) and passive acoustic monitoring (PAM).

This document was elaborated based on the documents prepared by the ACCOBAMS Scientific Committee that has worked for several years on the definition of the most appropriate methodologies for collecting data on cetaceans at the Mediterranean Sea scale, taking into account the protocols used in other regional contexts[1]. It presents specific information on monitoring by visual line transect surveys (conducted from boat and airplane) and by acoustic survey. It should be noted that it does not address all the tools and methods that could be used for cetacean survey, neither new technologies that are currently experimented (i.e. drones and satellite imagery). Significant information also comes from stranding networks. Lastly, this document is considering surveys using large ships, but the shipboard cetacean surveys conducted from small vessels would also make use of this document.

Monitoring cetacean species may be addressed at two spatial scales:

1) **Regional monitoring** - if the requirement is to monitor the use of a specific area by a particular species, e.g. monitoring the status of relative abundance between and within years in national waters or marine protected areas.
2) **Population level monitoring** - if the requirement is to monitor the status of a whole population, e.g. estimate density and abundance of cetaceans in the whole ACCOBAMS area.

Before conducting any type of monitoring of animal populations, it is important to define the objectives. The main aim in both aerial and vessel-based surveys is to assess density and abundance and, if systematic monitoring programs are in place, assess potential trends over time. Monitoring at the regional level may require data collection throughout the year, to better understand seasonal patterns in distribution, whereas monitoring at the population level would mainly address inter-annual changes.

Cetaceans generally occur in low densities and are highly mobile. They are difficult to spot and to follow at sea, even during good survey conditions, because they typically only show part of their head, back and dorsal fin while surfacing and spend the majority of their time underwater.

There are a number of actions that need to be taken when initiating any type of monitoring, either for species distributional range or to estimate population abundance of selected species.

[1] *e.g.* in the Atlantic waters within the framework of (i) the SCANS surveys undertaken to assess the populations of Small Cetaceans in the European Atlantic and North Sea, and (ii) the CODA surveys (Cetacean Offshore Distribution and Abundance in the European Atlantic) aiming to estimate cetacean abundance in European Atlantic waters.

1. Select the target species (surveys can be multi-species or single-species).
2. Determine whether to monitor an entire population or a portion of it (in a given region).
3. Define the population or area to monitor and the time-window.
4. Define monitoring objectives.
5. Consider logistics for the monitoring (e.g. size of area, weather, depth of area, available survey platforms).
6. Conduct statistical power analysis to find the best method to meet the monitoring objectives.
7. Conduct a cost-benefit analysis.

Currently, there are at least five potential approaches to be used in monitoring cetaceans:

1. Visual surveys from ship, aircraft or land observation platforms (LOP).
2. PAM carried out during ship surveys with towed hydrophones.
3. PAM performed by means of static acoustic monitoring, e.g. using T-PODs.
4. Photo-identification and mark-recapture analysis.
5. Satellite telemetry to track individual animals.
6. A combination of all or some of the above methodologies.

When deciding which monitoring method to implement, it is important to consider the limitations of each approach and compare the different methodologies. In general, surveys from ship or aircraft have a low temporal resolution, ship surveys may have bias due to responsive movements of animals, stationary acoustic systems have low spatial resolution and logistical problems with deployment, photographic identification relies on visual differences between individuals to allow identification, and telemetry typically only allows small samples resulting in much inter-individual variation.

There are different types of platforms and methods of detection that can be used for each approach, e.g. fixed observation points such as headlands or moving survey platforms such as ships and aircraft, or direct visual or acoustic detections of vocalizing animals, respectively. The methods can therefore range from very basic, yielding simple indices of abundance in limited areas, to very advanced providing accurate (how close the estimate is to the true value) and precise (the statistical variation in estimates generated from repeated samples) estimates of absolute abundance across wide areas.

Target species

Cetaceans

Eleven species of cetaceans are considered to regularly occur in the Mediterranean area: short-beaked common dolphin (*Delphinus delphis*), striped dolphin (*Stenella coeruleoalba*), common bottlenose dolphin (*Tursiops truncatus*), harbour porpoise (*Phocoena phocoena*), long-finned pilot whale (*Globicephala melas*), rough-toothed dolphin (*Steno bredanensis*), Risso's dolphin (*Grampus griseus*), fin whale (*Balaenoptera physalus*), sperm whale (*Physeter macrocephalus*), Cuvier's beaked whale (*Ziphius cavirostris*) and killer whale (*Orcinus orca*).

Knowledge about the ecology, abundance and habitat preferences of some of these species, including the most abundant ones, is in part scant and limited to specific sectors of the Mediterranean region, due to the uneven distribution of research effort during the last decades. In particular, the south-eastern portion of the basin, the coasts of North Africa and the central offshore waters are amongst the areas with the most limited knowledge on cetacean presence, occurrence and distribution.

Other marine endangered species
Even if cetacean species are the first targets of this monitoring effort, the observations of other marine endangered species, such as marine turtles, giant devil rays, monk seals and sea birds, and other elements such as marine debris, could be reported during the surveys. Specific protocols have to be designed for these opportunistic observations, bearing in mind that the primary objective is to collect data on cetaceans.

Dedicated vessel or aircraft visual surveys

For monitoring programmes involving dedicated visual surveys both ship-based and aerial methods are well established. Although in some situations the choice of platform will be determined by logistical constraints, and despite the fact that a full and comprehensive comparison of aerial and vessel-based surveys has not yet been carried out, generally the method which provides an estimate with the required precision for the lowest cost should be chosen.

For visual surveys, it is important to consider observer skill and experience. Observers may vary in sighting efficiency and observer training is important to obtain consistent results. Furthermore, consistency in data collection protocols, observers, survey design and planning is essential to guarantee reliable and robust results in the long term, especially when systematic monitoring programmes are scheduled.

Line transect sampling is typically used to estimate abundance and assess density. In line transect sampling, a survey area is defined and surveyed along pre-determined transects. The distance to each detected animal is measured and consequently used to obtain a detection function, from which an estimate of the effective width of the strip that has been searched can be calculated. This is necessary because the probability of detecting an animal decreases the further away it is from the transect line. Abundance is then calculated by extrapolating estimated density in the sampled strips to the entire survey area. The calculated number is therefore an estimate of abundance in a defined area at a particular time.

On ships, distances are either estimated by naked eye (observers should be trained in distance estimation and use individually calibrated tools) or using binoculars with distance calibrated reticules. Video range measuring methods allow distance to be accurately measured. To calculate the perpendicular distance to a sighting the radial angle should be recorded using an angle board. If an aircraft is used, an inclinometer reading, taken when the sighting is abeam of the aircraft, and the altitude of the aircraft allow precise calculation of the perpendicular sighting distance to the transect. Animals occur in groups in many cetacean species so the target for detection in a line transect survey is often a group rather than individuals. Hence, data on the group size and composition must also be accurately collected.

When estimating absolute abundance using the line transect distance sampling method, it is assumed that all animals on the track line are detected, ie. probability to detect an animal or a group of animals is maximum (g(0)=1).
There are two potential categories of bias that may invalidate the assumption that g(0)=1:

- availability bias (when the animal is underwater or, in general, not available to be seen during the period it is within visual range) and
- perception bias (when for whatever reason an observer misses an animal that is available at the surface).

