

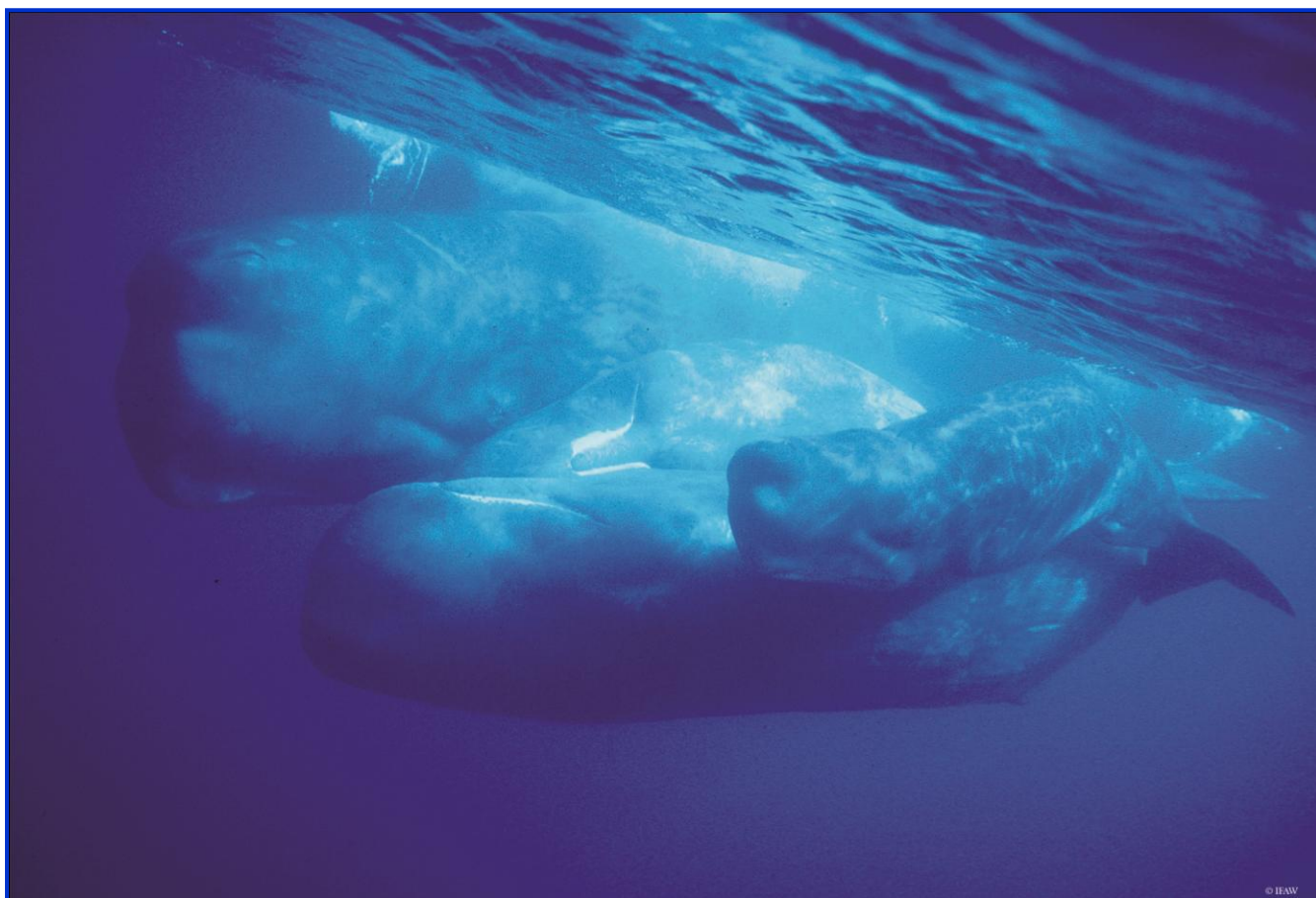


Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area, concluded under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS)

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 FOURTH MEETING OF THE CONTRACTING PARTIES TO ACCOBAMS



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Monaco, 5th-12th November 2010

Introduction

1. Following the entry into force of the Agreement on 1st June 2001, the First Meeting of the Parties held in Monaco in 2002, the Second Meeting of the Parties held in Palma de Mallorca, Spain, in 2004 and the Third Meeting of the Parties in 2007 in Dubrovnik, Croatia, the Fourth Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area (ACCOBAMS) was held in Monaco at the Méridien Plaza Beach Hotel, from 9th to 12th November 2010.

Participants

2. Representatives of the following States Parties to the Agreement took part in the Meeting: Albania, Bulgaria, Croatia, Cyprus, Egypt, France, Georgia, Greece, Italy, Lebanon, Malta, Monaco, Morocco, Portugal, Romania, Slovenia, Spain, Tunisia and Ukraine.
3. The following countries were represented by observers: Bosnia & Herzegovina, Democratic Republic of Congo and Turkey.
4. The following Intergovernmental Organisations were represented: United Nations Environment Programme (UNEP) / Convention on the Conservation of Migratory Species of wild animals (CMS), UNEP MAP/Regional Activity Centre for Specially Protected Areas (RAC/SPA), Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution, the Mediterranean Science Commission (CIESM), International Whaling Commission (IWC), General Fisheries Commission for the Mediterranean (GFCM), Global Marine and Polar Programme - International Union for Conservation of Nature (GMPP - IUCN), League of Arab States.
5. The following Partners were represented: Blue World Institute of Marine Research and Conservation - Brema Laboratory - European Cetacean Society (ECS) - Groupe de Recherche sur les Cétacés (GREC) - International Fund for Animal Welfare (IFAW) - International Union for the Conservation of Nature (IUCN) - Marine Mammal Research & Conservation Society (Morigenos) – Oceana - Ocean Care - Souffleurs d'écume - Whale and Dolphin Conservation Society (WDCS).
6. The following other nongovernmental organisations and institutions were represented: Bluwest - Natural Resources Defence Council (NRDC) - Mediterranean Protected Areas Network (MEDPAN) - SOS Grand Bleu.
7. The Secretariat of ACCOBAMS acted as Secretariat for the Meeting.
8. The full list of participants appears as [Annex I](#) to this Report.

Agenda Item 1 - Welcome Addresses

9. The Chair of the Bureau, Ana Štrbenac (Croatia), opened the Meeting by thanking His Serene Highness Prince Albert II of Monaco and the authorities of the Principality for hosting the Meeting and for their continuing support for the Agreement, and welcomed the participants to Monaco for the Fourth Meeting of the Parties. She stressed the importance of international cooperation in the field of cetacean conservation in the light of continuing biodiversity loss. She then praised the spirit of collaboration among the Parties to the Agreement.
10. Elizabeth Mrema (Executive Secretary, UNEP/CMS) expressed her gratitude to the support given to ACCOBAMS by His Serene Highness, commenting that His presence illustrated his continuing personal commitment to the Agreement. She emphasised that the Meeting had a heavy agenda including the adoption of an ambitious work plan for the forthcoming triennium. ACCOBAMS, CMS and ASCOBANS dealt with many common species and issues, such as bycatch, marine noise and climate change, and at the recent meeting of its Advisory Committee, ASCOBANS had suggested holding a joint meeting with ACCOBAMS on the issue of pollutants on the occasion of the 2011 Annual Meeting of the European Cetacean Society in Cadiz.
11. She concluded by saying that ACCOBAMS did not operate in a vacuum and had a role to play in other developments, particularly the CMS “Future Shape” process ([Annex XII](#)).
12. Marie-Christine Grillo-Compulsione (Executive Secretary, ACCOBAMS) said that it was a great honour to have His Serene Highness at the opening ceremony. She emphasised that during the Triennium 2008-2010, thanks to the personal commitment of the ACCOBAMS Focal Points, the Secretariat had supported the Parties in implementing many concrete activities in line with the priorities and recommendations defined by the MOPs. In this context she thanked the Scientific Committee, the Bureau and the Parties for their support. She wished the Agreement continuing success in the next Triennium.
13. His Serene Highness Prince Albert II welcomed the participants to the Principality for the Meeting ([Annex XII](#)). He said that, for centuries, cetaceans had fascinated human beings but had also fed their greed for profits. He noted with satisfaction that ACCOBAMS had grown to include 23 Parties since its adoption and had developed a sound scientific base. However, despite all that had been done, the conservation status of these species was still worrying and there were still gaps in the scientific knowledge that needed to be filled. In this context, He stressed the importance of the survey initiative submitted to this MOP and invited countries and relevant international organisations to join the initiative and provide it with scientific, technical and financial support.
14. Recalling the recent CBD COP10 in Nagoya, Japan, He stated that the world community had had to admit that the targets set in Johannesburg in 2002 to reverse the decline in biodiversity had not

been met and that the rate of loss of species and habitats was accelerating. The CBD COP had however adopted a new Strategic Plan which set new targets for designating protected areas on land and at sea and agreed on a new protocol after protracted negotiations on access to genetic resources and sharing the benefits.

15. His Serene Highness was delighted to announce that the Headquarters Agreement for ACCOBAMS would be signed during the course of the Meeting.

Agenda Item 2 - Granting the right to vote

16. The Chair explained that in the past the right to vote of countries or Regional Economic Integration Organizations that had recently acceded to the Agreement had to be confirmed at each session of the Meeting of the Parties. She suggested that the new Parties be granted the right to vote as soon as their instruments of ratification, acceptance, approval or accession had been deposited and that this should be included in the Rules of Procedure of the MOP. The Meeting having approved the suggestion by the Chair, the Legal Advisor, Tullio Scovazzi, outlined the provisions of the Rules of Procedure that required amendment. The Rules of Procedure, as amended by this Meeting, appears as [Annex II](#) to this Report.
17. In this context, it was pointed out that other Conventions required new Parties to wait until the Convention had fully entered into force before they enjoyed voting rights, but that the positive spirit in which ACCOBAMS was conducted made this provision unnecessary.

Agenda Item 3 - Election of the Bureau

18. The Chairperson of the Bureau informed the Meeting that, following consultations among the heads of delegations prior to the Meeting, it was proposed that the new Bureau be composed of five members instead of four. She also informed the Meeting that the heads of delegations proposed that the Bureau be composed of the representatives from the following countries: Monaco, Slovenia, Ukraine, Portugal and Lebanon.
19. The Meeting approved the suggestions of the heads of delegations and appointed the following Bureau members:

Chairperson: Mr. Cyril Gomez (Monaco)

Vice-Chairperson: Mr. Andrej Bibic (Slovenia)

Vice-Chairperson: Mr. Volodymyr Domashlinets (Ukraine)

Vice-Chairperson: Ms Marina Sequeira (Portugal)

Vice-Chairperson/Rapporteur: Mr. Gaby Khalaf (Lebanon)

20. The representative of Morocco asked that given the lack of representation of the Southern Mediterranean on the Bureau, consideration should be given to ensuring that this underrepresentation be compensated for in the Scientific Committee.
21. Before inviting M. Gomez to chair the Meeting, Ms Štrbenac expressed her gratitude for all the support she had received during the past three years. The Executive Secretary thanked her for all her hard work and congratulated the other members of the previous Bureau on their efficiency.

Agenda Item 4 - Adoption of the Agenda

22. The Executive Secretary presented the draft agenda (ACCOBAMS-MOP4/2010/Doc01Rev1) and the proposed timetable. She informed the Meeting that the Headquarters Agreement would be signed on the third day of the Meeting and that a number of side events had been programmed to take place during the lunch breaks and immediately after the afternoon sessions.
23. The representative of Italy proposed that Agenda Item 12 d (the draft implementation priorities for the period 2011-2013) be considered before Agenda Item 11 b (the appointment of Scientific Committee members) as the implementation priorities might have a bearing on the choice of suitable members.
24. The Meeting adopted the Agenda and the Timetable taking into account the amendment proposed by the delegation of Italy. The Agenda of the Meeting appears in [Annex III](#) of this Report.

Agenda Item 5 - Admission of Observers

25. The Chair referred to the revised Rules of Procedure (ACCOBAMS-MOP4/2010/Doc03Rev1) and the Provisional List of Observers (ACCOBAMS-MOP4/2010/Doc05) to admit all registered observers to the Meeting .

Agenda Item 6 - Establishment of the Credentials Committee

26. In accordance with Article 4 of the revised Rules of Procedure, a Credentials Committee was established. Malta was chosen as the Chair of the Committee with Egypt and France as Members.

Agenda Item 7 - Opening Statements

27. The Executive Secretary invited Parties wishing to place on record an opening statement to provide the Secretariat with a copy of the text in printed or electronic form in English or French ([Annex XII](#)).
28. The representative of Italy made an oral statement expressing gratitude to the authorities of Monaco for hosting the Meeting. He emphasised that during this Triennium, Italy had undertaken research on tissue samples, strandings, population surveys, ship strikes, fisheries, eco-toxicology,

and that Italy was working on the reorganization of its National Stranding Network, on the Emergency Task Force for live strandings, on a Satellite Telemetry pilot project and on marine protected areas. Italy wanted to share its expertise with other riparian states to ensure the long-term survival of cetaceans ([Annex XII](#)).

Agenda Item 8 - Progress Reports

a. Report of the Depositary

29. The representative of the Principality of Monaco, the Depositary of the Agreement, reported that since the Third Meeting of Parties, Algeria, Montenegro and Egypt had all acceded. The Party of Monaco was promoting the accession of further riparian states. His Serene Highness had personally written to the heads of State of Bosnia & Herzegovina, Israel, the Russian Federation and Turkey inviting them to attend the Meeting and become Parties. It was noted with satisfaction the presence of non-Parties such as Bosnia & Herzegovina and Turkey.
30. The report of the Depositary is presented in [Annex IV](#).

b. Report of the Secretariat

31. The Executive Secretary introduced the Report of the Secretariat ([Annex V](#)), the synthesis of regional workshops (ACCOBAMS-MOP4/2010/Doc13), the list of national focal points (ACCOBAMS-MOP4/2010/Inf05) and the document concerning the Future Shape of CMS (ACCOBAMS-MOP4/2010/Inf12). She confirmed that the three accessions since the last MOP had brought the total membership of the Agreement up to 23.
32. She informed the Meeting that the name, acronym and logo of ACCOBAMS had been registered under the Paris Convention for the Protection of Industrial Property to protect the Agreement's intellectual rights over them.
33. The representative of GFCM (Mr. Abedallah Srouf) presented his sincere thanks to the Principality of Monaco and to ACCOBAMS for the invitation sent to the GFCM to attend the Fourth Meeting of the Contracting Parties to ACCOBAMS and for the warm welcome and hospitality they had extended to the participants. He congratulated the ACCOBAMS Executive Secretary, and her staff on the excellent work that had in particular enabled the collaboration that existed between the two organizations to be maintained at this very high level and had permitted them to jointly carry out a number of activities related to cetaceans and their interactions with fisheries. He emphasised that the Subcommittee on the marine environment and ecosystems of the GFCM's Scientific Advisory Committee had collaborated with ACCOBAMS, in particular on the issue of bycatch and other subjects of common interest. He declared that his organisation was satisfied with this collaboration and hoped to enhance it in the future.