To address the availability bias, data on diving behaviour of the target species could be taken into consideration and used as a correction factor. With trained observers and large cetaceans, perception bias can be considered equal to or approximately equal to 1. However, if g(0) is significantly lower than one (as is often the case for small cetaceans) then this will result in a considerably negatively biased estimate and the true value of g(0) must be estimated. For shipboard surveys, the double-platform approach has been successfully used to address this problem. Availability bias is a particular problem for animals with very long dives; in the case of the sperm whale, acoustic techniques can overcome this problem.

The logistics of aerial surveys often prevent the use of two independent platforms to allow estimation of the proportion of animals missed on the transect line, however, recently Partenavia P-68 planes have been equipped with two sets of bubble windows, to allow double-platform data collection by means of independent observers on board of the same aircraft. Data collection protocols implementing aircraft circling back after a sighting to simulate the second research platform can be also used.

Relative abundance using only one platform may be sufficient for detecting population trends, reducing surveys cost considerably and may be used to monitoring the status of the target population between large-scale absolute abundance surveys based on larger budgets.

Another assumption for line transects methodology is that animals do not move prior to detection. This is not a problem for aerial surveys, but may bias shipboard surveys that typically survey at speeds around 10 knots. Evasive movements lead to negative bias in estimates of abundance, while attractive movements lead to positively biased estimates. Double-platform methodology can be applied to assess responsive movements. According to this method, observations are carried out from two platforms. Observers from the secondary or 'tracking' platform search an area ahead of the 'primary' survey area and sufficiently wide to ensure that animals are detected prior to any responsive movement to the ship, and to allow the tracking of animals until they are detected by the primary platform. The observers from the primary platform search independently of the tracking platform.

To assist in planning a line transect survey and to analyse the data there is a comprehensive analysis program available called DISTANCE.
DISTANCE provides software for estimating detection functions, density and abundance, and can be used to design the surveys. The latest version also includes mark-recapture distance sampling which allows analysis of dual observer distance sampling surveys, where the probability of detection on the trackline can be estimated. All versions of DISTANCE can be downloaded free from http://www.ruwpa.st-and.ac.uk/distance/.

It is clear from the above examples that proper design of the survey is critical to address monitoring issues of cetacean populations, and in particular that a large enough area is covered so that shifts in distributions can be accounted for when analyzing the data.

The areas to be surveyed are usually divided into survey blocks and the transects are designed to ensure equal coverage probability, using the dedicated software.

Survey design
The basic requirement for a line transect survey is that it provides representative coverage of the area for which an abundance estimate is desired *(i.e.* each point in the area has an equal or quantifiable probability of being sampled). A common design for vessel-based surveys at sea is a set of zig-zag lines

following a regular pattern, starting from a random point along one edge of the survey area. In aerial surveys, 'parallel transects' are to be preferred and the coverage should be allocated according to target species' density: more coverage where their density is higher.

Survey blocks
The development of appropriate survey blocks is a combination of biological factors (species, distribution/stock structure and abundance, habitat types etc.) and pragmatism associated with the logistics (numbers of vessels/planes; port/airport facilities; transit times; national boarders etc.).

Effort required per block
The effort required per block is determined as a function of ship/airplane time available in each block, available information on density of species and logistical constraints. The higher the level of coverage the better, as it allows for a larger sample size and therefore for more precise and robust abundance estimates.

There are some practical points needing attention when designing a survey. Transects should, as far as possible, run perpendicular to any density gradient; for example, coastal surveys typically have transects that run more or less perpendicular to the shore line.

Closing mode versus passing mode
In order to confirm certain information (species identification, group size and, historically, distance to sighting), cetacean surveys could be operated in 'closing mode'. In this mode, once a sighting has been made and the initial distance and angle been recorded, the vessel then approaches the animal(s) to identify the species and group size. It is also used if, for example, it is desired to obtain biopsy samples or photographs.

Nevertheless, operating in 'closing' mode can result in biased abundance and estimates. The preferred approach is thus to operate in 'passing mode' whenever possible (*i.e.* once a sighting is made the vessel remains on the designated course). However, this too has its problems, if, for example, many sightings are unidentified to species (the use of cameras with large stabilized zoom lenses may facilitate species identification).

Deciding between vessel and aerial surveys
Visual line transects surveys can be operated from a ship and from an aircraft. When deciding which platform to use, the relative merits of each approach for the species and areas to be covered must be considered. These include:

- aerial surveys are usually more cost-efficient per area than large vessel surveys, provided that the area to be covered is within the range of the aircraft from an airport and taking safety considerations into account (this often means not travelling more than 200 nautical miles or so offshore);
- aerial surveys can take better advantage of good weather conditions, in that they can cover much larger areas in the same period;
- aerial surveys are more efficient (and trackline design is easier) if the area to be covered has complex coastlines, many islands or large areas of shallow waters;
- aerial surveys can be more tolerant of swell but less tolerant of sea state and low cloud – they can also be affected by poor weather at the airport even if survey conditions are acceptable at sea;

- animals are less disturbed (if at all) by aircraft at normal flying altitudes and thus the problem of responsive movement is minimal;
- for multispecies aerial surveys, compromises must be made in terms of the optimum altitude for flying e.g. flying at the optimum altitude for a harbour porpoise survey means that the searching area for larger species such as fin whales is considerably reduced;
- vessels are generally better platforms for photo-identification and aircraft are unsuitable for biopsy sampling and acoustic recording;
- availability bias is much greater for aerial surveys;
- it is generally easier to obtain a suitable vessel than a suitable aircraft.

Platforms of opportunity

Platforms of opportunity are a potentially valuable resource for monitoring but it is usually not possible to choose the time or area of operation. Survey coverage is therefore typically extremely uneven and some areas, crucial for the presence of a target species, may not be covered; such unrepresentative coverage may introduce bias into assessment of distribution and abundance.

Platforms of opportunity using visual and/or acoustic methods are the cheapest way to monitor cetaceans. However, the success of using such vessels depends on finding the right platform that can cheaply and effectively accommodate observers and equipment and that cover appropriate areas at suitable speeds. These criteria are seldom fulfilled, especially since long term monitoring ideally requires the conditions to be consistent. Ferries may be suitable in some areas but spatial coverage is likely to be poor because of the fixed routes covered. Research vessels conducting annual monitoring of e.g. oceanography or fish resources have the potential to be valuable platforms of opportunity for monitoring if they take place at the right time(s) in the right place(s).

Acoustic surveys

The collection of acoustic data for cetaceans has some significant advantages over visual methods. Acoustic methods can be automated, data can be collected 24-hrs a day and data collection is not dependent on observer's skills, is less sensitive to weather conditions and can detect the presence of diving animals not available for visual observations. Disadvantages are that these methods rely on animals making sounds within a useful detection range and are identifiable to the species level. Furthermore, with exception of some species such as the sperm whale, methods to estimate abundance are not well established yet.

All odontocetes (toothed whales) have the ability to echolocate by producing and listening to particular "click" sounds. This allows them to navigate during night time or in murky waters, and to find and catch preys. Most toothed whales such as most dolphins (e.g. bottlenose and common dolphins) also produce other frequency modulated sounds (whistles) used for intraspecific communication. The monitoring of these sounds allows for the collection of information on spatial and temporal habitat use, as well as estimation of relative density.

Ship-board line transect acoustic survey is the most effective way of surveying sperm whales in the open sea and to collect the data required for accurate and robust estimation of absolute abundance in these waters. Visual-only survey techniques could introduce biases due to the long dive duration abilities demonstrated by the species and the little time generally spent at the surface, which makes them mostly unavailable for visual detection.

Acoustic data from sperm whales can be used to assess both relative and absolute abundance provided that the appropriate equipment and survey design is followed. Sperm whales produce loud regular clicks, which can be detected at ranges of tens of kilometres. Sperm whale click characteristics are generally easily recognisable. Thus, software automatization has been developed and used on a number of surveys resulting into real-time tracking and location to single animals or groups. By tracking a whale for a period of time, crossed bearings to successive clicks give a position for each whale, which can be used in a distance-based analysis.

A major task in this type of analysis is the assignment of clicks to individual whales when many animals are vocalizing simultaneously. Often, clicks from different whales are easily resolved using bearing information with dedicated software implementing beamforming. The regularity of the click train on each bearing indicates that they represent a single whale. On occasions where more than one whale is on the same bearing, clicks can be assigned to individuals using spectral and amplitude information, inter-click intervals and inter-pulse intervals. By identifying the most obvious whale in a group and removing those clicks from the analysis, identification of successive whales becomes progressively easier until all clicks are assigned.

Since acoustic detection ranges are generally ~10 km, a survey vessel travelling at 18 km per hour (10 knots) will be in acoustic range of a sperm whale close to the track line for over an hour. Typically, sperm whales dive for approximately 30-50 minutes followed by 10-15 minutes at the surface. Clicking is generally continuous when the whales are submerged and they are silent while resting at the surface.

On occasion, whales cease clicking regularly for periods of 2-3 hours, but evidence from tagging and observational studies suggests this is infrequent. The probability of a whale to remain silent for the entire time that the vessel is in range is therefore considered to be small, indicating that g(0) for acoustic surveys is close to 1. However, calves (which may represent up to 20% of the population) do not make long foraging dives and are not clicking regularly. Consequently, their detection may have low efficiency and a correction factor calculated from existing data should be applied.

Acoustic survey data for sperm whales can generally be collected simultaneously with visual data for other species particularly if the survey is operating primarily in passing mode. Survey vessels can also continue acoustic sampling in conditions unsuitable for visual survey (bad weather and night time).

Abundance estimates, based on acoustic methods, are only possible for sperm whales. Potentially, information on distribution can be obtained from acoustic data for all species, although with much more uncertainties for common and striped dolphins, given the difficulties in distinguishing their vocalizations.

A hydrophone array is towed behind each vessel. The equipment consists of a desktop computer running automatic detection software, the towed hydrophone, and various interface cards for getting sounds into the computer. The computer is running all the time, and one scientist is in charge of the acoustic system on each vessel.

Photo-identification

Photo-identification is a widely used technique in cetacean research that can provide estimates of abundance and population parameters e.g. survival and calving rate. It has been used for monitoring purposes for common bottlenose dolphins and killer whales since the 1970s. The technique relies on

being able to obtain good quality photos of animals' body parts that constitute unique recognizable markings.
This method can be used for population level monitoring of species with appropriate markings, if data can be collected across the distribution of the population. This approach cannot be applied to species that lack suitable individual identification marks.

Using photo-identification, it is sometimes possible to census the whole population when all individuals can be encountered at any given time in an area, all are well marked and no individuals seem to be moving in or out of the population. This is however unusual and has only been accomplished for a few populations of bottlenose dolphin, e.g. Sado Estuary, Portugal and Doubtful Sound, New Zealand, and for killer whales off Vancouver Island. More commonly, mark-recapture models must be applied to photo-identification data to estimate abundance (rather than a census the whole population) for specific areas that populations or part of populations occupy during one or more seasons of the year.

Information on the proportion of the population possessing recognisable markings is also required to allow estimation of population size.
The standard software program for mark-recapture analysis is program MARK (http://www.cnr.colostate.edu/~gwhite/mark/mark.htm), which includes a wide range of models to estimate population size and survival rates. There are models that can take account of heterogeneity of capture probabilities, a common problem in mark-recapture studies. These include program CAPTURE, a widely used multi-sample closed population model. If animals are believed to emigrate temporarily from the study area, there are also methods available for taking this into account in analysis.

Satellite tracking

Information on the movements and distribution of individual animals can help to identify important habitats, migration routes and to define boundaries between populations. Effective conservation of animal populations is enhanced by this information, which can also be valuable when designing monitoring programmes. In recent years satellite tagging of cetaceans has been increasingly used to obtain information on seasonal movements, distribution and diving behaviour.

To make inferences about large populations ranging over a wide area, many animals must be tagged, especially in species with high individual variation in behaviour. For some areas and species this would be a significant logistical challenge.

Many kinds of tags have been used in studies of cetaceans, including VHF transmitters, satellite tags and GPS data loggers. Satellite telemetry has the advantage that because data are transmitted to an earth based station via a satellite, it is possible to follow animals all over the world without retrieval of the tag.

Each tagged animal can provide a wealth of information but the limitation is that typically only a few animals can be tagged in a study due to limited funding or access to live animals. General conclusions are therefore often difficult especially if all members of the population are not equally available for tagging.

Power analysis

For any type of monitoring it is necessary to ensure that the chosen method and the study design will be able to provide an answer to the question posed with a useful level of precision. A power analysis can indicate the ability of the statistical procedure and the available or planned data to reveal a certain level of change i.e. the ability to detect a trend of a given magnitude. Power analysis can be used in two situations: firstly for interpretation of results of analysis of existing data; and secondly to plan studies to calculate the necessary sample size e.g. the length of time series of abundance estimates, or the coefficient of variation (CV) of those estimates, needed to detect specified rates of population change in a trend analysis.

TRENDS is a freely available program designed to carry out a power analysis of linear regression, particularly in the context of monitoring populations in wildlife studies (http://swfsc.noaa.gov/textblock.aspx?Division=PRD&ParentMenuId=228&id=4740). TRENDS summarises the power analysis in five parameters: duration of study, rate of change, precision of estimates, Type 1 error rate, and power (1 - Type 2 error rate). The value of any one of these can be estimated if the other four are specified. TRENDS is therefore designed to help answer such questions as:

- How many years are required to detect a trend?
- How much effort would be required to detect a certain level of change in a certain time period? What is the probability of detecting a trend?

RECOMMENDATION 10.2 - RECOMMENDATION ON POPULATION STRUCTURE

The Scientific Committee **reiterates** the importance of understanding population structure to contribute to the interpretation of abundance estimates, the assessment of threats and the evaluation of mitigation measures. All of these are important if ACCOBAMS is to meet its conservation objectives.

The Committee **welcomed** the report of the Joint ECS/ACCOBAMS/ASCOBANS Workshop on Cetacean Population Structure (27th ECS Conference, 6th April 2013, Setubal, Portugal). That Workshop had identified a number of priorities for immediate attention given conservation concerns:

(1) short-beaked common dolphins, particularly in Greek waters;
(2) Risso's dolphin, given some evidence that they may occur in small, local 'management units';
(3) killer whales in the Strait of Gibraltar and Gulf of Cadiz with a focus on the relationship with the Atlantic waters outside the Mediterranean;
(4) harbour porpoises in the Black and Aegean Seas;
(5) Cuvier's beaked whales;
(6) Fin whales.

The Committee **recommends** that work on population structure be accorded high priority within the next triennium. To assist in this process it **re-establishes** a population structure Working Group (co-chairs Gaspari and Natoli). It **reiterates** the Terms of Reference agreed at SC7 and provided in ACCOBAMS-SC7/2011/Inf20. The working group will determine its workplan based upon discussions at the Tenth Scientific Committee meeting and the workshop referred to above.