34. The representative of France cited the Pelagos sanctuary as a good example of cooperation promoted by ACCOBAMS.
35. Elizabeth Mrema (UNEP/CMS) explained the background to the intercessional process concerning the Future Shape of the CMS Family. CMS COP9 in Rome in 2008 had established a Working Group to elaborate three options to be presented at COP10 in 2011. Consultants had been engaged to develop the options. The First Phase of the process had been completed with an analysis of the current structure of CMS. The report on the Second Phase had just been published and would be discussed at the forthcoming 37th Meeting of the CMS Standing Committee. The views of ACCOBAMS Parties were welcome.

c. Report of the Bureau

36. Ms Štrbenac, the former Chair, presented the report of the Bureau ([Annex VI](#)), and the reports of the Fifth and Sixth Meetings of the Bureau and the First Meeting of the Extended Bureau. The five main themes discussed were: institutional & administrative issues, which included the Future Shape of CMS and the ACCOBAMS Headquarters Agreement; budgetary matters (concerns were expressed over the non-payment of subscriptions); activities of the Scientific Committee; projects and activities and partners.
37. The holding of the sub-regional workshops was considered to have been a success and likely to contribute to the greater efficiency and better implementation of the Agreement.

d. Report of Sub-Regional Coordination Units

38. The representative of the Permanent Secretariat of the Black Sea Commission, Mr. Alexei Birkun, introduced the report of the Black Sea Sub-Regional Coordination Unit ([Annex VII](#)). The report on the conservation status of Black Sea populations of harbour porpoises, bottlenose dolphins and common dolphins had led to their IUCN listing being changed to endangered, endangered and vulnerable, respectively.
39. The representative of RAC/SPA, Ms. Lobna Ben Nakhla, introduced the report of the Mediterranean Sub-Regional Coordination Unit ([Annex VIII](#)). The main activities were assisting countries in elaborating national action plans (i.e. the Syrian Arab Republic and Egypt) and collaborating with the University of Istanbul on an oceanographic campaign in the Eastern Mediterranean and research into fisheries interactions off the north coast of Tunisia. RAC/SPA was also working with the University of Valencia on MEDACES (the Mediterranean Database on Cetacean Strandings).

e. Report of the Chair of the Scientific Committee

40. Giuseppe Notarbartolo di Sciara, the Chair of the ACCOBAMS Scientific Committee, introduced the report of the Scientific Committee ([Annex IX](#)), the Recommendations of the Scientific Committee (ACCOBAMS-MOP4/2010/Doc20), the reports of the Fifth and Sixth Meetings of the Scientific Committee (ACCOBAMS-MOP4/2010/Doc36 and ACCOBAMS-MOP4/2010/Doc33 respectively) and the Vision of ACCOBAMS beyond 2010 (ACCOBAMS-MOP4/2010/Doc28).
41. The Recommendations of the Scientific Committee concerned: the ACCOBAMS Survey Initiative; the programme of work on population structure; the conservation of the Mediterranean common dolphin; ship strikes; marine protected areas; anthropogenic noise; monitoring, assessing and reducing bycatch in the Black Sea; climate change; and minimum funding for the Scientific Committee. The Committee had also issued a declaration, the impetus for which was concern that the slow rate of progress in conservation might lead to some species' populations declining to the point of extinction.
42. The Chair of the Scientific Committee said that better knowledge of population structures was essential for better mitigation and conservation measures. Efforts were being made to collate sightings data, share information and improve knowledge of certain species. Considerable amounts of work were being done on ship strikes, including the joint workshop organized with the IWC.
43. He stressed that bycatch and interactions with fisheries, particularly artisanal ones, needed more attention and that ACCOBAMS was collaborating with the GFCM on mitigation measures including the use of acoustic deterrent devices to reduce depredation. Chemical and acoustic pollution were major problems, and predictions of the effects of climate change on the Mediterranean were dire. The outcomes of the IWC Workshop in Vienna on climate change would be of great interest.
44. The representative of the WDCCS praised the work of the Scientific Committee, particularly mentioning its independence, transparency and expertise.
45. Responding to a question from the representative of Monaco on how ACCOBAMS could improve its performance and core data, Mr. Giuseppe Notarbartolo di Sciara said that lack of data was a major impediment but that attempts were being made to increase coverage through, for instance, surveys in the Adriatic off Croatia and conducting more genetic analysis, for which techniques were being perfected but where the capacity to do more studies was limited.
46. The Chair of the Scientific Committee stated that the last Bureau Meeting had invited him to elaborate a strategic vision for ACCOBAMS beyond 2023 in the light of the conclusions and recommendations of the COP10 of the CBD. He stated that many issues of relevance to

ACCOBAMS had been discussed during the last COP of CBD and presented a two-page document he had prepared to propose elements for the strategic vision for ACCOBAMS. He suggested that the document be turned into a Resolution of the ACCOBAMS MOP.

47. The representative of Croatia said that the vision should be a part of the Agreement's long-term strategy.
48. The representative of Malta stressed the importance of a coordinated approach with developments within the European Union, such as the Marine Framework Strategy Directive, within the United Nations and within Regional Seas Programmes.
49. The Meeting decided to establish a Working Group to draft a strategic vision for ACCOBAMS and the following Parties volunteered to take part: Croatia (Chair), Egypt, France, Italy, Malta, Monaco, Morocco and Spain. The Group was later adjoined by the WDCCS. In addition to elaboration of vision, the Group prepared a draft Resolution stipulating development of a strategy for ACCOBAMS covering the period 2013-2023. The Resolution was adopted ([Annex X: Resolution 4.24](#))
50. Mr. Giuseppe Notarbartolo di Sciara informed the Meeting that he was stepping down as Chair of the Scientific Committee, although he would remain involved in the Agreement. He thanked all of his colleagues for their support over the years.
51. The Executive Secretary acknowledged the huge debt owed to Mr. Giuseppe Notarbartolo di Sciara for his long service to ACCOBAMS, dating from its very origins.

Agenda Item 9 - Report by the Credentials Committee

52. The representative of Malta reported that credentials had been received from: Albania, Bulgaria, Croatia, Cyprus, Egypt, France, Georgia, Greece, Italy, Lebanon, Malta, Monaco, Morocco, Portugal, Romania, Slovenia, Spain, Tunisia and Ukraine. Four of the letters of credential did not explicitly state that the delegate should take part in votes, but this was deemed implicit in the expression "full rights" contained in the letters. One letter of credential was not presented in the original.

Agenda Item 10 - National Reports

a. Synthesis of the National Implementation Reports of the Parties

53. The Secretariat reported that the response rate of Parties submitting their National Reports was high but not perfect, with 19 of the 23 received. An online system had been used for the first time and had been made available in June 2010. A number of improvements to the system had been made in the light of comments received. The synthesis of the reports was contained in ACCOBAMS-

MOP4/2010/Doc12 based on information provided by the Parties and taken from other sources. The information included details of ratification, national agencies and implementing bodies and legislation. Only seven Parties appeared to have a coordinated network of cetacean stranding monitoring and only Italy, Portugal and Spain had emergency plans in place. There were numerous national projects being undertaken covering a wide range of issues.

54. The representative of Italy commented that some Italian NGOs appeared to have been omitted from the list and that research projects should be mentioned.
55. The representative of Malta said that the code of practice adopted in her country in 1999 on strandings should be added to the emergency plans section.

b. Range States activities

56. The representative of Bosnia & Herzegovina said that this was the first ACCOBAMS MOP to be attended by his country. As a Mediterranean and maritime country, Bosnia & Herzegovina had a keen interest in ACCOBAMS and its activities.

Agenda Item 11 – Institutional Dispositions

a. Status of the Secretariat

57. The representative of Monaco described the main elements of the draft Host Government Agreement for ACCOBAMS, the text of which appeared in draft Resolution 4.2.
58. The Resolution 4.2 was **adopted** by the Meeting without amendment ([Annex X](#)).

b. Appointment of Scientific Committee members

59. Ms. Ana Štrbenac introduced this Agenda Item, telling the Meeting that after the Extended Bureau was created it had become necessary to look into possible overlaps between the role of the Scientific Committee and that of the new ACCOBAMS body. To this end an evaluation of the Scientific Committee had been made, the results appearing in ACCOBAMS-MOP4/2010/Doc18. She invited the consultant who had carried out this evaluation (M. Andreas Demetropoulos) to present its conclusions.
60. Mr. Demetropoulos stated that the ACCOBAMS Scientific Committee had done a considerable amount of work and produced several tools and guidelines that had been adopted by the Parties. He emphasised that adjustments were needed to improve the way this body would function. These adjustments concerned the composition of the Committee and the manner in which its members were designated. Mr. Demetropoulos stressed that these proposals for adjustment should in no way be seen as lessening the merit of the Scientific Committee and its achievements.

61. Speaking for several NGO representatives, the participant from the WDCS presented a statement highlighting the role played by the ACCOBAMS Scientific Committee and stressing how important it was that its independence be maintained. The statement asked the Parties, if they envisaged reviewing the composition of the Scientific Committee, to make sure that this body consist exclusively of scientists in the pertinent fields of natural science. The full text of this statement appears in [Annex XII](#) to this Report.
62. Several delegations of Parties were in favour of making changes to the composition of, and the procedure for appointing Members to, the Scientific Committee.
63. The representative of CIESM, a leading Partner of ACCOBAMS, stressed that science and politics should be kept separate and warned that government-appointed experts were often viewed with some suspicion. Reacting to the request by Parties to CIESM to provide a list of 10 experts from which the MOP would select the Chair of the Scientific Committee and 4 task managers, he informed the Meeting that he was unwilling to provide more than five names. He urged that Parties act with caution in revising the structure and the way the Scientific Committee functioned and that the support of his organisation to ACCOBAMS was conditional: it might reconsider its support for the Scientific Committee of ACCOBAMS if the Parties interfered in the selection of the Scientific Committee members designated by CIESM. The representative of CIESM promised to provide the CVs of proposed experts in 24 hours.
64. Several delegations stated that it was necessary to define clear criteria for designating Members of the Scientific Committee, and that having its Members appointed by the Parties would not compromise their independence; rather, it was likely to ensure that the expertise available within the Scientific Committee would be better adapted to subjects of importance to the Agreement.
65. At the suggestion of the Chair, a working group (Croatia, Egypt, France, Italy, Lebanon, Malta, Morocco, Portugal, Romania, Slovenia, Spain, Tunisia and WDCS) was formed to elaborate a proposal dealing with criteria for the selection of Members of the Scientific Committee and for its composition. The working group met twice, coordinated by the representative for Morocco, and with several representatives of Parties, Partner Organisations and the Chair of the Scientific Committee participating.
66. In his capacity as coordinator of the working group, the representative of Morocco summarised the main results of the group and stated that there was consensus on the need, during the coming intercessional period, to work on criteria for selecting the Members of the Scientific Committee.
67. The Meeting agreed that a proposal for the said criteria be elaborated by the Scientific Committee and submitted to the Bureau of Parties, which would prepare a proposal to submit to the next MOP on the criteria to be applied when selecting the Members of the Scientific Committee. The Meeting

also agreed that proposals for Members of the Scientific Committee should be formulated sufficiently early and be accompanied by CVs, so that the designation of the Members by the Parties be done with full knowledge of their profiles and fields of qualification.

68. Following a request by one delegation, the Chair invited Mr. Giuseppe Notarbartolo di Sciara (Chair of the Scientific Committee) to make a proposal as for the designation of the Chair and Vice-Chair of the Scientific Committee for the Triennium 2011-2013. Mr. Notarbartolo di Sciara suggested Mr. Alexei Birkun, as Chair of the Scientific Committee and Mr. Vincent Ridoux as Vice-Chair. The Meeting unanimously accepted the proposal.
69. The Meeting discussed and then **adopted** Resolution 4.4 ([Annex X](#)).

c. Status of ACCOBAMS Partners

70. The Executive Secretary introduced the draft Resolution 4.20, the report on activities of ACCOBAMS Partners (ACCOBAMS-MOP4/2010/Inf10) and the list of ACCOBAMS Partners (ACCOBAMS-MOP4/2010/Inf14). She informed the Meeting that many Partners had submitted reports covering a wide range of activities including capacity building and public awareness campaigns.
71. The draft Resolution aimed to strengthen the status of ACCOBAMS Partners. The Executive Secretary pointed out that some of the 33 official Partners had not contacted the Secretariat for some time and it was not clear whether they wished to retain their Partner status. All Partners were therefore being asked to complete a statement confirming their continuing interest. The Resolution also contained a provision requiring Partners to seek permission to use the ACCOBAMS logo and empowered the Bureau to revoke Partnership status.
72. Responding to a question concerning whether it was necessary to include in the Resolution the threat of legal action, the Executive Secretary explained that there had been an occasion when a dolphinarium in Slovenia had falsely claimed to be an ACCOBAMS Partner and action had had to be taken to protect the Agreement's name. The Legal Adviser said that it was not necessary to retain the wording as ACCOBAMS could still take legal action without it.
73. The representative from WDCS asked if its Partnership status was under review and if the statements would have to be made regularly. The Executive Secretary assured the Meeting that the WDCS was a model Partner whose support was always highly appreciated.
74. Mr. Giuseppe Notarbartolo di Sciara suggested that one criterion for granting Partnership status should be that the organization shared the fundamental aims of the Agreement. He added that all Partners should be strongly encouraged to share information.

75. The Meeting discussed and then **adopted** Resolution 4.20 ([Annex X](#)).

Agenda Item 12 - Working Programme and Financial Arrangements

a. Report by the Fund Management Controller

76. The Executive Secretary presented the report by the fund management controller (ACCOBAMS-MOP4/2010/Doc16), informing the Meeting that the report stated that the budget of ACCOBAMS had been properly and wisely managed. The Meeting took note of the report.

b. Report by the Secretariat on the Budgetary Matters

77. The Executive Secretary presented the report on the 2008-2010 Triennium and the execution of the budget (ACCOBAMS-MOP4/2010/Doc14) and explained that the figures for 2010 covered the period up until the end of September. Since the printing of the report, the contribution of Romania had been received. Accumulated unpaid pledges amounted to €25,000 at the end of 2008. In 2009 88% of pledges had been received, while the figure for 2010 was slightly lower, with three months of the year remaining. At the time of the Meeting the total outstanding was €144,973. One Party has not paid its dues for over three years. In 2010, expenditure was likely to exceed income, but the reserves were sufficient to keep the Trust Fund in credit and the projected balance for the end of the year was €11,000.
78. Voluntary contributions had been received from France, Italy, Monaco and Spain. These had funded capacity building, training initiatives and the Survey Initiative project. Monaco had also made in-kind contributions towards the administration of the Secretariat. Other income included a rebate of VAT paid and bank interest.
79. The Chair commented that the financial situation was reasonably healthy but stressed the importance of Parties paying their contributions on time.

c. Report on the Supplementary Conservation Fund

80. The Executive Secretary presented the report on incomes and expenditures to the Supplementary Conservation Fund (2008-2010) (ACCOBAMS-MOP4/2010/Doc15), explaining that the balance of the account at the start of the Triennium was €47,000. Six projects (three in the Mediterranean and three in the Black Sea) had been funded and the fund had been partially replenished, leaving a balance of just €204. The Fund would need to be further replenished if more projects were to be financed and the Executive Secretary suggested that any further national contributions received in the course of the year should be used to this end.
81. The three Mediterranean projects were a pilot study of acoustic deterrent devices in Morocco in seven locations, an abundance study in Lebanon and a project to reduce fisheries interactions in

Tunisia. The Black Sea projects concerned stranding networks and bycatch mitigation in Romania, Bulgaria and Georgia.