RECOMMENDATION 10.3 - RECOMMENDATION ON THE ASSESSMENT OF IUCN CONSERVATION STATUS

The Scientific Committee received a progress report of the IUCN Red List for ACCOBAMS. It was noted that the IUCN Centre for Mediterranean cooperation has not received new or updated assessments in the last two years for the species categorised as Data Deficient for the IUCN Red List in the Mediterranean Sea.

The Scientific Committee **recommends**:

(1) consideration is given by the initial assessors as to whether there is sufficient new information to re-asses the species that are still Data Deficient, and if so, submit new assessment for consideration by the appropriate evaluators;
(1) consideration is given whether there is sufficient information to evaluate species within the region not previously assessed (e.g. the rough-toothed dolphin) and if so, an assessment is submitted for consideration by the appropriate evaluators;
(2) as killer whales are still not included in the Mediterranean IUCN Red List, despite the evaluation done in collaboration between IUCN and ACCOBAMS in 2006 (Res 3.19), a re-assessment of the species is undertaken by the initial assessors , taking into account the Agreement area and submit it for consideration by the appropriate evaluators.

RECOMMENDATION 10.4 - RECOMMENDATION ON MEDACES

MEDACES is the 'Mediterranean Database of Cetacean Strandings'. It was established to assist with the compilation of data to co-ordinate all national and regional efforts for riparian countries. Originally created under the Barcelona Convention, it was later extended to the complete ACCOBAMS area. For primarily financial reasons, the Scientific Committee was asked by the ACCOBAMS Bureau to evaluate its usefulness.

The Scientific Committee **agreed** on the great overall importance and value of a central database such as MEDACES to cetacean conservation. The need for a comprehensive database for information derived from the efforts of national and regional stranding networks is great. It is clear that the ability to combine data for analyses is key to providing the best scientific advice, recognising that cetaceans do not adhere to national boundaries. When, ideally, basin-wide stranding data flow in regularly and are integrated promptly, synoptic views, so sought after re ACCOBAMS's Survey initiative, are readily and cheaply available. Thus, whenever the latter materializes, co-temporal basin-wide stranding rate data provided by MEDACES could complement and be correlated with basin-wide distribution and abundance estimates. Just some of other important topics that such data can help to address include: ship strikes, entanglements, disease, marine debris etc. This information will be greatly improved if cause of death is determined in a standardised manner (e.g. see Item *necropsy*) and submitted, when available to the database.

Given the short timeframe allowed for advice to the Bureau, the Scientific Committee **recommends** that:

- ACCOBAMS ensures MEDACES's future operation by securing and allocating funds to the host institution (University of Valencia) at least until the next Meeting of Parties in 2016.

In addition, the Scientific Committee **recommends** that in advance of the Meeting of Parties:

- A thorough review should be undertaken by the Secretariat in conjunction with the Chair of the Scientific Committee (or his nominee(s)) and in consultation with those running MEDACES into the working of MEDACES within the region with a special focus on:
    - contact with focal points and stranding network organisers who do not submit data to MEDACES, asking them to indicate why they do not do so (this may be practical reasons, such as time, or more fundamental reasons such as data confidentiality/access) and what might encourage them to do so, including MEDACES acting as both a full database and, where good local databases exist, a metadatabase;
    - contact with focal points and stranding network organisers who have agreed to submit data but who do not do so promptly or who have not done so for a long time to determine why and what might be done to improve the process (again these may be for practical or more fundamental reasons);
    - contact with the University of Valencia to determine the incidence of the use of the database by scientists and the nature of the analyses undertaken;
    - the level of 'advertising' undertaken to identify the value of the contained data and the use of the facility for new stranding networks as part of capacity building efforts (see Item *capacity building*);
    - developing mechanisms to allow the ACCOBAMS Scientific Committee to recommend analyses to be undertaken using MEDACES.

RECOMMENDATION 10.5 - RECOMMENDATION ON NOISE

The Scientific Committee considered a number of issues in its discussion of noise: (1) the development of a noise registry; (2) Environmental Impact Assessments and related matters; (3) military exercises; (4) noise indicators; (5) 'quiet areas'; and (6) research permit requests.

The development of a noise registry

As shown in ACCOBAMS.SC10.Doc13, a large portion of the Mediterranean area is subject to noise-producing human activities and it seems likely such activities will increase. This initial examination has illustrated the need for the development of a comprehensive registry on anthropogenic noise in the Agreement Area in order to assist in developing noise 'hot spots' to assist with mitigation measures. As this is in accordance with the Ecosystems Approach (EcAp) initiative within the Barcelona Convention, the Committee **recommends** that such a noise registry mechanism be developed and that this is submitted to the Barcelona Convention for endorsement.

The Scientific Committee **reiterates** its previous recommendation that Environmental Impact Assessments (EIAs), SIA (Strategic Impact Assessment) and AA (Appropriate Assessment) to be undertaken prior to projects that may affect cetaceans and especially those involving impulsive noise[2]. It **agrees** that at a minimum EIAs,SIAs and AAs should (based upon the expert advice of the Joint Noise Working Group developed for and submitted to the *CBD Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity* (25-27 February 2014), in response to CBD Notification 2014-001):

(1) provide adequate information on baseline biological and environmental information to describe the area being impacted;
(2) fully characterise operations and their acoustic components – this should include professional modelling of the sound propagation features and the spatial region that will experience anthropogenic noise above natural ambient sound levels;
(3) assess the impact on cetaceans within this area and consider the potential cumulative effects from other anthropogenic activities;
(4) describe how the impacts are proposed to be mitigated and effectiveness monitored before, during and after the operation; and
(5) provide an objective consideration of the risk posed by the proposed activity against alternatives.

The Scientific Committee **recommends**:

(1) that Parties, when conducting an EIA process in line with Resolution 4.17, also apply the minimum standards for EIAs described above;
(2) that Parties work with the Secretariat and the Scientific Committee to develop best practice guidelines for an EIA review process that considers *inter alia* involvement of the ACCOBAMS Scientific Committee in an advisory capacity to Parties on the cetacean component of EIAs, as well as opportunities for comments by civil society;
(3) that Parties support the development of an ACCOBAMS-hosted online depository of ACCOBAMS noise related documents and decisions made by Parties with respect to EIAs with a cetacean component, as well as documents evaluating the success or otherwise of mitigation approaches – this can become a resource for expert working groups and ACCOBAMS Parties to enable the evolution of the ACCOBAMS best practice as it evolves.

[2] And see *inter alia* EU EIA Directive 2014/52, Espoo (EIA) Convention Principle 17, CBD Decision XII/23, CMS Resolution 10.24, and ACCOBAMS Resolution 5.15

Military activities

The Scientific Committee also **reiterated** its concerns over the risks to cetaceans posed by military manoeuvres and especially active sonar (including discussion of a mass stranding of Cuvier's beaked whales attributed to NATO activities off Sicily in 2011). This is particularly true for sensitive species (e.g. Cuvier's beaked whales) in critical habitats identified by ACCOBAMS (Resolution 4.15). It noted that the US Navy has recognised the importance of not using active sonar in areas and at times when marine mammals are vulnerable. The Committee was therefore concerned to learn of a major NATO exercise in the Sicilian Channel in September 2015 (an area identified to be of special significance by ACCOBAMS and an EBSA).

The Scientific Committee **recognises** the sensitivity surrounding military exercises but is concerned that the safety of cetaceans is not adequately addressed during such exercises, particularly in light of ACCOBAMS Resolutions 4.15, 4.17, 5.13 and CMS Resolutions 9.19 and 10.24.