82. Morocco stressed that the modest amounts of funding provided for small projects could have a large local impact.
83. M. Gaby Khalaf (Lebanon) and M. Mohamed Hmani (Tunisia) presented the objectives and results of the projects implemented in their countries with financial support from the Supplementary Conservation Fund.
84. In Lebanon the project included surveys for cetaceans and training in photo-identification techniques using a new research vessel donated by Italy. Thanks to the funding provided by the Supplementary Conservation Fund, many activities related to cetacean conservation were being implemented, including education and awareness raising campaigns.
85. In Tunisia, the project involved in the implementation of a study that aimed to assess the degree of interaction between dolphins and to types of fishing gears: net for traditional fisheries and purse seine for small pelagic fisheries. This study concerned two regions in Tunisia. The Tunisian delegation presented, during the Meeting of the Parties to ACCOBAMS, a live Internet broadcast from Tunisia of an educational event, for the general public on the conservation of cetaceans. This event was co-organized with the IFAW, ACCOBAMS and National Association on Sustainable development and conservation of wild life.

d. Draft Implementation Priorities for the Period 2011-2013

86. The Executive Secretary introduced the draft Resolution 4.5 making reference to the table on the first page of the Annex listing conservation actions under the headings of research, monitoring and threat mitigation, capacity building and strategic planning.
87. The representative of Italy stressed that the priority ranking assigned to each action had a significant bearing on the choice of task managers of the Scientific Committee. He also stressed the importance of the issue of pollution in cetacean conservation.
88. The WDCCS representative stressed the significance of the threat from climate change to the cetaceans of the region, noting that they would be unable to migrate away from unfavourable change. He recommended that a new review of this matter in the context of ACCOBAMS could be achieved by a workshop.
89. The Chair of the Scientific Committee noted that the level of priority attributed to the various conservation actions listed in the Annex was not based on the advice of the Scientific Committee

and declared the Committee's availability to address this task in the future after having determined the appropriate criteria necessary to such ranking.

90. The Resolution 4.5 was **adopted** ([Annex X](#)).

Draft Resolution 4.6: Format for National Implementation Reports of the Agreement

91. The Executive Secretary presented the draft Resolution 4.6 (Format for National Implementation Reports of the Agreement) explaining that a system of online reporting had been tested for the first time this year and that efforts were being made to harmonize reporting requirements as far as possible with other international instruments dealing with cetaceans. It was hoped that online reporting would encourage more regular submission of data and keep to a minimum the burden on the Parties, since the Secretariat would complete parts of the reports in advance. The teething problems of the new system had been resolved thanks to the feedback from and cooperation of the Parties.
92. Chedly Rais presented the proposed new format for the online reporting system, emphasising that to avoid duplicating effort, data was being taken from other open sources, such as national reports to other Conventions and the MEDACES database. The data was clearly marked so that the national focal points could see that they were being requested simply to verify, and where necessary complete, the information entered in the system.
93. In view of the draft Resolution 4.6 "Format for National Implementation Reports", urging Parties to up-date the information provided at least once every year, Malta wished to note that such reporting requirements may be further burden to comply with especially, they add further to the normal reporting requests of Ministries.
94. The Meeting reviewed and amended the proposed format taking into account the comments and suggestions made by the delegates.
95. The Resolution was **adopted** at later stage, as Resolution 4.6 ([Annex X](#)).

Draft Resolution 4.7 on Commercial Whale-Watching Activities in the ACCOBAMS Area

96. The Executive Secretary introduced the subjects of commercial whale-watching activities and the related guidelines for implementing a Pelagos/ACCOBAMS label. An overview of whale-watching activities in the ACCOBAMS Area was contained in (ACCOBAMS-MOP4/2010/Inf11), with particular focus on three countries (Spain, Italy and France). Pilot projects funded by France were being developed in Tunisia and Morocco

97. ACCOBAMS had adopted whale-watching guidelines at MOP1 in 2002 and these had remained virtually unchanged since that time, and only minor changes were being proposed. It was stressed that the guidelines were meant to be illustrative and not prescriptive so that they could be adapted to local circumstances, the species concerned and the season (particularly if calves were present). It was also noted that in the Pelagos Sanctuary, the vessel exclusion zone around cetaceans had been set at 100 metres rather than 50 metres. Spanish legislation prescribed 60 metres. Portuguese legislation prescribed 50 metres in continental Portugal and 30 metres in Azores.
98. Fannie Dubois (from the ACCOBAMS Secretariat) presented Guidelines for implementing a label for commercial whale-watching, in particular draft logos, conditions of contract, composition of the Certification Committee as well as Procedure for adopting, delivering, controlling and revising the label. She said that worldwide whale-watching activities generated annual revenues of \$1 billion, an estimated 10 million people took part every year and 23 operators were present in the Mediterranean in 2005. There were potentially detrimental effects of non sustainable whale-watching activities such as habitat destruction and animals disturbance, consequently there is a need to control this activity and encourage operators to respect the Code of Good Conduct for whale watching.
99. Both ACCOBAMS and the three Parties to the Pelagos Sanctuary had considered introducing a labelling scheme and the ACCOBAMS Extended Bureau in consultation with the chair of Pelagos had decided to establish national certification committees. Guidelines for implementing a Pelagos / ACCOBAMS label for commercial whale-watching activities(Annex XI) shall be transmitted to the Pelagos Standing Committee, as it was decided during the Pelagos COP4.
100. A logo for the labelling scheme was being designed and contract conditions, both general and specific, together with penalties and cancellation clauses, were being drafted. Participating operators would be expected to undergo training and would have to be nature orientated. They would be asked to complete observation forms, cooperate with scientists by allowing them on board and join stranding networks.
101. The Chair concluded the discussion on this draft Resolution by saying that it appeared that Parties were generally content with the draft after the clarification of the legal definition of a number of terms.
102. The Resolution was **adopted** at later stage, as Resolution 4.7 ([Annex X](#)).

Draft Resolution 4.8: Contribution from ACCOBAMS to the implementation of the Marine Strategy Framework Directive

103. The Bureau had given the Chair of the Scientific Committee the task of examining the EU Marine Strategy to identify area of interest to and possible roles for ACCOBAMS. An initial report had

been presented to the Extended Bureau Meeting in Rome (2010) highlighting the descriptors for good environmental status of greatest relevance to ACCOBAMS.

104. Several delegates said that ACCOBAMS could play a significant role in implementing the EU Marine Strategy Framework Directive. The Chair stressed that the essential point was to establish the link and synergies between the EU Strategy and the ACCOBAMS work programme.
105. The Resolution was **adopted** at later stage, as Resolution 4.8 ([Annex X](#)).

Draft Resolution 4.10 - Ship Strikes on Large Whales in the Mediterranean Sea

106. The Chair explained that the aim was to encourage the reporting of ship strike incidents and for ACCOBAMS to enhance its cooperation with other organizations such as the IMO. The recommendations before the Meeting arose from a joint workshop organized in conjunction with the IWC. ACCOBAMS-MOP4/2010/Inf41 contained guidance on how to minimize the risk of ship strikes involving cetaceans.
107. Monaco delegation declared that the Principality would organise, during the triennium, and in collaboration with ACCOBAMS Secretariat, a workshop to promote the REPCET system among maritime companies.
108. The Observer from the IWC pointed out that research was still in the early stages of data collection and analysis and that proposed mitigation measures would be developed in due course. Reporting, recording and investigating strike incidents were important and it was stressed that there was no intention of blaming ship operators involved in collisions with cetaceans. The Strait of Gibraltar was proposed as test areas, and this was welcomed by Spain. The French delegation had also proposed the Pelagos Sanctuary as a test area.
109. Malta stressed that some Parties would need assistance in building capacity to undertake necropsies and the Executive Secretary undertook to organize training sessions.
110. The Executive Secretary of UNEP/CMS pointed to recent initiatives under the parent Convention including COP Resolutions on human induced impacts on cetaceans which included ship strikes. She suggested adding a reference to this in the preamble or including CMS and ASCOBANS in the list of Partners.
111. The delegation of Monaco expressed the procedure undertaken among IMO for the creation of a Particularly Sensitive Sea Area (PSSA) for the Pelagos Sanctuary and welcomed the mobilization of the three Parties Italian, French and Monegasque in this process.

112. The Chair summarised by saying that Parties appeared content with the draft Resolution subject to minor amendments.

113. The Resolution was **adopted** at later stage, as Resolution 4.10 ([Annex X](#)).

Draft Resolution 4.11: Population structure study

114. The Secretariat introduced draft Resolution 4.11, which urged the Parties to support genetic studies that gave information on population structure.

115. After minor changes and a mention of other research methodologies, the Resolution 4.11 was **adopted** ([Annex X](#)).

Draft Resolution 4.12: Comprehensive cetacean population estimates and distribution in the ACCOBAMS area

116. The draft Resolution 4.12, presented by the Secretariat, was welcomed by several delegations in that it addressed an action that has high priority.

117. The French representative mentioned future collaboration between the French Agency for Marine Protected Areas, RAC/SPA, ACCOBAMS and IUCN, for the surveying of canyon habitats in the Mediterranean region, based on the French experience. He added that France was supporting the present ACCOBAMS Survey Initiative by appointing a project manager to help in developing the survey and fund raising.

118. The Italian delegate offered to share the Italian experience and provide data for an aerial survey. He added that Italy had decided to make a voluntary €100,000 contribution to ACCOBAMS to support the use of aerial surveys within the Survey Initiative.

119. The representative of Monaco reminded the delegates of the words of His Serene Highness Prince Albert II on how important these estimates were and the need to mobilise funding.

120. On the basis of the Memorandum of Cooperation between the Government of the Republic of Croatia and the Government of the Italian Republic, a joint declaration was signed in September 2010 , expressing willingness of two countries to further develop the scientific cooperation in the field of monitoring and assessing presence and abundance of cetaceans in the frame of ACCOBAMS.

121. The Resolution was **adopted** at later stage, as Resolution 4.12 ([Annex X](#)).

Draft Resolution 4.13: conservation of the Mediterranean short-beaked common dolphin

122. The Secretariat presented the draft Resolution 4.13 that resulted from a recommendation made by the Scientific Committee on this species. The Executive Secretary paid tribute to ACCOBAMS Partners Ocean Care and WDCS for their attention to this issue.
123. A lengthy discussion followed on conveying concern about the conservation of this species to the EU and on the need to initiate dialogue with this body, either through EU Member Parties or via the Secretariat and/or the Scientific Committee.
124. The need to properly apply fisheries laws and reconcile fishermen and dolphins was also mentioned.
125. The Resolution was **adopted** at later stage, as Resolution 4.13 ([Annex X](#)).

Draft Resolution 4.15: Marine Protected Areas of importance for cetacean conservation

126. The Executive Secretary introduced draft Resolution 4.15 addressing the criteria for the selection of marine protected areas. The Secretary said that the draft used the MOP3 documents map and that the list of sites could be updated.
127. The draft Resolution 4.15 was updated in the light of new data from Albania, Croatia, Egypt, Greece and Italy.
128. The representative of Lebanon recalled that in Lebanon, there was a Marine protected Area "Ile des Palmiers", but that in its creation text, there was no specific reference to cetaceans even if their protection is ensured by different tools. The representative of Lebanon was committed to working with relevant authorities to include, in the creation text, Guidelines recommended by ACCOBAMS for the protection and conservation of cetaceans.
129. The representative of Malta pointed out that such large areas were onerous for small countries like Malta and that smaller areas would be more manageable. The delegate from Tunisia supported the creation of MPAs within a framework of specific studies required by relevant Parties.
130. The Chair of the Scientific Committee referred to the initiative developed by UNEP/MAP in collaboration with the EC for declaring marine protected areas in zones beyond national jurisdiction, which might be very important for marine mammals.
131. Responding to a request about mentioning in the Annex to the draft Resolution 4.15 studies that showed the importance of these areas, the Executive Secretary stated that this could rather be posted on the website or transmitted to the Parties.

132. The representative of the GFCM suggested developing a wider consultation mechanism and said that his organisation was ready to share its experience in the field.
133. The Resolution was **adopted** at later stage, as Resolution 4.15 ([Annex X](#)).

Draft Resolution 4.16: Guidelines for a coordinated cetacean stranding response

134. The Secretary presented the document "Live stranding: Rescue capacity and triage" (ACCOBAMS-MOP4/2010/Doc26) and "The network of tissue banks within ACCOBAMS Agreement: present situation, national initiatives and future perspectives" (ACCOBAMS-MOP4/2010/Inf42) and the "Guidelines for the establishment of a system of Tissue Banks within the ACCOBAMS Area and the ethical code" (Reference document: ACCOBAMS-MOP3/2007/Doc30); she insisted on the importance of the administrative element in emergency plans.
135. The delegates were informed about the Italian tissue bank in Padua, presently leading the network of tissue banks within ACCOBAMS, and about the French tissue bank in La Rochelle.
136. The Portuguese representative gave information about the Portuguese tissue bank, run by the Portuguese Wildlife Society. Efforts were being made to improve its efficiency and attract additional funding. This bank was collaborating with the Galicia, Padua and La Rochelle tissue banks.
137. Many delegates asked for collaboration between tissue banks and capacity building as regards tissue sampling and treatment to be promoted.
138. The Resolution was **adopted** at later stage, as Resolution 4.16 ([Annex X](#)).

Draft Resolution 4.19: Model legislation for the conservation of cetaceans

139. The Executive Secretary introduced draft Resolution 4.19 explaining that this represented a tool for countries wanting to strengthen their legislation.
140. The Meeting decided to replace the word "legislation" by "measures" in the Title of the Resolution and in the Resolution text as appropriate.
141. The draft Resolution 4.19, as orally amended, was **adopted** ([Annex X](#)).

e) Adoption of the budget for the period 2011-2013

Draft Resolution 4.3: Financial and administrative matters for 2011-2013

142. The Secretariat presented draft Resolution 4.3 and the explanatory note on the draft budget.

143. The delegate of France declared that despite the general instructions to agree only to budget increases in line with national inflation of 2-3 %, it would be possible to accept the proposed rise of about 5% in the French contribution because of the importance of the work carried out by ACCOBAMS and given the fact that the sums involved were modest.
144. Similarly, the Spanish representative said that despite the budget freeze for other conventions, he could accept the proposed level of increase taking into consideration the importance of the issues to be addressed in the next triennium.
145. The Italian delegation said that in the light of the financial constraints, it had a clear mandate to keep increases in the contributions to a minimum. However, Italy recognised its role in ACCOBAMS and could therefore accept the 3,000 Euros annual increase. It highlighted that there was a lack of financial commitment from many ACCOBAMS Parties since 80% of the budget was being met by just three Parties.
146. The Greek delegate offered to increase the ordinary annual contribution of his country to the Trust Fund up to 20,000 € ¹.
147. It was pointed that in some cases (Romania for instance), the contribution to the budget increase substantially. The Secretariat explained that this situation was generated mainly by changes in 2010 of UN Key for some ACCOBAMS Parties
148. The importance of Parties paying their contributions in full and on time was stressed. Italy suggested that Parties paying the minimum contributions should make a single payment at the beginning of the triennium and that Parties be given a firm deadline to clear any arrears. Some Parties proposed that flexibility in terms of periodicity of payments should be kept as financial rules and procedures may vary from one country to another.
149. The Resolution was **adopted** at later stage, as Resolution 4.3 ([Annex X](#)).

Agenda Item 13 – Proposal of Amendments to the Agreement

150. The Executive Secretary drew the Meeting's attention to the "Proposal from Portugal for the extension of ACCOBAMS geographical scope" (ACCOBAMS-MOP4/2010/Doc29), the "Proposal from Spain for the extension of ACCOBAMS geographical scope" (ACCOBAMS-MOP4/2010/Doc30), the Draft Resolution A/4.1 and the "Legal and practical implications of the extension of the Agreement geographical scope" (ACCOBAMS-MOP4/2010/Inf15). A letter from the European Commission supporting the proposal to extend the ACCOBAMS Agreement Area was also circulated. Portugal and Spain were then asked to explain their proposal.