In order to be able to obtain lessons from the September 2015 NATO exercise and thus enable the Scientific Committee to provide advice to improve the situation in the future, the Scientific Committee **recommends that:**

(1) ACCOBAMS Parties, through the Secretariat, request NATO to provide information for the September 2015 exercise on:

(a) active sonar use (or other noise sources including explosions) during the 2015 exercise (time, area, source levels);

(b) sightings of cetaceans, if any, during the exercise;

(c) approaches adopted, if any, to evaluate (e.g. through sound modelling and examination of data on likely cetacean occurrence) potential adverse effects on cetaceans;

(d) mitigation measures taken, if any, and the basis for these and

(2) ACCOBAMS Parties, through the Secretariat, **advise** NATO and national navies that the Scientific Committee is ready to provide advice and assistance with respect to mitigating adverse effects on cetaceans for any future exercises.

Quiet areas

Furthermore, in the light of Resolution 5.13 on Cuvier's beaked whales and a document written by ACCOBAMS partner OceanCare (ACCOBAMS.SC10.Inf33) suggesting the need for 'quiet zones', the Scientific Committee **recommends** that this issue be addressed in the next triennium with a focus on a quantitative elaboration of the concept of 'quiet zones' and a more thorough evaluation of the scientific evidence for establishing such areas (in space and time) as discussed under Item 4.2.2 of the meeting.

Research permits

The Scientific Committee **recommends** that research institutes and organisation wishing to undertake monitoring programmes on noise that require permits from national authorities, consider submitting those to the ACCOBAMS Secretariat for advice and assistance in submitting permit requests.

Finally,

- with respect to MSFD and noise indictors (see Item 5.3.1), the Scientific Committee **advises** Parties that it is available to develop a noise impact indicator on cetaceans, should they request it.

with respect to the EcAp process and noise indicators, the Scientific Committee advises Parties that it is available to further develop the two candidate noise indicators on cetaceans, should they request it.

RECOMMENDATION 10.6 - RECOMMENDATION ON SHIP STRIKES

The Scientific Committee **reiterated** that the issue of ship strikes, particularly of large whales such as fin and sperm whales, remains of concern within the ACCOBAMS region. These concerns span the issues of conservation, animal welfare and human safety. It noted the present effective collaborative work with the IWC Scientific and Conservation Committees on this issue and **recommended** that this continues, along with collaboration with CMS and ASCOBANS and other International Organizations.

In addition to the work identified at the 2010 Joint IWC-ACCOBAMS workshop that is still ongoing, the Scientific Committee also reviewed the relevant recommendations of the 2014 report of the joint IWC-SPAW workshop to address collisions between marine mammals and ships with a focus on the wider Caribbean, which was attended by two of its members. The Scientific Committee **endorsed** the conclusions and recommendations of that Workshop, highlighting the following:

(1) The highest priority is to place emphasis on the collection and reporting of data (including near misses) to the Global Ship Strikes Database which will both: (1) facilitate a proper evaluation, prioritisation and monitoring of ship strikes as a threat to various populations and regions; and (2) assist in the development of mitigation measures.

(2) In tandem with this, refined species distribution modelling exercises (where sufficient data exist) are essential to identify the important areas for cetaceans at appropriate temporal and geographical scales to compare with potential threats, including ship strikes; where insufficient data exist efforts to obtain this at the regional level are essential. This information is required both to evaluate and prioritise efforts as well as to assist with mitigation and monitoring measures.

(3) Mitigation that separates whales from vessels (or at least minimise co-occurrence) in space and time to the extent possible are the most effective, where this is possible (e.g. routing schemes).

(4) The most effective and only demonstrated general method to reduce lethal strikes available at present is reduced speed. The efficacy of other measures (e.g. alerting mariners that whales may be in the area, such as having observers on-board or systems such as REPCET) including technical solutions requires careful evaluation before they can be endorsed. At present, apart from recommending that vessels go slowly, it is not possible to provide advice on simple avoidance strategies in the presence of whales.

(5) The issue requires co-operation with a variety of stakeholders ranging from intergovernmental bodies (such as IMO, IWC, ACCOBAMS, ASCOBANS and CMS), the marine sector, national and local authorities, scientific institutions and NGOs. Co-operation with the IUCN Marine Mammal Protected Area Task Force was also highlighted.

In terms of future priority actions, the Scientific Committee **recommends that:**

(1) ACCOBAMS Parties strongly encourage the submission of information on ship strikes to the Global Ship Strikes database hosted by the IWC which has recently streamlined the data entry process with advice from members of the ACCOBAMS Scientific Committee and others - where regional/national databases exist, exchange of information with the Global Database is essential.

(2) ACCOBAMS continues to work with the IWC, ASCOBANS and other relevant organisations to finalise necropsy protocols to *inter alia* identify causes of death (including ship strikes and bycatch in fishing gear).

(3) ACCOBAMS Parties ensure that the ACCOBAMS Survey Initiative, that was first recommended in 2003, be undertaken as soon as possible to provide the necessary baseline data on abundance, as well as density and distribution in the summer.

(4) The ACCOBAMS Scientific Committee investigates the existing data to determine the efficacy of undertaking a spatial modelling exercise for fin whales in the Mediterranean for comparison with information on shipping traffic.

(5) ACCOBAMS Parties continue to support projects that will improve our knowledge of ship strikes and potential mitigation strategies including telemetry and photo-id studies.

(6) The scientific evaluation of the efficacy of the REPCET system first recommended at the 2010 Workshop and further recommended at the 2014 Workshop be undertaken in the next triennium.

(7) ACCOBAMS Parties give serious consideration to the possibility of introducing speed restrictions within Conservation Based Areas (e.g. Marine Protected Areas, SPAMIs, etc.) at those times of the year when fin or sperm whales are present.

(8) ACCOBAMS supports efforts to introduce a Traffic Separation Scheme (TSS) in the Hellenic trench as recommended by the IWC Scientific Committee in 2015 as a result of work initially identified at the 2010 Workshop.

RECOMMENDATION 10.7 - RECOMMENDATION ON CETACEAN WATCHING

The ACCOBAMS region is an important area for a great number of cetacean species, whether as a permanent habitat, a breeding or feeding ground or a migratory corridor. The presence of such a diversity of cetaceans has led to the development of whale watching activities, both on a commercial and recreational basis, which until present still maintains a steady and regular growth within the region. Whale watching is an important economic activity in many places of the ACCOBAMS area. Although several countries in the region have already implemented specific codes of conduct and national legislation aimed at regulating and monitoring the activity, this particular tourism activity is not necessary benign. In addition, efforts are made by other International Organisations, i.e. IWC and CMS to manage the development of whale watching.

If well managed, and within a suitable management framework, whale watching can provide a valuable educational tool, contribute to the local economy and can promote research on cetaceans and their conservation. However, in the absence of such a framework, whale watching can increase pressure on the environment including cetaceans and adversely affect populations.

In an effort to minimize the risk of adverse impacts of cetacean watching and to ensure the sustainable development of such activities, effective management strategies need to be implemented. The Scientific Committee noted that the development of guidance for sustainable whale watching is a priority topic for the IWC (the IWC Whalewatching Working Group has produced a five year whale watching strategy and is developing a Handbook for Whale Watching.).