¹ subject to Greek Government approval

151. Portugal stated that it had always been its intention to apply ACCOBAMS to the waters under its jurisdiction. This made good sense administratively as well as ecologically because of Portugal's closer affinity of its cetacean populations to those of Mediterranean than to the North Sea and the Baltic.
152. Spain also said that the cetaceans found off its North West and North coasts were more closely related to the populations of Portugal than those of Northern European Seas. There would also be conservation benefits in applying the provisions of ACCOBAMS to all cetacean populations of the jurisdictional waters of Spain and Portugal. Administratively, it made more sense to have a single regime and a single Agreement to implement, consistent with the EU Habitats Directive applying to all and not just small cetaceans. The Spanish representative concluded his remarks by stating that it had never been his country's intention to accede to ASCOBANS, while this Agreement did not cover all cetacean species.
153. France, the only country that was Party to both ASCOBANS and ACCOBAMS, understood the rationale of Spain and Portugal wanting to have a single Agreement covering all their waters but voiced concern that the extension as proposed would lead to an overlap of the Areas of ACCOBAMS and ASCOBANS and he wanted to examine the legal and governance implications of this.
154. Several Parties said that they were content to support the proposed extension given the fact that the two countries most directly affected had initiated the move. Morocco expressed its objection to this extension of the Agreement.
155. Replying to a question from the Italian delegation who asked whether the extension would have any financial implications, the Executive Secretary said that as the number of Parties was not affected there should be none.
156. The Executive Secretary of UNEP/CMS fully understood the desire of Spain and Portugal to have a single Agreement applying to their waters and for it to cover all cetaceans. She pointed out that ASCOBANS had not excluded the possibility of extending its species range and had an informal working group which dealt with large cetaceans. When ASCOBANS had extended its Agreement Area, it had done so in full consultation with ACCOBAMS and with Spain, Portugal and Ireland in order to facilitate their accession. In the light of the "Future Shape" process looking into options to restructure the entire CMS Family, the Advisory Committee of ASCOBANS and the parent Convention urged that ACCOBAMS Parties defer consideration of the extension until after the next CMS COP when the outcome of the review would be known. There were also possible legal complications with two separate Agreements covering the same area which might implicate the

International Law of the Sea. Consideration might also be given to the feasibility of merging the two Agreements at some time in the future.

157. The Legal Adviser felt that the extension presented no legal problems as the overlap was theoretical given that neither Spain nor Portugal was Party to ASCOBANS. Given its coverage of all cetacean species and its far clearer provisions concerning the prohibition of lethal take, he felt ACCOBAMS was the more effective instrument. The extension also would not prevent the two Agreements from cooperating and indeed might even encourage them to do so. Spain concurred that the overlap was a theoretical problem and pointed to the fact that many other instruments overlapped such as the London and Barcelona Conventions without resulting in any difficulties.
158. The representative of Portugal concurred with the opinion expressed by the Legal Adviser and also mentioned the importance of the feasibility of merging the two Agreements in a near future. But given the different scopes of the two instruments this process may take more time than expected and, in the meantime, the extension of the ACCOBAMS geographical area into the Portuguese continental EEZ would allow the inclusion of all cetacean populations present in this area into one agreement that already covers the south part of the country.
159. The Chair concluded that the consensus of the Parties was that the draft Resolution should be put forward for adoption, and he took note of the questions raised by France concerning governance and the request from the Executive Secretary of CMS that the decision be deferred until MOP5 after the conclusion of the Future Shape process.
160. The Resolution was **adopted** as Resolution A/4.1 ([Annex X](#)).

Agenda Item 14 - Adoption of Resolutions

161. In addition to the Resolutions adopted under the above Agenda items, the Meeting reviewed and **adopted** the following Resolutions ([Annex X](#)):

ACCOBAMS-MOP4/2010/Res4.9	Fisheries interactions with cetaceans
ACCOBAMS-MOP4/2010/Res4.14	Climate change
ACCOBAMS-MOP4/2010/Res4.17	Guidelines to address the impact of anthropogenic noise on cetaceans in the ACCOBAMS area
ACCOBAMS-MOP4/2010/Res4.18	Guidelines on the granting of exceptions to Article II, paragraph 1, for the purpose of non-lethal in situ research in the Agreement area
ACCOBAMS-MOP4/2010/Res4.21	ACCOBAMS logos: conditions for use

162. Referring to Resolution 4.9, the IUCN representative stressed that he would caution against being too prescriptive in specifications for acoustic deterrent devices, as the 3 devices covered by the two

sets of specifications in the Annex to draft Resolution 4.9 have only been shown to be effective in reducing bycatch of harbor porpoises. It is noted that ICES, on request of the EU Commission, has recently conducted a review of EU Council Regulation 812/2004, concerning inter alia the use of acoustic deterrent devices to reduce bycatch of small cetaceans, and that the advice provided to the EU Commission (<http://www.ices.dk/committe/acom/comwork/report/asp/advice.asp?Region=-1&Species=218&Period=305&submit1=Submit+Query&mode=2>) could be of value to ACCOBAMS in its deliberations.

Agenda Item 15: Other business

163. No other business was raised.

Agenda Item 16: Date and venue of the Fifth Meeting of the Parties

164. Offer was received from the delegation of Morocco to host the next MOP of ACCOBAMS (November, 2013), subject to the final approval of its Government.

165. The Meeting expressed its gratitude to the Morocco delegation for its kind and generous offer.

166. The Resolution 4.23 was **adopted** ([Annex X](#)).

Agenda Item 17: Adoption of the Report of the Meeting

167. The Meeting reviewed the draft report prepared by the Secretariat and **adopted** it as orally amended.

168. The Meeting **adopted** also the Resolution 4.22 "Tribute to organizers" ([Annex X](#)).

Agenda Item 18: Closure of the Meeting

After the exchange of the usual civilities, the Chairperson closed the Meeting at 7.00 pm on Friday 12th November 2010.

ANNEX I

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ANNEX II

<p>REVISED RULES OF PROCEDURE OF THE MEETING OF THE PARTIES OF THE AGREEMENT ON THE CONSERVATION OF CETACEANS OF THE BLACK SEA, THE MEDITERRANEAN SEA AND CONTIGUOUS ATLANTIC AREA (ACCOBAMS)</p>
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PURPOSE

Article 1

1. These rules of procedure shall apply to any Session of the Meeting of the Contracting Parties to the Agreement on the Conservation on Cetaceans of the Black sea, Mediterranean Sea and contiguous Atlantic area, convened in accordance with article III of the Agreement.
2. Insofar as they are applicable, these rules shall apply *mutatis mutandis* to any other meeting held in the framework of the Agreement on the Conservation on Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area.

DATE AND PLACE OF MEETINGS

Article 2

1. Ordinary sessions of the Meeting of the Parties shall be held at intervals of not more than three years.
2. The Meeting of the Parties shall take place in the country chosen by the previous Meeting of the Parties on the basis of a formal invitation that should have been issued to this effect by the responsible authority of that country. If more than one Party issues an invitation to host the next session of the Meeting of the Parties, and two or more invitations are maintained after informal consultations, the Meeting of the Parties shall decide on the venue of the next session by secret ballot.
3. If no invitation has been received, the Meeting of the Parties shall be held in the country where the Secretariat has its seat, unless other appropriate arrangements are made by the Secretariat of the Agreement or the Secretariat of the Convention.
4. Extraordinary sessions of the Meetings of the Parties shall be convened by the Agreement Secretariat on the written request of at least two thirds of the Parties.

DELEGATES, CREDENTIALS, OBSERVERS

Article 3

Representatives

1. A Party to the Agreement (hereafter referred to as a "Party"¹) shall be entitled to be represented at the Meeting by a delegation consisting of a Head of Delegation and such Alternative Representatives and Advisers as the Party may deem necessary.
2. The Representative of a Party shall exercise the voting rights of that Party. In his/her absence, an Alternative Representative of that Party shall act in his place.

¹ See Articles I, paragraph 3.i), and XIV of the Agreement. A Party is a State which has deposited with the Government of the Principality of Monaco its instrument of ratification, acceptance, approval or accession in due time before the Meeting.

3. States or regional economic integration organizations that have ratified, accepted or approved the Agreement or have signed it without reservations in respect of ratification, acceptance or approval or have acceded to it are represented at the Meetings of the Parties and exercise their voting rights, even though the Agreement has not yet entered into force for them.
4. Logistic and other limitations may require that no more than four delegates of any Party be present at a plenary session. The Secretariat shall notify Parties, observers and other participants of any such limitations in advance of the Meeting.

Article 4

Credentials

1. The Representative or any Alternative Representative of a Party shall, before exercising the voting rights of the Party, have been granted powers by, or on behalf of, a proper authority, such as the Head of State, the Head of Government or the Minister of Foreign Affairs or the head of an executive body of any regional economic Organization, enabling them to represent the Party at the Meeting and to vote.
2. Such credentials shall be submitted to the Secretariat of the Agreement at the beginning of the Meeting.
3. A Credentials Committee of not more than five representatives shall examine the credentials and shall report thereon to the Meeting. Pending a decision on their credentials, delegates may participate provisionally in the Meeting.
4. If credentials are submitted in a language other than one of the working languages of the Meeting (French and English), they shall be accompanied by a suitable translation into one of these two languages to permit their efficient validations by the Credentials Committee.

Article 5

Observers²

1. The United Nations, its Specialized Agencies, the International Atomic Energy Agency and any State not a Party to the Agreement may be represented at the Meeting by observers
2. Any Body or Agency technically concerned *inter alia* with the conservation of cetaceans and fisheries management, which is either:
 - a) an international Agency or Body; or
 - b) an international non-governmental Agency or body, or a national governmental Agency or body; or
 - c) a national non-governmental Agency or Body which has been approved for this purpose by the State in which it is located;

and which has informed the Secretariat of the Agreement of its desire to be represented at the Meeting by observers, shall be permitted to be represented unless, for those referred to in paragraph 2b and 2c, at least one-third of the Parties present object.

3. Bodies and Agencies desiring to be represented at the Meeting by observers shall submit the name of their representatives and in the case of Bodies and Agencies, referred to in paragraph 2b and

² See Agreement, Article III, paragraph 4

2c, of this Article, evidence of the approval of the State in which they are located, to the Secretariat of the Agreement prior to the opening of the Meeting.

4. Logistic and other limitations may require that no more than two observers from any non-Party State, Body or Agency be present at the Meeting. The Secretariat shall notify Parties, observers and other participants of any such limitations in advance of the Meeting.

AGENDA

Article 6

1. The Secretariat shall prepare the provisional agenda of each Meeting, in consultation with the Convention Secretariat and the Sub Regional Coordination Units.
2. The provisional agenda of each ordinary session of the Meeting of the Parties shall include, as appropriate:
 - a) Items arising from the articles or the Annexes of the Agreement;
 - b) Items, the inclusion of which has been decided at a previous Meeting or which emanate from decisions taken at a previous Meeting;
 - c) Items referred to in paragraph 6 of the present article;
 - d) Any item proposed by a Party, the Scientific Committee or the Secretariat.
3. The Secretariat shall, in consultation with the Bureau, include any item that has been proposed by a Party and has been received by the Secretariat after the provisional agenda has been produced, but before the opening of the Meeting, in a supplementary provisional agenda.
4. The Meeting of the Parties shall examine the provisional agenda together with any supplementary provisional agenda. When adopting the agenda, it may add, delete, defer, or amend items. Only items, which are considered by the Meeting of the Parties to be urgent and important, may be added to the agenda.
5. The provisional Agenda for an extraordinary session of the Meeting of the Parties shall consist only of those items proposed for consideration in the request for this session. The provisional agenda and any necessary supporting documents shall be distributed to the Parties at the same time as the invitation to the extraordinary session.
6. Any item of the agenda of an ordinary session of the Meeting of the Parties, consideration of which has not been completed at the session, shall be included automatically in the agenda of the next session, unless otherwise decided by the Meeting of the Parties.

Article 7

Documents

The documents for each ordinary session of the Meeting of the Parties, as per Article 6 paragraph 5 and proposals received from the Parties, as per Article 12 of the Rules of Procedure, shall be distributed to the Parties in the two working languages by the Secretariat at least sixty days before the opening of the Meeting.

BUREAU

Article 8

1. At opening session of each ordinary Meeting, the acting Chairperson, or in the absence of the Chairperson, a representative of the same Party or in its absence the Head of the Delegation of the

host country of the Meeting of the Parties, shall preside until the Meeting of the Parties has elected its Chairperson.

2. At the commencement of the first sitting of each ordinary Meeting³, a Chairperson and a maximum of four Vice Chairpersons shall be elected from among the representatives of the Parties present at the Meeting, based on informal consultations conducted by the Secretariat.
3. The Chairperson shall participate in the Meeting in that capacity and shall not at the same time exercise the rights of a representative of a Party. The Party concerned shall designate another representative who shall be entitled to represent the Party in the Meeting and to exercise the right to vote.
4. If the Chairperson and/or one of the Vice-Chairpersons resign or are otherwise unable to complete the assigned term of office or to perform the functions of the office, a representative of the same Party shall be named by the Party concerned to replace the said officer for the remainder of that office's mandate.
5. For the purpose of the Meeting of the Parties and the Meeting of the Bureau, and throughout session, one of the Vice Chairpersons will be Reporter.

RULES OF ORDER AND DEBATE

Article 9

Powers of Presiding Officer and Vice-Presiding

1. In addition to exercising powers conferred elsewhere in these Rules, the Presiding Officer shall at plenary sessions of the Meeting:
 - a) open and close the session;
 - b) direct the discussions;
 - c) ensure the observance of these rules;
 - d) accord the right to speak;
 - e) put questions to the vote and announce decisions;
 - f) rule on points of order; and
 - g) subject to these Rules, have complete control of the proceedings of the Meeting and the maintenance of order.
2. The Presiding Officer may, in the course of discussion at a plenary session of the Meeting, propose to the Meeting of the Parties:
 - a) time limits for speakers;
 - b) limitation of the number of times the members of a delegation or the observers from a State not a Party, body or agency may speak on any question;
 - c) the closure of the list of speakers;
 - d) accord the right of reply to any delegate after the closure of the speakers;
 - e) the adjournment or the closure of the debate on the particular subject or question under discussion; and
 - f) the suspension or adjournment of the session.
3. Without prejudice to Article 8, paragraph 4, for the debates the Presiding officer may be supply by the Vice-Presiding.

³ See Agreement, Article VI, paragraph 1

Article 10

Seating, Quorum

1. Delegations shall be seated in accordance with the alphabetical order of the names of the Parties in the French language.
2. A quorum for plenary sessions of the Meeting shall consist of more than one-half of the Parties having delegations at the Meeting. No plenary session shall take place in the absence of a quorum.

Article 11

Right to Speak

1. The Presiding Officer shall call upon speakers in the order in which they signify their desire to speak, with precedence given to the delegations of the Parties.
2. A delegate or observer may speak only if called upon by the Presiding Officer, who may call a speaker to order if the remarks are not relevant to the subject under discussion.
3. A speaker shall not be interrupted except on a point of order. The speaker may, however, with the permission of the Presiding Officer, give way during their speech to allow any delegate or observer to bring complement on a particular point in his speech.
4. The Chairperson of a committee or working group may be accorded precedence for the purpose of explaining the conclusions arrived at by that committee or working group.

Article 12

Submission of Proposals for Amendment of the Agreement and its Appendices

1. As a general rule, subject to any provisions of the Agreement itself,
 - a) proposals shall have been communicated at least 150 days before the session to the Secretariat, which shall have circulated them to all Parties in the working languages of the Meeting⁴,
 - b) proposals arising out of discussion of the foregoing may be discussed at any plenary session of the Meeting provided copies of them have been circulated to all delegations not later than the day preceding the session.
2. The Presiding Officer may also permit the discussion and consideration of urgent proposals arising after the period prescribed with the subparagraph a) of this Article provided that they relate to proposed amendments which have been circulated in accordance with the subparagraph b) of this Article and that their consideration will not unduly inhibit the proceedings of the Meeting. The Presiding Officer may, in addition, permit the discussion of motions as to procedures, even though such motions have not been circulated previously.
3. After a proposal has been adopted or rejected by the Meeting it shall not be reconsidered unless a two-thirds majority of the Representatives participating in the Meeting so decide. Permission to speak on a motion to reconsider a proposal shall be accorded only to a delegate from each of two Parties wishing to speak against the motion, after which the motion shall immediately be put to the vote.

⁴ See Agreement, Article X, paragraph 2

Article 13

Point of Order

1. During the discussion of any matter, a delegate may rise to a point of order, and the Presiding Officer in accordance with these Rules shall immediately decide the point of order. A delegate may appeal against any ruling of the Presiding Officer. The appeal shall immediately be put to the vote, and the decision of the Presiding Officer shall be maintained unless a majority of the Representatives present and voting otherwise decide. A delegate rising to a point of order may not speak on the substance of the matter under discussion.
2. The following motions shall have precedence in the following order over all other proposals or motions before the Meeting:
 - a) to suspend the sitting;
 - b) to adjourn the sitting;
 - c) to adjourn the debate on the particular subject or question under discussion;
 - d) to close the debate on the particular subject or question under discussion.

VOTING

Article 14

Methods of Voting

1. Without prejudice to the provisions of Article 4, paragraph 1, each delegation shall have one vote. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with the number of votes equal to the number of their member States which are Parties. In such case, the member States of such organizations shall not exercise their right individually⁵.
2. Representatives of Parties which are three or more years behind in paying their subscriptions on the date of the opening session of the Meeting of the Parties shall not be eligible to vote. However, the Meeting of the Parties may allow such Parties to continue to exercise their right to vote if it is satisfied that the delay in payment arises from exceptional circumstances.
3. The Meeting shall normally vote by show of hands, but any Representative may request a roll-call vote. The roll-call vote shall be taken in the French alphabetical order. The Presiding Officer may require a roll-call vote on the advice of the tellers where they are in doubt as to the actual number of votes cast and this is likely to be critical to the outcome.
4. All votes in respect of the election of officers or of prospective host countries for the next Meeting shall be by secret ballot and, although it shall not normally be used, any Representative may request a secret ballot for other matters. If seconded, the question of whether a secret ballot should be held shall immediately be voted upon. The motion for a secret ballot may not be conducted by secret ballot.
5. Voting by roll-call or by secret ballot shall be expressed by "Yes", "No" or "Abstain". Only affirmative and negative votes shall be counted in calculating the number of votes cast.
6. Procedural decisions are taken by a simple majority.

⁵ See Agreement, Article III, paragraph 5.

7. If votes are equal, a second vote shall be taken. If the vote is also equal, the motion or amendment shall not be carried.
8. The Presiding Officer shall be responsible for the counting of the votes and shall announce the result. Tellers appointed by the Secretariat may assist the Presiding Officer.
9. After the Presiding Officer has announced the beginning of the vote, it shall not be interrupted except by a Representative on a point of order in connection with the actual conduct of the voting. The Presiding Officer may permit Representatives to explain their votes either before or after the voting, and may limit the time to be allowed for such explanations.

Article 15

Majority

Except where otherwise provided for under the provisions of the Agreement, these Rules or the Terms of Reference for the Administration of the Trust Fund, all votes on procedural matters relating to the forwarding of the business of the Meeting shall be decided by a simple majority of votes cast, while all other decisions shall be taken by a two-thirds majority of votes cast.

Article 16

Procedure for Voting on Motions and Amendments

1. A delegate may move that parts of a proposal or of an amendment be voted on separately. If objection is made to the request for such division, the motion for division shall be voted upon first. Permission to speak on the motion for division shall be accorded only to a delegate from each of two Parties wishing to speak in favour of and a delegate from each of two Parties wishing to speak against the motion. If the motion for division is carried, those parts of the proposal or amendment that are subsequently approved shall be put to the vote as a whole. If all operative parts of the proposal or the amendment have been rejected, the proposal or the amendment shall be considered to have been rejected as a whole.
2. When an amendment is moved to a proposal, the amendment shall be voted on first. When two or more amendments are moved to a proposal, the Meeting shall vote first on the amendment furthest removed in substance from the original proposal and then on the amendment next furthest removed there from, and so on until all amendments have been put to the vote. When, however, the adoption of one amendment necessarily implies the rejection of another amendment, the latter amendment shall not be put to the vote. If one or more amendments are adopted, the amended proposal shall then be voted upon. A motion is considered an amendment to a proposal if it merely adds to, deletes or revises part of that proposal.
3. If two or more proposals relate to the same question, the Meeting shall, unless it decides otherwise, vote on the proposals in the order in which they have been submitted. The Meeting may, after voting on a proposal, decide whether to vote on the next proposal.

Article 17

Elections

1. If in an election to fill one place no candidate obtains the required majority in the first ballot, a second ballot shall be taken restricted to the two candidates obtaining the largest number of votes. If in the second ballot the votes are equally divided, the Presiding Officer shall decide between the candidates by drawing lots.
2. If in the first ballot there is a tie amongst candidates obtaining the second largest number of votes, a special ballot shall be held amongst them to reduce the number of candidates to two.

3. In the case of tie amongst three or more candidates obtaining the largest number of votes in the first ballot, a special ballot shall be held amongst them to reduce the number of candidates to two. If a tie then results amongst two or more candidates, the Presiding Officer shall reduce the number to two by drawing lots, and a further ballot shall be held in accordance with paragraph 1 of this Article.

SECRETARIAT

Article 18

1. The Agreement Executive Secretary shall be the Secretary of the Meeting of the Parties.
2. The Secretariat shall provide and direct the staff as required by the Meeting of the Parties.

Article 19

1. The Secretariat shall⁶ :
 - a) Arrange for interpretation at the Meeting;
 - b) Prepare, receive, translate, reproduce and distribute the documents which will be useful during the Meeting;
 - c) Draft the report of the Meeting, under the guidance of the Reporter, for consideration by the Bureau first and for final approval by the Meeting of the Parties;
 - d) Make and arrange for keeping of sound recordings of the Meeting;
 - e) Arrange for the custody and preservation of the documents of the Meeting
 - f) Publish and circulate the official documents which result from the Meeting;
 - g) Generally perform all other work that the Meeting of the Parties may require.

LANGUAGES AND RECORDS

Article 20

Official and Working Languages

1. French and English shall be the official and working languages of the Meetings.
2. The official documents of the Meeting shall be distributed in those two languages.
3. Speeches made in any of the working languages shall be interpreted into the other working language.

Article 21

Other Languages

1. A delegate may speak in a language other than a working language. He shall be responsible for providing interpretation into a working language, and interpretation into the other working language may be based upon that interpretation.

⁶ See Article IV of the Agreement.

2. Any document submitted to the Secretariat in any language other than a working language shall be accompanied by a translation into one of the two working languages, this translation being trustworthy.

Article 22

Report

1. The report of the Meeting shall be circulated to all Parties in the official languages of the Meeting.
2. Committees and working groups shall decide upon the form in which their report shall be presented.

PUBLICITY OF DEBATES

Article 23

Plenary Sessions

All plenary sessions of the Meeting shall be open to the public, except that in exceptional circumstances the Meeting may decide, by a two-thirds majority of Representatives present and voting, that any single session be closed to the public.

Article 24

Sessions of Committees and Working Groups

As a general rule, sessions of committees and working groups shall be limited to the representatives and to observers invited by the Chairpersons of the committees or working groups.

THE BUREAU, OTHER COMMITTEES AND WORKING GROUPS

Article 25

1. During the Meeting of the Party, the Bureau and the Reporter of the Meeting shall meet as often as necessary on request of his Chairman.

Article 26

Credentials Committee and Working Groups

1. In addition to the Credentials Committee, the Meeting of the Parties may establish working groups as may be necessary to enable them to carry out their functions. They shall define the terms of reference and composition of each working group, the size of which shall be limited according to the number of places available in assembly rooms.
2. The Meeting of the Parties may decide that any such working group may meet in the period between ordinary Meetings.
3. The Credentials Committee and each working group shall elect their own officers.
4. Insofar as they are applicable, these Rules shall apply *mutatis mutandis* to the proceedings of committee and working groups; however interpretation may not be provided in sessions of the committee and working groups.

Article 27

Scientific Committee

The Meeting of the Parties shall elect the qualified experts representing the regions in the Scientific Committee, and their alternates, upon proposition of the delegates of the regions after informal consultations with the Sub-Regional Coordination Units.

AMENDMENT

Article 28

These Rules may be amended as required by decision of the Meeting.

ANNEX III

AGENDA

- 1. Welcome addresses**
- 2. Granting the right to vote**
- 3. Election of the Bureau**
- 4. Adoption of the Agenda**
- 5. Admission of Observers**
- 6. Establishment of the Credentials Committee**
- 7. Opening Statements**
- 8. Progress reports:**
 - a) Report of the Depositary
 - b) Report of the Secretariat
 - c) Report of the Bureau
 - d) Report of the Sub-Regional Coordination Units
 - e) Report of the Chair of the Scientific Committee
- 9. Report by the Credentials Committee**
- 10. National reports**
 - a) Synthesis of the National Implementation Reports of the Parties
 - b) Range States activities
- 11. Institutional dispositions**
 - a) Status of the Secretariat
 - b) Appointment of Scientific Committee members
 - c) Status of ACCOBAMS Partners
- 12. Working Program and Financial arrangements**
 - a) Report by the Fund Management Controller
 - b) Report by the Secretariat on the budgetary matters
 - c) Report on the Supplementary Conservation Fund
 - d) Draft implementation priorities for the period 2011-2013
 - e) Adoption of the budget for the period 2011-2013
- 13. Proposal of Amendments to the Agreement**
- 14. Adoption of Resolutions**
- 15. Other business**
- 16. Date and venue of the Fifth Meeting of the Parties**
- 17. Adoption of the Report of the Meeting**
- 18. Closure of the Meeting**

ANNEX IV

REPORT OF THE DEPOSITARY

Since the Third Meeting of the Contracting Parties that took place in Dubrovnik 22nd – 25th October 2007, and the ratification of Algeria that took place the 1st December 2007, the Depositary had recorded the deposit of the instruments of two Riparian States: Montenegro and Egypt.

The Depositary had informed all the Contracting Parties, the European Community, the Treaty section of the United Nations, the Permanent Secretariats of ACCOBAMS and of CMS of those accessions and the dates of entry into force of the Agreement for each of those Countries.

In addition the Depositary, through the various diplomatic officers of the Principality of Monaco, had supported the action taken by the Permanent Secretariat to raise awareness among the other Riparian States and the European Commission with a view to their accession.

Finally, H.S.H Prince Albert II of Monaco has personally addressed a letter to the Presidents of Bosnia Herzegovina, Israel, Russian Federation and Turkey inviting them to become Contracting Parties of the Agreement and to participate, as observers, at the Fourth Meeting of the Parties in Monaco, 9th - 12th November 2010.

The following table presents the status of the Contracting Parties as of the 23rd June 2010.

COUNTRY	SIGNATURES	RATIFICATIONS		ENTRY INTO FORCE
	Dates	Tool	Deposit of the tool	
ALBANIA	24/11/1996	25/05/2001	03/07/2001	01/10/2001
ALGERIA		19/03/2007 (AA)***	25/09/2007	01/12/2007
BOSNIA-HERZEGOVINA				
BULGARIA	16/09/1999	23/09/1999	10/11/1999	01/06/2001
CROATIA	24/11/1996	03/05/2000	10/07/2000	01/06/2001
CYPRUS	24/11/1996	30/01/2006	14/02/2006	01/05/2006
EGYPT		04/03/2010	19/04/2010	01/07/2010
EUROPEAN UNION (1)				
FRANCE	24/11/1996	26/02/04 (AA)***	10/03/2004	01/06/2004
GEORGIA	24/11/1996	30/03/2001	31/05/2001	01/06/2001
GREECE	24/11/1996*	24/11/1996*	24/11/1996*	01/06/2001
ISRAEL				
ITALY	24/11/1996	10/02/2005	24/06/05	01/09/2005
LEBANON		05/05/2004(A)**	13/12/2004	01/03/2005
LIBYAN ARAB JAMAHIRIYA		12/05/2002	18/06/2002	01/09/2002
MALTA	23/03/2001*	23/03/2001*	23/03/2001*	01/06/2001
MONACO	24/11/1996	25/04/1997	30/04/1997	01/06/2001
MONTENEGRO		17/02/2009 (AAA)****	18/05/2009	01/08/2009
MOROCCO	28/03/1997	13/05/1999	05/07/1999	01/06/2001
PORTUGAL	24/11/1996	30/09/2004 (A) **	15/10/2004	01/01/2005
ROMANIA	28/09/1998	13/06/2000	17/07/2000	01/06/2001
RUSSIA				
SLOVENIA		12/07/2006	25/09/2006	01/12/2006
SPAIN	24/11/1996	07/01/1999	02/02/1999	01/06/2001
SYRIA		07/02/02 (A)**	22/03/2002	01/06/2002
TUNISIA	24/11/1996	31/12/2001	15/01/2002	01/04/2002
TURKEY				
UKRAINE		09/07/2003	23/10/2003	01/01/2004
UNITED KINGDOM				

* Signature valid for ratification

** A = Adherence

*** AA = Approval

****AAA= Accession

(1) Instituting the European Community since the entry into force of the Lisbon Treaty the 1st December 2009

ANNEX V

REPORT OF THE SECRETARIAT

I. ADMINISTRATIVE MATTERS.....

1. Status of ratification
2. Contacts with Countries / Promotion of ratification of the Agreement.....
3. Proposal of amendment of the Agreement
4. Deposit of name and logo of the Agreement.....

II. FOLLOW UP OF THE MOP3 DECISIONS BY THE SECRETARIAT.....

1. Main activities on Research and Conservation
2. Communication, awareness and capacity building
3. Meetings
4. Partners.....
5. Projects
6. National Reports.....
7. CMS Future Shape

ANNEX 1

ANNEX 2

ANNEX 3

The Permanent Secretariat expresses all its gratitude to the Governments that supported the work of ACCOBAMS, to the Scientific Committee for his huge involvement and to the ACCOBAMS' Partners for their fruitful collaboration in the past triennium working programme.

I. ADMINISTRATIVE MATTERS

Status of ratification

Since the last Meeting of the Parties, three Countries (Algeria, Montenegro and Egypt) acceded to the Agreement and deposited their relevant instruments to the Depositary. Therefore the number of Parties to ACCOBAMS reached 23 Parties (as for 31st July 2010, Figure 1).