In light of the above and based on the discussions, **the ACCOBAMS Scientific Committee recommends** that the Working Group on Whale Watching reviews and advises on the following points **before April 2016 in order to allow the preparation of a draft Resolution** in the light of work undertaken by other Organisations including the IWC:

1) definition on the different types of whale watching operators (commercial, research, others);
2) revision of the technical details in the ACCOBAMS code of conduct (ACCOBAMS-SC10/2015/Doc14) associated with the use of the logo High Quality Whale Watching (including swim-with programmes, aerial spotting and use of drones);
3) consider issues related to data collection, validation, storage and access, etc.… (ACCOBAMS-SC10/2015/Doc15);
4) Test the revised data form in some pilot areas and a variety of operation types (e.g. the Pelagos Sanctuary with the co-operation of CIMA Research Foundation, Gibraltar Strait, and south Portugal);
5) Collaborate with ongoing effort by the IWC and CMS.

The Scientific Committee also recommends that Parties adapt their national legislation on whale watching in order to meet, at minimum, the requirements of the ACCOBAMS code of conduct.

RECOMMENDATION 10.8 - RECOMMENDATION ON CONSERVATION PLANS

The Scientific Committee has recognised the importance of conservation plans to fulfilling ACCOBAMS conservation objectives. However, it also recognised that a lack of structure and focus has hindered the development and effectiveness of such plans. It noted that the IWC has developed a process for the development of 'Conservation Management Plans (CMPs)' through its Scientific and Conservation Committees. At the request of the Secretariat, the Scientific Committee summarised the IWC approach to CMPs in the context of ACCOBAMS and also presented a workplan for the development of a CMP following this template for fin whales (ACCOBAMS-SC10/2015/Doc 16&18). Key components of CMPs include:

(1) support of national authorities;
(2) involvement of stakeholders at an early stage of development;
(3) recognition that CMPs complement not replace existing measures;
(4) overview of present status of the species;
(5) clear, achievable goals and objectives;
(6) practical, prioritized mitigation actions;
(7) regular monitoring and reporting;
(8) clear governance structures to coordinate the engagement of key stakeholders.

The Scientific Committee **recommends:**

(1) Adoption of the CMP framework and template (Annex) given in document ACCOBAMS-SC10/2015/Doc 16&18 for use by ACCOBAMS for new plans (e.g. bottlenose dolphins – see Item 4);

(2) Establishment of a Steering Group (Chaired by Panigada and including representatives of IWC, Pelagos Sanctuary) to develop a preliminary draft CMP for fin whales following the new template (see Resolution 5.12), consideration by stakeholders (e.g. by a workshop), with a view to submitting a CMP for consideration at the 2019 Meeting of Parties (e.g. see Fig. 1);

(3) Support by Parties for the ASI (see Item 4.1.) and the work on population structure (see Item 4.1.2) and ship strikes (see Item 4.2.3) with respect to fin whales that will produce important information for the development (and subsequent implementation) of a CMP;

(4) Review and possible revision of existing plans (e.g. that for common dolphins) in the light of the template given in Annex.

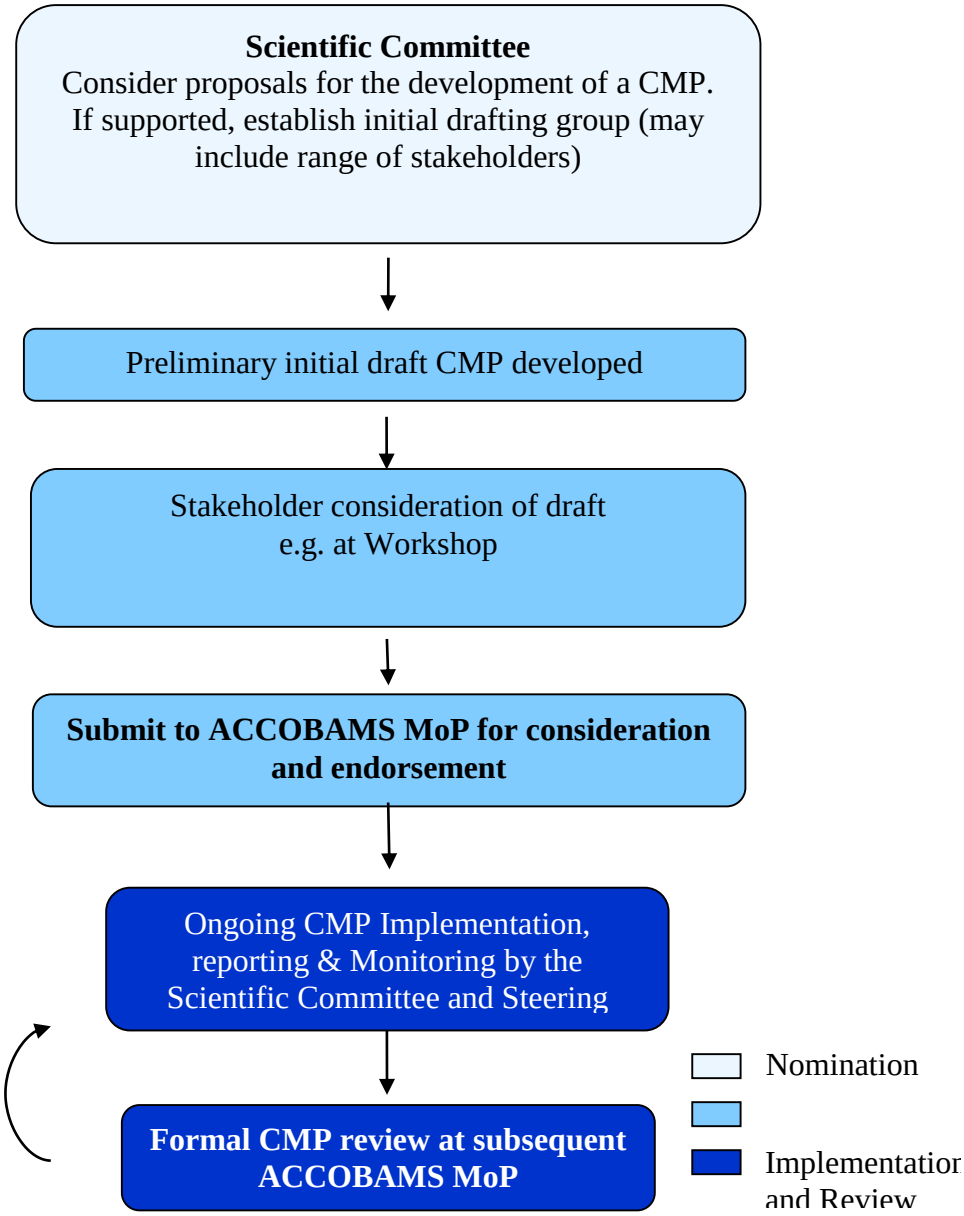

Fig. 1 Process for developing/implementing CMPs

Annex
TEMPLATE FOR A CMP

Table of Contents

EXECUTIVE SUMMARY

Provide a general overview of the plan. This section should include:

- Why a CMP is needed: Scene setting for a CMP – including a brief description of the target population, its habitat, and threats that impact the population.
- An overall goal of the CMP which would act as the mission statement for the plan.
- An overview of how the CMP is structured and what is detailed in each section.
- A *Summary Table of High Priority Actions* could also be included. High priority actions usually fall into the following categories:
  - co-ordination (COORD);
  - public awareness and capacity building (PACB);
  - research essential for providing adequate management advice or filling in knowledge gaps (RES);
  - monitoring (MON); and
  - mitigation measures (MIT).

1. INTRODUCTION

This section should briefly address the following questions:

- Why is active management needed for the identified cetacean population, threat or critical habitat?
- Why is a CMP the most appropriate management tool to achieve the stated conservation objectives?