The Secretariat got in contact, especially on the occasion of international meetings, with relevant Ministries from Countries no yet Parties to ACCOBAMS and so far the interest of Turkey for the accession is being thwarted by internal political problems.

Notwithstanding several contacts by the Secretariat, no official feedback was shown from Bosnia, Russian Federation and Israel.

Focal Points have been nominated by the Parties as well as by certain non-member Countries.

Documents	Link to the Agreement
<ul style="list-style-type: none"> Status of Ratifications MOP4/2010/Inf 04 List of National Focal Points MOP4/2010/Inf 05 	<ul style="list-style-type: none"> Article III Article IV Article VIII a)

The graph hereinafter shows a progress increase in the number of ratification, increase more important during the second triennium (2004-2007).

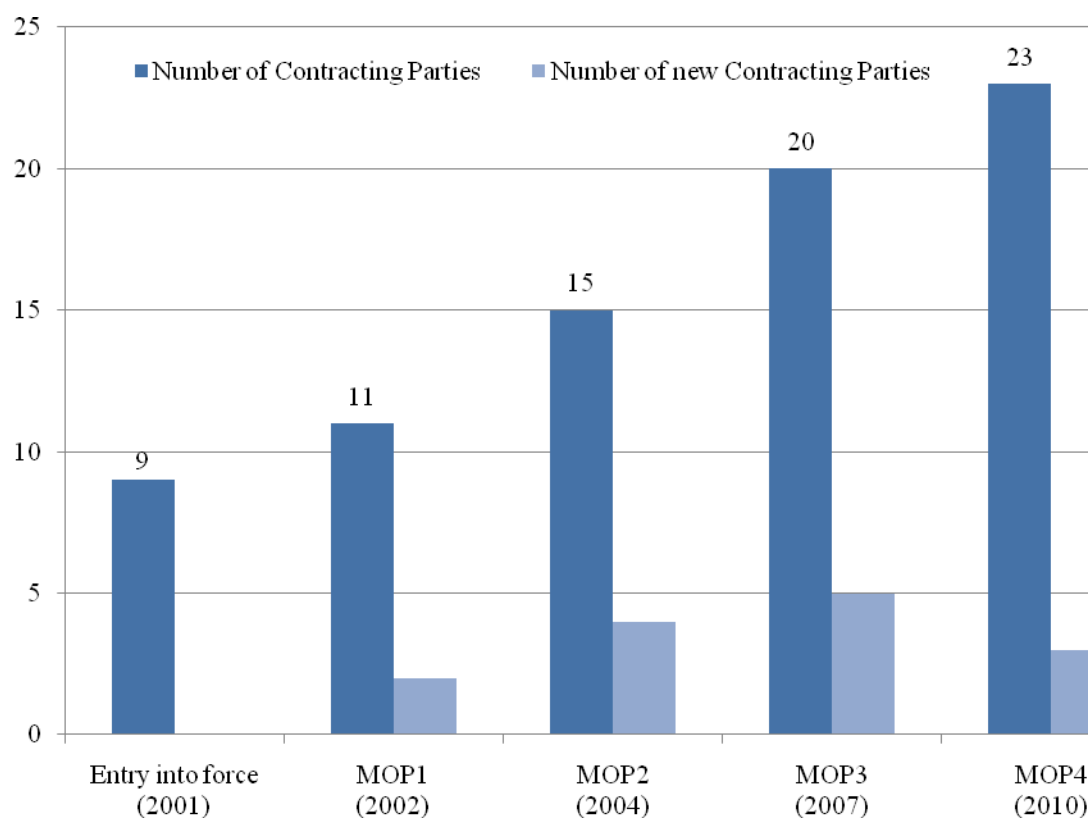


Figure 1. : Ratification by Parties

Contacts with Countries / Promotion of ratification to the Agreement

The Secretariat undertook many initiatives to meet the national authorities during missions organized in Countries (Tables II and III) and at the occasion of international meetings attended by the Focal Points or other representatives of the national authorities. HSH the Prince of Monaco has sent a letter to the head of governments of Bosnia and Herzegovina, of Israel, of Russia and of Turkey, inviting them to become Parties to ACCOBAMS.

The Secretariat had also the opportunity to present the Agreement objectives to the Arab League and meet several time with the DG Environment and DG Mare of the European Commission to exchange on the ratification process, and the survey project

Documents	Link to the Agreement
<ul style="list-style-type: none">Report of the Depositary MOP4/2010/Doc 06	<ul style="list-style-type: none">Article IIIArticle IV

Proposal of amendment of the Agreement

The Secretariat received a joint proposal of amendments relevant to the extension of the geographical area presented by Portugal and Spain. The geographical proposed area is presented in **Annex 1** as well as the document describing activities developed in the extension area (**Annexes 2 and 3**).

Concerning financial implication, pursuant to the system of calculation for ordinary contributions, the proposal extension will have no impact on ordinary contributions. The Sub Regional Coordination Unit for Mediterranean will act as in the past when Spain and Portugal were already included as Parties to the Agreement.

The Scientific Committee will beneficiate of the expertise of local scientist and also data collected through the research developed in the new area taking in consideration that a lot of activities are ongoing (see Annex 2)

Documents	Link to the Agreement
<ul style="list-style-type: none">Proposal of amendment from Portugal MOP4/2010/Doc 29Proposal of amendment from Spain MOP4/2010/Doc 30Draft Resolution A/4.1 on "Extension of the ACCOBAMS Agreement Area" MOP4/2010/ResA/4.1Legal and practical implications of the extension of the ACCOBAMS geographical scope MOP4/2010/Inf 15	<ul style="list-style-type: none">Article X

Deposit of name and logo of the Agreement

In 2008, the Secretariat sent an official request to register to international level and under Article 6ter (3)(b) of the Paris Convention for the Protection of Industrial Property, the name, abbreviation and emblem of ACCOBAMS. This request has been accepted and is communicated through an electronic publication on the Article 6ter Express Database, to the States party to the Paris Convention and the Members of World Trade Organisation on March 31, 2009.

http://www.wipo.int/wipo_magazine/en/2009/03/article_0009.html

II. FOLLOW UP OF THE MOP3 DECISIONS BY THE SECRETARIAT

The MOP3 mandated the Secretariat to develop activities during the 2008-2010 triennium. The implementation of this mandate is developed here below. Activities described hereafter illustrate also cooperation between ACCOBAMS and International Governmental, Organisations and Non Governmental Organisations.

Main activities on Research and Conservation

Underwater noise issue:

According to the Resolution 3.10, the Secretariat established a correspondence Working Group (WG) on noise, composed by France, Spain and paired with the OSPAR Convention, the WDCCS and the NRDC. This WG was mandated to examine the draft guidelines prepared by a consultant (Gianni Pavan) which are annexed to ACCOBAMS-MOP4/2010/Res 4.17.

Thanks to the collaboration of Ocean care and NRDC, a peer review on the impact of ocean noise pollution was submitted to the United Nation Division for ocean Affairs and the law of the Sea (DOALOS), pursuant to paragraph 107 of Resolution 61/222 (2009) inviting Members States and Intergovernmental Organisations to submit appropriate peer-review articles on the ocean noise issue for DOALOS website.

Collisions issue:

The ACCOBAMS Scientific Committee strongly support the REPCET Project, aimed to mitigate the collisions impact of cetaceans with vessels <http://www.repcet.com/>.

A joint IWC/ACCOBAMS workshop on reducing collisions between vessels and marine cetaceans held in September 2010 in Beaulieu.

A draft Resolution has been prepared to be submitted to the Meeting of the Parties (ACCOBAMS-MOP4/2010/Res 4.10).

The Italian Ministry of Environment granted a earmarked voluntary contribution (70 000€) to support a project to asses ship strikes and identify conservation measures: “**Collisioni tra grandi cetacei e imbarcazioni in Mar Mediterraneo: valutazione e identificazione di misure di mitigazione e azioni di conservazione**” developed by Tethys, an ACCOBAMS Partner.

The ACCOBAMS Survey Initiative:

At its 2nd meeting in 2003, the Scientific Committee (SC) drew the attention of the ACCOBAMS Parties to the "fundamental importance of obtaining baseline population² estimates and distributional information of cetaceans within the area as soon as possible". It stressed that without such information (and a suitable monitoring programme) it will be impossible to *inter alia* determine whether ACCOBAMS is meeting its conservation objectives. The great importance of such information in the assessment of risk, the determination of appropriate mitigation measures and the associated determination of priority actions, has been highlighted in many discussions of the Scientific Committee, including past and recent discussions on by catches, MPAs, fin whales, the conservation plans for Mediterranean common dolphins, Mediterranean bottlenose dolphins and Black Sea cetaceans and (see recommendations of the SC since SC2 adopted by the Parties). On a number of occasions the Committee has reiterated that such work represents the highest priority for conservation research within the area (although this should not be interpreted as meaning that other work cannot continue in parallel). The Parties have accepted this by Resolution and many Countries have indicated their desire to co-operate in some way (e.g. via direct and/or

² Use of the word population here implies obtaining knowledge on stock structure as well as abundance

indirect funding). In this spirit, Spain granted 300 000 € voluntary contribution. Considerable work has been undertaken in the intervening years to develop the project presented in ACCOBAMS-MOP4/2010/**Doc25**, including the holding of a number of expert workshops. Aims are to obtain baseline population estimates (stock structure and abundance) and distributional information of cetaceans within the ACCOBAMS area. Including actions related to management tools, capacity building and public awareness.

Marine Protected Areas:

Among the objectives of the Agreement, the creation of MPAs, on this purpose the map, presenting the existing and potential areas of importance for cetaceans, was widely **distributed** (<http://www.accobams.org/images/stories/Map/mpas.jpg>) **on the occasion of attempted followed by the Secretariat .**

In the frame of the collaboration with the RAC/SPA, the Secretariat participated to the “International seminar on legal aspects of MPAs in the *High Sea*” as member of the Steering Committee on the project “identification of SPAMIs in the Mediterranean areas beyond national jurisdiction” developed by the RAC/SPA thanks to the support of EU.

Also the guidelines on MPAs were printed in collaboration with the RAC/SPA to be notably distributed to the CBD conference in Nagoya (Japan).

Interactions with Fisheries:

An International Workshop on by catch was organized , (17-18 September 2008, Rome Italy) in collaboration with the GFCM thanks to the support of the Italian Ministry of Agriculture as part of the project for the “Assessment and mitigation of the adverse impacts of interactions between cetaceans and fishing activities in the ACCOBAMS Area”. On this occasion a Protocol for data collection on by catch and depredation in the ACCOBAMS Region was prepared and the ACCOBAMS Countries presented data on by catch.

In accordance with the recommendations of the Contracting Parties, the Secretariat endeavoured to strengthen coordination and collaboration with the Secretariat of the GFCM. In this context, the Secretariat attended the relevant technical meetings organised within the framework of GFCM, in particular the meetings of the GFCM's Scientific Advisory Committee (SAC) and its Subcommittee on Marine Environment and Ecosystems (SCMEE). As results of this participation, the GFCM identified by catch in cetaceans as one of the main issues to be addressed to mitigate the impact of fishing activities on endangered species.

The Secretariat was also represented to the Second, Third and Fourth Sessions of GFCM Commissions (Table I).

Three working documents were prepared for the MOP4:

MOP4/2010/**Doc 21**: Testing and use of AMD for depredation mitigation.

MOP4/2010/**Doc 22**: Protocol for data collection on by catch and depredation in the ACCOBAMS Region.

MOP4/2010/**Doc 23**: Review on the effectiveness of acoustic devices and depredation mitigation measures

A draft Resolution will be submitted to the 4th Meeting of the Parties: ACCOBAMS-MOP4/2010/Res 4.9.

Commercial whale watching activities in the Agreement area:

The acting collaboration between ACCOBAMS and PELAGOS Sanctuary, permitted to prepare a document for the proposition of a Label on whale watching activities: “Guidelines for implementing a Pelagos / ACCOBAMS label for commercial whale-watching activities” (ACCOBAMS-MOP4/2010/**Doc 24**).

An overview of whale watching activities in the ACCOBAMS area was prepared to be presented

to the MOP4 (ACCOBAMS-MOP4/2010/**Inf 11**).

Thanks to a voluntary contribution granted by the French Ministère de l'Écologie et du Développement durable" the Secretariat organized a workshop to prepare feasibility study on the establishment of Whale watching activities in Morocco.

Strandings

Guidelines for fishermen on the prevention and mitigation of marine litter pollution and ghost fishing in the Black Sea region have been prepared in 2008. These guidelines were translated in Ukrainian and Russian.

A draft Resolution with Guidelines for a coordinated cetacean stranding response has been prepared to be submitted to the Meeting of the Parties (ACCOBAMS-MOP4/2010/**Res 4.16**).

Two others documents were prepared to update information on rescue capacity and tissue banks relevant for the ACCOBAMS area:

MOP4/2010/**Doc 26**: Live stranding: Rescue capacity and triage.

MOP4/2010/**Inf 42**: The network of tissue banks within the ACCOBAMS Agreement: present situation, national initiatives and future perspectives.

Dolphin interaction programmes

As requested by the MOP3, Recommendations from a clinical opinion on the issues, including a judgment as to whether DAT is necessary or whether it can be easily substituted with therapies involving terrestrial domestic animals are reported in the ACCOBAMS-MOP4/2010/**Doc 27**.

Cetacean sighting database:

Considering the substantial human and financial resource requirement of the scheme, an alternative path was investigated to allow the fruition of sighting data, which involved the channelling of sighting information directly from the data owners into the Ocean Biogeographic Information System Spatial Ecological Analysis of Mega Vertebrate Populations (OBIS-SEAMAP) global online database for marine mammals, sea birds and turtles (<http://seamap.env.duke.edu/>). This was in line with what was proposed during the previous meeting of the Scientific Committee and approved by the Meeting of the Parties, with the encouragement of the Bureau. The progress report of the expert will be presented during the 4th Meeting of the Parties, with the Report of the Chair of the Scientific Committee (ACCOBAMS-MOP4/2010/**Doc09**).

National Action Plans

Collaboration with the RAC/SPA was developed for the development of National Action Plans for the conservation of cetacean populations in Lebanon and Syria.