This section should include:

- The scope, context and policy setting of the CMP.
- A detailed map of the known distribution of the population/critical habitat
  - If a CMP is being designed for a particular threat the map should include an outline of the area where the threat is encountered by the target cetacean population.
  - If the CMP is being designed for a particular critical habitat, the map should include the extent of the critical habitat.
- This section should also reference any current or previous conservation management actions relating to the draft CMP including conservation plans, legislation as well as any relevant peer reviewed papers or related documentation.

1.1 Overall Objectives of the CMP

To maximise the success of a plan and it ensure that required changes are identified promptly; the measurable short, medium and long-term objectives should be identified. Thus, the monitoring of the

target population, human activities affecting it, mitigation measures, and the effectiveness of those measures is essential.
Objectives of a CMP will not only relate to the conservation of the population but also to the interests of relevant stakeholders.
Insert the overall short, medium and long term objectives of the CMP.

2. LEGAL FRAMEWORK

Insert a list of relevant international conventions, agreements and legislation and management arrangements that the plan may relate to. Supporting information can be contained on Appendices.

[Please note that the below are examples only]

2.1 International Conventions and Agreements

2.2 National Legislation and Management Arrangements

2.2.1 Participating Range State A

National legislation with respect to the population of X whales

2.2.2 Participating Range State B

National legislation with respect to the population of X whales

2.2.3 Participating Range State C

National legislation with respect to the population of X whales

2.2.4 Participating Range State A

Area X Fisheries Management Plan

2.2.5 Participating Range State B

Marine Protected Area X Operational Management Plan

3. GOVERNANCE

3.1 Coordination of a CMP

As a CMP may cover a large geographical area ad involve several jurisdictions, it is important to establish an appropriate management structure for the CMP that identifies key stakeholders, their roles and responsibilities and the interaction between them during the development, implementation and review stages of the plan.
Insert an outline of the governance framework under which the CMP would be conducted, from the development stage through to the implementation and review stages.

3.2 Timeline for a CMP

Identify the various stages of a CMP with tasks and indicative timings for each stage as well as outlining which parties may be involved with the tasks identified.

4. SCIENTIFIC BACKGROUND

4.1 Biology, Status and Environmental Parameters

Insert concise background information on the nominated population(s), including:

- population structure;
- abundance and population trends;
- distribution, migration and movements; and

- basic biology (feeding, reproduction and survivorship).

Identify any knowledge gaps that exist in current data.

4.2 Critical Habitats

If habitats are identified that are deemed as critical for the recovery and/or protection of a target cetacean population, the extent of these habitats and the purposes that they are used for should be outlined here.

4.3 Attributes of the Population to be Monitored

The ultimate success or failure of any CMP depends on improvements in the conservation status of the target population(s) – this can only be achieved by monitoring. Depending on the objectives of the CMP and the nature of the threats a population faces, a variety of candidate 'attributes' of the population can be considered for monitoring over time, to determine the success of the overall plan and/or individual actions and to amend the CMP where necessary.
This section should include a description of the attributes of the population that will be monitored (e.g.: abundance (relative and/or absolute), reproductive rates, survivorship, health, prey status, range) and an evaluation of the feasibility of detecting trends with current methods given that changes occur (e.g. using power analyses).

5. THREATS, MITIGATION MEASURES AND MONITORING

5.1 Identification of Threats

This section should provide a summary of the known or suspected threats (both direct and incidental) to the nominated cetacean population/critical habitat. This should be summarised in tabular form (such as that seen below) but should also include a discussion of each explaining the rationale behind the summary. Where appropriate, reference should be made to actions within the CMP. Note: the first five columns in the table will form part of the nomination process.

Table: Summary of actual and potential threats to the nominated population.

Actual/Potential Threat	Cause or related activity	Evidence	Possible Impact	Priority for Action	Relevant Actions	Party Responsible
Directly lethal threats						
e.g. Entrapment in set nets	*Set net fishing*	*Strong*	*Mortality +/or serious injury*	*High*	*RES-01*	*Participating range states*
e.g. Entanglements in Other Types of Fishing Gear						
Sub-lethal threats						
e.g. Noise, pollution, etc						

5.2 Mitigation Measures and Monitoring

This section should include identified mitigation measures to address key threats and how the mitigation measures will be monitored. For example:

5.1 Entrapment in Set Nets

Undertake the following mitigation measures (MIT-01, 02, 03) and the following monitoring measures (MON-01, 02) to facilitate the conservation of species A in the area designated XYZ.
Undertake the following public awareness raising measures PACB-01, 02 to promote the conservation of species A in the area designated XYZ.

5.2 Entanglements in Other Types of Fishing Gear

6. ACTIONS

These form the key component of any CMP. While there may be overlap, these can generally be incorporated under the following categories:

- co-ordination (COORD);
- public awareness and capacity building (PACB);
- research essential for providing adequate management advice or filling in knowledge gaps (RES);
- monitoring (MON); and
- mitigation measures (MIT).

It is important that actions be realistic and effective. They should be well specified (usually 1-2 pages for each action) and generally include the following information, where relevant:

(1) Description (including concise objective, threats to which relevant and how, rationale, target data or activity, method, implementation timeline);

(2) Actors (responsible for implementation and relevant stakeholders);

(3) Evaluation (actors responsible);

(4) Priority (importance to the plan and feasibility);

(5) Costs (where appropriate).

6. SUMMARY AND IMPLEMENTATION OF ACTIONS

Insert a tabular summary of all actions here, referring to the 1-2 page detailed summaries (see above). In addition, include here an implementation strategy or designate responsibility for developing and implementing an implementation strategy along with a Management Framework.
Outline how the actions will meet the short, medium or long term objectives of the plan.

6.1 Stakeholder Engagement, Public Awareness and Education

Insert here a strategy and information on stakeholder engagement, public awareness and any education activities that will be undertaken during the CMP implementation stage (e.g. via websites, meetings etc.).

6.2 Reporting Process

A CMP should be considered a living document and once the implementation stage begins, a process of reporting and review is essential to determine how well the CMP is meeting its overall objectives and implementation timelines and milestones.
Insert process for reporting on CMP progress to the IWC (including a timeframe).

7. BIBLIOGRAPHY

As a CMP should be based upon best scientific knowledge and guided by the principles and practices of adaptive management, it is important for a CMP to identify any published works relevant to effective implementation of the plan.

Insert bibliography here.

8. APPENDICES

Insert additional background and contextual information in appendices. For example, the original CMP nomination could be supplied here.

RECOMMENDATION 10.9 - RECOMMENDATION ON CAPACITY BUILDING

1. Stranding network, referring to Res.1.10 and Res 3.29:

The Scientific Committee **reiterates** the value and role of stranding networks in providing valuable data for cetaceans' conservation. It **recommends** capacity building efforts in countries where stranding networks are either not efficiently operating or absent, including the training of personal on how to deal with stranding events including rehabilitation and euthanasia (see Item live -strandings) and how to run a necropsy (see Item standard protocols). The Scientific Committee also **recommends** that the local authorities be involved in the network and intervention team.

2. Research programmes

The Scientific Committee **recommends:**

- the identification and prioritisation of research needs (e.g. photo-identification, abundance surveys, assessment of interaction with fisheries and other anthropogenic impacts) in sub-regions of the ACCOBAMS area, in collaboration with RAC/SPA and Black Sea Commission, to increase the research and output quality using standardised protocols and approaches (e.g. see Item survey guidelines) – this includes fieldwork training and data analysis/publication.
- Continued emphasis on photo-identification as a priority research technique in the ACCOBAMS area (see Resolution 5.2) - this includes the use of common platforms (e.g. Intercet – see discussion under Item 4.2.7) to compare data from neighbouring regions and as well as to provide a wider view of bottlenose dolphins' distribution;
- That the capacity building programme should include a follow-up on the research activities in each sub-region as part of efforts to ensure the continuity of the programme to achieve its long term goals;
- That the training should be organised in collaboration with the countries in the region to ensure the participation of maximum number of trainees;
- That the Secretariat assists research institutes to apply to potential donors for necessary research equipment.

3. Promoting education and public awareness (Res.5.2)

The Scientific Committee **recommends:**

- Promotion of ACCOBAMS module on cetology (Master Program in French and English) for use in relevant educational programs in the ACCOBAMS area;
- Promotion of public awareness campaigns regarding cetaceans' research and conservation, targeting different stakeholders as an initial step prior to facilitating effective capacity building programmes.

RECOMMENDATION 10.10 - RECOMMENDATION ON LIVE STRANDINGS

Cetacean strandings can present national governments with specific challenges that are exacerbated when they become a transboundary event. They involve multiple jurisdictions and policy sectors and often require a rapid response; usually under conditions of both media and social pressure with a high emotive content. Given this, these events can turn into a crisis, in particular during live or mass strandings, when euthanasia may need to be considered as a human option, and those related to epidemic or anthropogenic causes.

The joint ACCOBAMS/Pelagos workshop on cetacean live stranding held in Monaco on 29-30 October 2014 (ACCOBAMS-Pelagos WLS/2014/Doc 25) proposed harmonized Procedures in case of cetacean live stranding stressing that in case of transboundary emergencies involving cetaceans rapid intervention, participation and cooperation from different experts, stakeholders and within scientific organizations are required to ensure an effective response and an adequate coordination.

The Scientific Committee noted that the IWC held an Expert Workshop in September 2013 (IWC/65/WKM&AWIRep01) that addressed many of the concerns noted above. In particular it stressed the need for human safety to paramount, developed a decision tree related to rescue versus euthanasia, provided an authoritative and comprehensive review of various euthanasia methods, provided advice on data collection protocols and provided advice on event management. It also recognised the special challenges presented by large mass strandings and has proposed a future workshop on that topic. The Scientific Committee **welcomed** information about this workshop but recognised that there was insufficient time to review it at this meeting.

With respect to live strandings, the Scientific Committee **recommends** that in conjunction with the IWC and ASCOBANS and taking into account the reports of the joint ACCOBAMS/Pelagos Workshop and the expert IWC Workshop:

1) the development of common definitions of terms related to stranding events;
2) the development of a common protocol for necropsies that also takes into account available resources throughout the region;
3) the development of a common data collection protocol for live strandings;
4) the development of principles and guidelines for handling live strandings events (including prevention), recognising the cultural, political, socioeconomic differences between countries;
5) the development of training and exchange programmes for national stranding networks aimed to creating a common framework for rescue teams, in particular with respect to rehabilitation, intervention on live strandings and euthanasia procedures and dealing with the public;
6) a mechanism for sharing of information before during and after emergency stranding events to improve guidelines in the future; and
7) the development of regional Task Forces to share expertise, equipment and knowledge.

RECOMMENDATION 10.11 - RECOMMENDATION ON MSFD IMPLEMENTATION

Following the discussion about the results presented in ACCOBAMS-SC10/2015/Doc.24 "Overview of the implementation of EU Marine Strategy Framework Directive (regarding Cetaceans in the ACCOBAMS area and recommendations", the ACCOBAMS Scientific Committee:

- **endorses** the Recommendations provided within the document presented, notably the two higher priority recommendations: (1) complete the questionnaire survey by inviting more Parties to respond and prepare a joint paper for a marine policy journal, and (2) hold a workshop with scientists and monitoring officers to help coordinate national monitoring programmes within MSFD regions in the medium term (the MSFD 6-years cycle).

- **encourages** EU Member States, but also Non-EU-Member States [Parties to ACCOBAMS and of the Barcelona Convention under which the EcAp initiative is being developed] to include cetaceans in all 5 potentially relevant descriptors (D1, D4, D8, D10 & D11) as threat to GES.

- **encourages** EU Member States, but also Non-EU-Member States [Parties to ACCOBAMS] to integrate conservation action reflecting objectives, decisions, recommendations and information by ACCOBAMS that suit reaching GES within their national Programme of Measures.

RECOMMENDATION 10.12 - RECOMMENDATION FROM THE SCIENTIFIC COMMITTEE

LANGUAGE AT THE MEETINGS OF THE SCIENTIFIC COMMITTEE

The Scientific Committee **noted** that using a single language will facilitate the work of the Committee, particularly when drafting the report and recommendations. It **recognised** that at the present meeting almost all participants used English. Further, the Scientific Committee **acknowledged** that English has become the main language in international scientific communication, including conferences and peer-review publishing. In addition, it **noted** that simultaneous translations incur large costs and may restrict late-evening discussions.

The Scientific Committee therefore **recommends** that, depending on the composition of the next Scientific Committee, serious consideration be given to using English as the primary language at the meetings of the Scientific Committee, without the need for translation facilities.

LENGTH AND NATURE OF THE SCIENTIFIC COMMITTEE MEETINGS

The Scientific Committee **expressed concern** over the lack of time to deal with the amount of workload during its meetings. The Scientific Committee also **noted** it is imperative to dedicate sufficient time to carry out its work, to provide the best possible scientific guidance to the MOP.

The Scientific Committee therefore **requests** that an additional day be allocated to meetings of the Scientific Committee, to facilitate proper scientific examination of materials presented, development of recommendations for scientific work, and, in the case of meeting prior to the MOP, the development of recommendations and advice to the MOP on Resolutions and the Work Programme. Furthermore, the Scientific Committee **noted** that with only two meetings in the triennium, it has insufficient time to ensure progress with scientific priorities. In particular, much of the first meeting is spent discussing the instructions from the previous MOP, whilst the second meeting is spent developing recommendations for the following MOP. Recognizing budgetary concerns, the Scientific Committee **recommends** that serious consideration be given to three meetings per triennium, including the possibility of having one smaller operational meeting. This should be examined further by the Secretariat in consultation with the Chair of the Scientific Committee.

ANNEX 4 - TERMS OF REFERENCE FOR THE MMO WORKING GROUP (MMO WG)

This Working Group will address these items before the next Scientific Committee Meeting which will be held in April 2017:

- Examine possibilities for the promotion of mandatory involvement of MMOs in any impulsive noise-generating activities (e.g. seismic exploration, pile driving, training course of seismic acquisition and processing, testing of seismic instruments)
- Review of existing training schemes and best practice guidelines and participation to their actualisation.
- Review of different ways of implementing MMO trainings and development of an ACCOBAMS MMO scheme (e.g. ACCOBAMS MMO label, ACCOBAMS school).
- Development of strategy to involve industrial stakeholder into the process.
- Assessment of MMO accreditation conditions.
- Help in organising the content of the MMO workshop to be held during the next ECS conference.
- Presentation of a consolidated proposition to the SC of ACCOBAMS about the MMO training issue.

Leader: Léa DAVID (EcoOcéan Institut)

Participants:
Silvia FREY (OceanCare)
Yanis SOUAMI (SINAY / JNWG)
Alessio MAGLIO (SINAY)
Aurélie MOULINS (CIMA Foundation)
Gianni PAVAN (JNWG)
Caterina LANFREDI (Thetys Research Institute)