The Secretariat organized in September 2010 a workshop with Moroccan Authorities and relevant Institutions to start the preparation of the National Action Plan in Morocco

Synergy with other Conventions:

During the triennium 2007-2010, the Secretariat of ACCOBAMS, thanks to the expertise of the ACCOBAMS Scientific Committee contributed to the harmonization of the CMS Appendices through the revision of the status of: *Grampus griseus* (Appendix II), *Tursiops truncatus* (Appendix II), *Tursiops truncatus ponticus* (Appendix I),

Communication, awareness and capacity building

Different efforts were made to raise public awareness during the Triennium 2008-2010:

- With the objective to raise public awareness especially among young generations, the Secretariat provided several ACCOBAMS Games (created in 2006 thanks to the Italian voluntary contribution) to scholarships in Monaco. The game was done by two classes of children between 8 and 10 years old. Its purpose was to gather the children acquired knowledge over the school year regarding environmental issues which included the protection and conservation of cetaceans. Further collaboration is planned for the coming school year.
- In July 2008 and 2009, the Secretariat provided the Association “Destination Planète Mer” with 50 ACCOBAMS leaflets and 100 guides (containing cetacean species present in the Mediterranean and the code of conduct for whale watching). This association takes onboard groups of children during the summer to cruise the Mediterranean. During the trips, the children learn about the sea, the biodiversity, but most importantly learn how to respect the environment all together. Among its Partners, “Destination Planète Mer” counts WWF France and Ifremer. (<http://destinationplanetemer.com>)
- On November 16th 2009, thanks to the Italian Ministry of Environment, 60 students, aged 14 to 16, able to read in Italian, from 3 different Monaco schools gathered at the Méridien Beach Plaza in Monaco to take part to an evening dedicated to the protection of cetaceans in the Mediterranean. M. Giuseppe Notarbartolo di Sciara made a presentation on the main threats cetaceans face. In the following weeks, the students took part in a competition for which they will have to produce individual projects. Three winners have been rewarded, by H.S.H the Prince of Monaco, with a week (from 5th to 11st July 2010) onboard of the Tethys Institute sailboat in the Liguria Sea to approach cetaceans and realise the work of scientists on a daily basis.
- The Secretariat provided several ACCOBAMS Games and Posters to Caroline Library in Monaco (<http://www.bibliotheque-caroline.mc>), during their workshop on cetacean in April 2010.
- The “ACCOBAMS Training Kit” ([Training Kit](#)), aimed at being a useful supportive tool for high level training, was primarily designed for scientists officially involved in Cetacean Conservation and particularly in ACCOBAMS implementation. Its aim is to compile and synthesized the most important and most useful information regarding the Mediterranean and Black Sea cetaceans, in order to make it easily accessible and usable for the newcomers in this field. During the triennium the “ACCOBAMS Training Kit” has been distributed to several ACCOBAMS Parties.
- The Secretariat, as a Founding Partner for the “Year of the Dolphin” 2007 campaign, continued the global CMS awareness initiative during the extension of the Year of the Dolphin in 2008. ACCOBAMS commitment included assistance in the development of the campaign’s strategies and raising public awareness on the event.
- In September 2008, the Secretariat was contacted by the WDCS to be involved in the 2008/2009 Volvo Ocean Race. The Volvo Ocean Race was a global challenge to capture the interest and passion of millions of people around the world highlighting another global challenge – the race to protect the world’s whales and dolphins.. The Secretariat provided support for the creation of posters that was a highlight of the WDCS exhibition area in Alicante, Spain (starting point of the race).

- "The Cetaceans of the Mediterranean Sea" (Protection of threatened species)
In the framework of its environmental programme called "From the Earth to the Sea", the EcoOcéan Institute has provided a series of educational activities to schoolchildren with the aim to increase kids' awareness to the protection of the marine environment and more particularly to the protection of threaten species such as cetaceans in the Mediterranean Sea. These educational activities already took place in 2008 and have been conducted again this year thanks to the support of the "Conseil Général de l'Hérault", PELAGOS Sanctuary and ACCOBAMS.
- ACCOBAMS supported the CMS project concerning the "Toothed Whale Review" and contributed to the publication of a poster. The original scope of the review was extended to the sperm whale and thus all toothed whales.
http://www.cms.int/reports/small_cetaceans/img/Odontocete_poster.pdf
- Awareness material such as leaflets, CDs, banner and posters was also renewed and updated. A folder containing laminated sheets presenting cetacean species occurring in the Mediterranean and Black Seas as well as activities developed by the Agreement was published to help in ACCOBAMS objectives presentation. Calendars for 2010 and new ACCOBAMS brochure were also created during the triennium 2007-2010.
- The Norwegian singer Lean dedicates one of her song to ACCOBAMS ("Little Whales") and a video montage was realised. This singer was already world-recognized with her single "Mother", illustrated with a video entirely taken in Capo Nord; the theme treated is directed to the earth environmental problems, being focused, in particular, to land over-heat.
- Another key aspect of the outreach activities of the Secretariat is the maintenance and further development of the website (<http://www.accobams.org/>). The website has been entire restructured and new features have been added.

Meetings

a)	<i>Representation of ACCOBAMS</i>
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During the past triennium, the Permanent Secretariat was represented to meetings and workshops (Table I) in order to liaise with other Organisations and to strengthen collaboration.

Convinced of the importance of establishing and maintaining close contacts with the Riparian Countries, the Secretariat undertaken many initiatives during the triennium to meet with the national authorities during missions organized in Countries and at the occasion of international meetings attended by the Focal Points or other representatives of the national authorities. During these contacts, the Secretariat presented the activities of the Agreement, disseminated information material and investigated with the Country representative ways of strengthening cooperation for the implementation of ACCOBAMS.

Table I: Meetings attended by the Permanent Secretariat in 2008, 2009 and 2010

2008

Organisation			Meeting / Workshop
ASCOBANS			15 th Advisory Committee
CMS			YOD, Thesis award, 15 th Scientific Committee, 9 th Conference of the Parties
Essence NGO)	Consulting (Greek		Workshop on the ACCOBAMS implementation in Crete

GFCM	32 nd Session of the Commission, SCME (Sub-Committee on Marine Environment and Ecosystems), SAC (Scientific advisory Committee)
ICRAM	Presentation of the Italian projects in the frame of the ACCOBAMS implementation
IDDRI & Albert II Foundation	Seminary on Marine Protected Area
IUCN	The IUCN World Conservation Congress
PAM	15 th Conference of the Parties
Pelagos	Technical and Scientific Committee
RIMMO	Annual meeting
UNEP	10 th Special Session of the Governing Council/Global Ministerial Environment Forum
UNEP/MAP RAC/SPA	Workshop "Promote and develop MPAs in the Mediterranean"

2009

Organisation	Meeting / Workshop
Arab League	Meeting of Experts
ASCOBANS	16 th Advisory Committee 6 th Meeting of the Parties
Bern Convention	4 th Meeting Group of Experts on Biodiversity and Climate Change
Black Sea Commission	Meeting of the Contracting Parties
CMS	Standing Committee
Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention)	16 th Meeting of the Parties
ECS	23 rd Annual Conference
FAO	Strategic Action Programme for the Conservation of Biological Diversity (SAP BIO)
GFCM	33 th Session of the Commission, 10 th Session of the Sub-Committee on Economic and Social Sciences, Transversal Working Group Selectivity Improvement and Bycatch Reduction
IFAW	Workshop on the implementation of the CITES
IUCN	Workshop on Cetaceans conservation in Alboran Sea, Governance in Mediterranean
IWC	61 st Annual Meeting
NOAA	The world's First Conference on Marine Protected Areas for Marine Mammals
Pelagos	4 th Technical and Scientific Committee, 4 th Meeting of the Parties
Souffleur d'écumes	REPCET: presentation of the project
TOTAL	Workshop on collisions
UNEP/MAP RAC/SPA	High Seas steering Committee meetings, 9 th Meeting of Focal Points for SPAs

2010

Organisation	Meeting / Workshop
Black Sea Commission	22 nd Regular Black Sea Commission Meeting
European Commission	Meetings with DG Mare and DG environment to strengthen collaboration
GFCM	12 th session of the Scientific advisory Committee, 34 th Session of the Commission
IWC	62 th Annual Meeting
IWC / ACCOBAMS	Workshop on collisions
Souffleur d'écumes	REPCET : inauguration

It should be noted that in several cases the Secretariat was able to represent ACCOBAMS thanks to the local presence of experts/consultants.

b)	<i>Institutional meetings organised by the Agreement</i>
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Several workshops, trainings and administrative Meetings (Table II) were carried out by the Permanent Secretariat to facilitate the Agreement implementation.

The Fifth Meeting of the Bureau (December 2008) agreed upon the proposal of the Secretariat to organize Regional Workshops gathering groups of Countries Parties to ACCOBAMS in order to assess, and facilitate if needed, the implementation of the Agreement.

Five Regional Workshops were organised during 2009 and 2010.

Documents	Link to the Agreement
<ul style="list-style-type: none"> Synthesis of Regional Workshop MOP4/2010/Doc 13 Report of the Fifth Meeting of the Bureau <i>Ref Doc:</i> ACCOBAMS-BU5/Doc19 Report of the Sixth Meeting of the Bureau <i>Ref Doc:</i> ACCOBAMS-BU6/Doc16 Report of the First Meeting of the Extended Bureau <i>Ref Doc:</i> ACCOBAMS- BU_EXT1/Doc17 Report of the Fifth Meeting of the Scientific Committee <i>Ref Doc:</i> ACCOBAMS-SC5/2008/Doc36 Report of the Sixth Meeting of the Scientific Committee <i>Ref Doc:</i> ACCOBAMS-SC6/2010/Doc36 	<ul style="list-style-type: none"> Article IV, c)

Table II: Meeting / Workshop / Training carried out by the Permanent Secretariat (*as per 30th September 2010*)

2008

In collaboration with	Meeting / Workshop / Training	Place
	Workshop Survey Initiative	Monaco
Italian Ministero delle Politiche Agricole GFCM	ByCBAMS - International workshop	Italy
Monaco	Training in Lebanon : <i>End 2008 a workshop in Lebanon was organized to prepare a National Action Plan, establish a National Stranding network and provide juridical basis to create an adequate legislation on Biodiversity conservation. This workshop is the first step of the development of a project concerning the monitoring of the Lebanese coasts and identification of the cetaceans populations..</i>	Lebanon

In collaboration with	Meeting / Workshop / Training	Place
Italian Ministero dell'Ambiente e della Tutela del Territorio e del Mare ALNITAK	<p>Train the trainers :</p> <p><i>In 2008, the Italian Ministry of Environment donated a voluntary contribution to establish the "Train the Trainers" project, which is designed to tutor the educators and scientists on the best way to disseminate their knowledge.</i></p> <p><i>An educational manual will be published and 3 Countries (Algeria, Morocco and Tunisia) were trained. The Programme will be extended to Albania and Montenegro in the next triennium.</i></p>	Morocco, Algeria, Tunisia
EcoOcean	<p>Training on methods to monitor cetacean populations:</p> <p><i>A French expert went to Lebanon to finalise the project presented to the Supplementary Conservation Fund and facilitate the fieldwork.</i></p>	Lebanon
Italian Ministero dell'Ambiente e della Tutela del Territorio e del Mare	Regional Workshop for Western Countries	Portugal
Monaco RAC/SPA	<p>First Biennial Conference for South ACCOBAMS Countries on Cetacean conservation:</p> <p><i>The First Conference (CSMC1) was held in Tabarka, Tunisia, from the 12th to the 14th October 2009. The aim was to assess the knowledge acquired on cetaceans in the South and East of the Mediterranean, identify potential gaps and stimulate the development of conservation actions in order to promote the implementation of the ACCOBAMS Agreement. The Biennial Conference came from an initiative launched by the ACCOBAMS Secretariat. Its First edition was organised in collaboration with the Regional Activity Centre for Specially Protected Areas (UNEP/MAP).</i></p>	Tunis
Italian Ministero dell'Ambiente e della Tutela del Territorio e del Mare	Regional Workshop for Adriatic Countries	Croatia
Italian Ministero dell'Ambiente e della Tutela del Territorio e del Mare	Regional Workshop for South Countries	Tunisia

2010

In collaboration with	Meeting / Workshop / Training	Place
	Working group on noise	France
University of Padova	Training on cetacean tissue sampling for a Bulgarian scientist	Italy
Black Sea Commission	Regional Workshop for Eastern Countries	Turkey
Black Sea Commission	Regional Workshop for Black sea Countries	Turkey
Black Sea Council for Marine Mammals (BSCMM)	Training on Photo-identification for experts from Bulgaria and Romania. This training was devoted to: - <i>design photo-id project/programme for their countries;</i> - <i>do cetacean photo-id themselves (take correct photographs and process them up to the national catalogue); and</i> - <i>teach other people to do photo-id.</i>	Ukraine
IWC	Workshop on collisions	France

Partners

During the triennium, many NGOs collaborated with the Secretariat of ACCOBAMS in undertaking activities for the implementation of the Agreement with special focus on public awareness.

More details on the activities of ACCOBAMS Partners are presented in the document MOP4/2010/**Inf 10**.

The Secretariat received applications from 4 organizations asking to be accepted as Partners (Figure 2).

In accordance with the procedure adopted by the Parties for granting the status of ACCOBAMS Partner, the Secretariat submitted the received application to the Bureau Meetings.

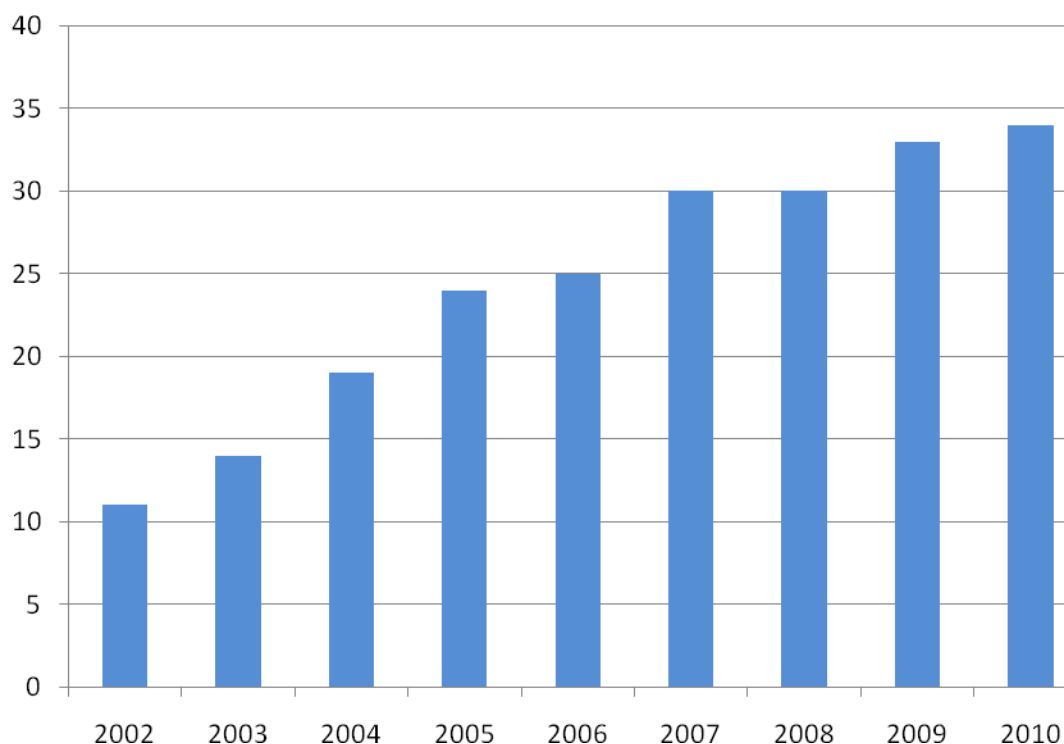


Figure 2: Evolution of the number of ACCOBAMS Partners since 2002

Projects

Projects developed during the triennium

Projects are financially supported through the Supplementary Conservation Funds or through earmarked voluntary contributions. The ACCOBAMS Supplementary Conservation Fund is devoted to help Countries in development and Countries in economical transition to implement the Agreement through notably voluntary contributions.

The Figure 3 shows an increase of the number of undertaken projects every year.

Currently, there are nine ongoing projects (Table III, Figure 4).

Documents	Link to the Agreement
<ul style="list-style-type: none"> Report on incomes and expenditures relevant to the Supplementary Conservation Fund for 2008-2010 MOP4/2010/Doc 15 	<ul style="list-style-type: none"> Article IV, b) and c)

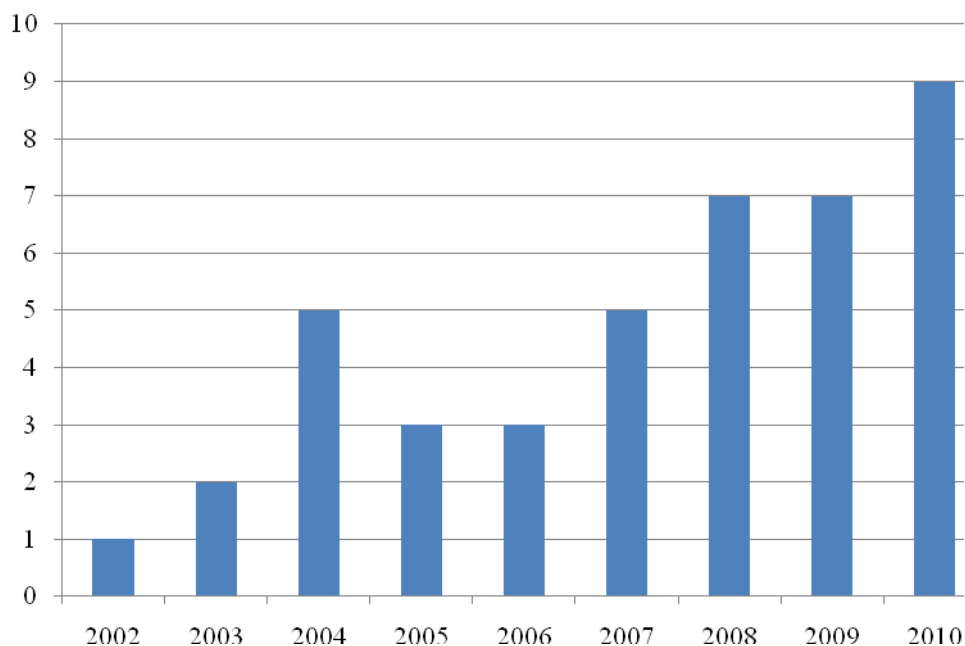


Figure 3: number of undertaken projects /year

Table III: Projects

	Name of the Project	Area	Starting on	Trust Fund	Voluntary contribution	
					SCF	Other
Management and monitoring including research	Ship strikes (Ss) <i>achieved</i>	Mediterranean Sea	2008			X
	Interactions (Int): Study of dolphin/fishing net interactions at the level of traditional fisheries	Tunisia	2008		X	
	Pilot project for use of acoustic devices (Ad)	Morocco	2008		X	

	Inventorying (Inv): identification, abundance and distribution areas	Lebanon	2009		X	X
	Stranding & bycatch (S&B)	Bulgaria Georgia Romania	2009		X	
	Implementation of the whale watching activities (WW)	Morocco Tunisia	2010			X
Capacity building	Train the trainers (Tt)	Albania Algeria Montenegro Morocco Tunisia	2009			X
	Photo-identification (PI)	Black Sea Mediterranean Sea	2010	X		X
	Teaching module on cetacean conservation as support to relevant post- graduate degrees (Masters)	Algeria France Lebanon Morocco Tunisia	2010			X
Public awareness	Exhibition (Exh)	Tunisia	2010	X		

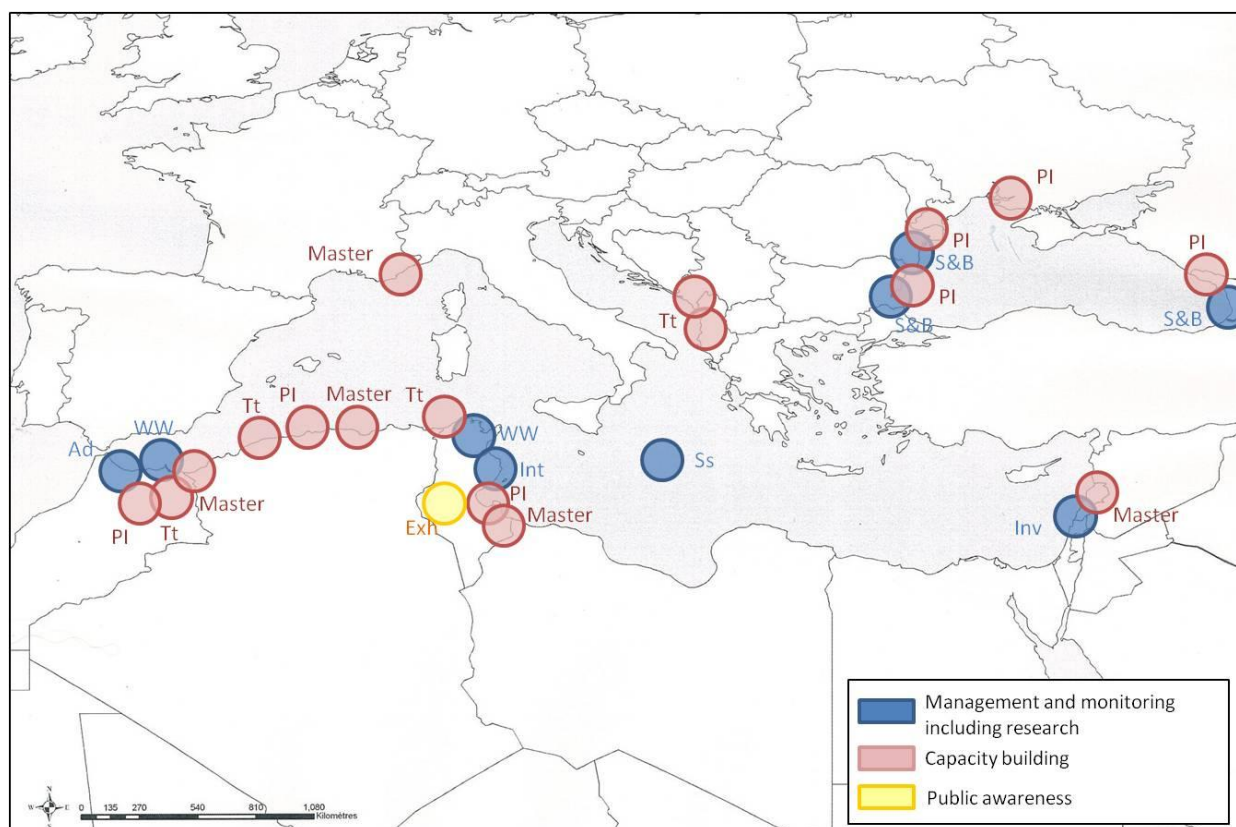


Figure 4: Distribution of the ongoing projects

National Reports

Pursuant to Article VIII, National Reports on implementation of the Agreement were provided to the Secretariat by National Focal Points (Table IV). A synthesis is available in the following document: ACCOBAMS-MOP4/2010/Doc 12.

Table IV: Evolution of the number of National Report submitted during the MOP

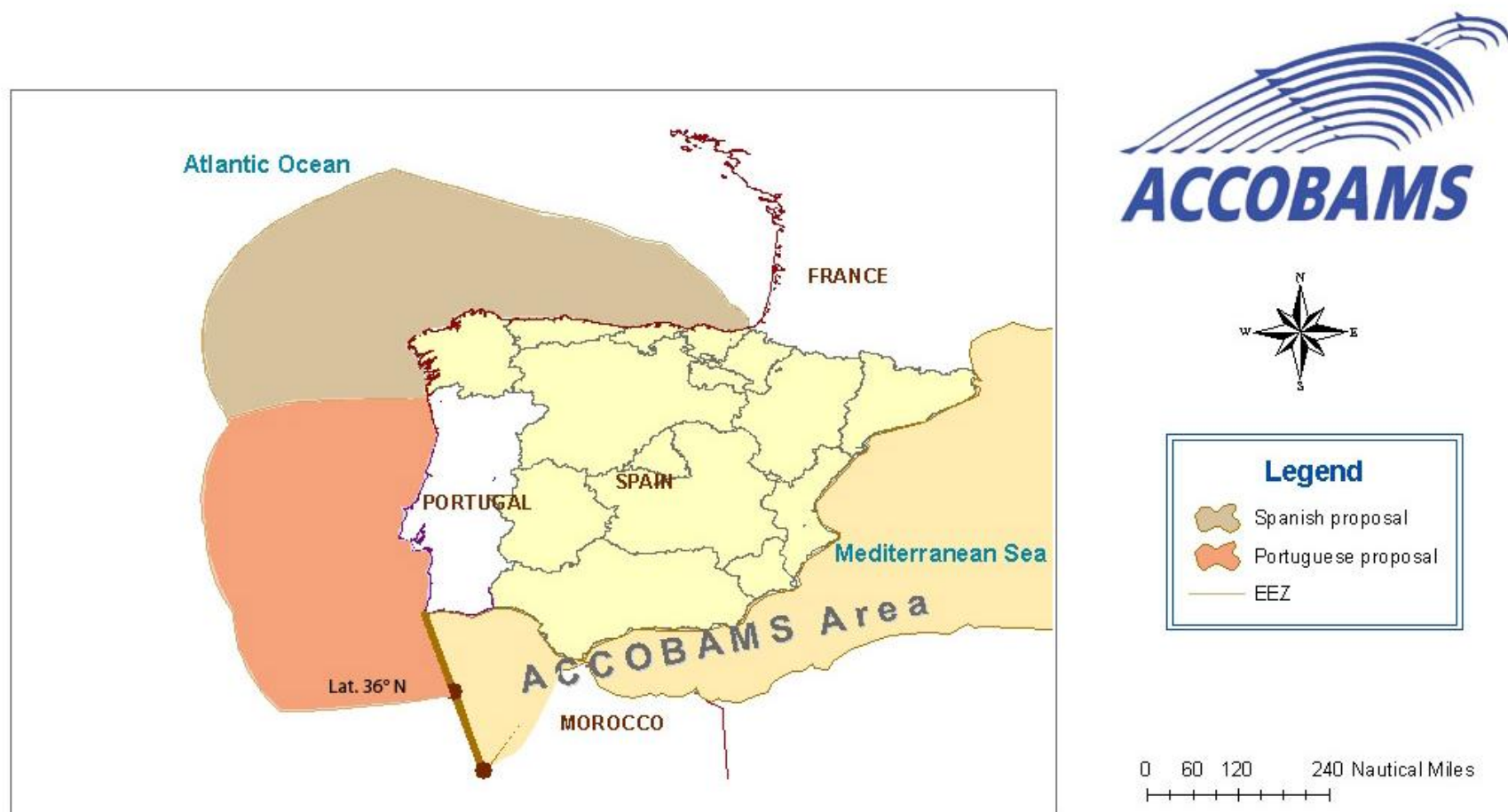
	Number of Parties	Number of National Reports
MOP1	11	-
MOP2	15	11
MOP3	20	14
MOP4	23	15 ³

CMS Future Shape

The Ninth Conference of the Parties of the Convention of Migratory Species (UNEP/CMS) has requested, through Resolution 9.2 paragraph 6, the assessment of existing Agreements and corresponding projects covering three taxonomic groups being terrestrial mammals, marine species and birds. These assessments have to be conducted within the frame of the intersession process regarding the Future shape of the CMS initiated by Resolution 9.13. More details concerning the CMS Future Shape progress and its potential impact on ACCOBAMS are available in the following document: ACCOBAMS-MOP4/2010/Inf 12.

³ As of 28th October 2010

PORTUGUESE AND SPANISH PROPOSAL OF ACCOBAMS AMENDMENT (EXTENSION OF ACCOBAMS GEOGRAPHICAL SCOPE)



ANNEX 2 (information provided by the National Focal Points)

Cetacean research projects in Portuguese Atlantic waters

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
	Implementation and coordination of the Portuguese stranding network	Mainland Portugal	ICNB (Marina Sequeira)	Maritime Authorities, NGO's, Universities	Assistance in strandings of dead cetaceans and seaturtles		1988-present	
	ATLANCETUS	Portuguese and Spanish Atlantic coasts, including Azores, Madeira and the Canary Islands	ICNB and CEMMA	AMBAR, Museo Marítimo del Cantábrico, IEO Cantabria, CEPESMA, Univ. Oviedo, Inst. Investigaciones Marinas – CSIC, IEO Galicia, Aula del Mar Andalucía, SECAC, Viceconsejería de Medio Ambiente, Univ. Azores (DOP), Museu Municipal Funchal	<ul style="list-style-type: none"> - Establish protocols for recording strandings and bycatch data - Update a central database - Produce regular reports 		1996-1999	
	Implementation and coordination of the Portuguese live-stranding network	Mainland Portugal	ICNB (Marina Sequeira)	SPVS Lisbon Zoo Zoomarine	Assistance in strandings of live cetaceans		1999-present	
	Study of the harbour porpoise population in Cabo do Mondego region (Northern Portugal)	Mainland Portugal	ICNB (Marina Sequeira)	- Dept. Biology / Univ. Minho - SPVS	<ul style="list-style-type: none"> - Confirm the presence of the harbour porpoise in this region - Confirm reproduction - Understand the use of this coastal area throughout the year 	7 800 €	2000-2001	
	Evaluation of cetacean mortality in the region Aveiro - Figueira da Foz (Northern Portugal)	Mainland Portugal	ICNB (Marina Sequeira)	- Dept. Biology / Univ. Minho - SPVS	<ul style="list-style-type: none"> - Definition of a regional stranding network. - Assistance in dead strandings - Evaluation of by-catch evidences 	7 800 €	2001-2002	
	Fishing activity at Setúbal, Sesimbra and Sines harbours – preliminary evaluation of its impact on harbour porpoises	Mainland Portugal (Central region)	ICNB (Marina Sequeira /		<ul style="list-style-type: none"> - Characterize the fishing activity at selected harbours - Evaluate harbour porpoise mortality levels 		2001-2002	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
	mortality		Ana Martins)					
	Monitoring of the small cetacean community in the Centre of Portugal	Mainland Portugal	SPVS (Marisa Ferreira)	- Dept. Biology / Univ. Minho	- Distribution of small cetaceans - Evaluation of abundances - Estimation of mortality causes	36 000€	2003-2006	
	Stranding Network in the Centre of Portugal	Mainland Portugal	SPVS (Marisa Ferreira)	- ICNB - Dept. Biology / Univ. Minho	Assistance in strandings of dead cetaceans and seaturtles	38 000€ (annual value)	2000-present	
	Distribution and occurrence of cetaceans along the Portuguese coast	Mainland Portugal	ICNB (Marina Sequeira / Helena Marques)	Univ. Évora	- Analyse cetacean strandings data - Determine patterns of geographical and temporal strandigs distribution	4.279,20 €	2003-2004	
	SCANS II (Small Cetacean Abundance in the North Sea and Adjacent Waters)	European Atlantic waters	St. Andrews Univ. (LIFE04NAT GB000245)	Several EU co-financiers, partners and subcontractors site site)	- Determine the absolute abundance of small cetacean populations - Develop and test methods to monitor cetacean populations - Develop a framework for management bycatch	3.113.260 €	2005-2006	http://biology.st-andrews.ac.uk/scans2
	Stranding Network in the North of Portugal	Mainland Portugal	SPVS (Marisa Ferreira)	- ICNB - Dept. Biology / Univ. Minho	Assistance in strandings of dead cetaceans and seaturtles	28 000€ (annual value)	2008-present	
	Stranding Network in the Algarve region	Mainland Portugal	SPVS (Ana Marçalo)	- ICNB - CESAM - Dept. Biology / Univ. Minho	Assistance in strandings of dead cetaceans and seaturtles	18 000€ (annual value)	2010-present	
	Genetics of common dolphins stranded in Centre/North coast of Portugal	Mainland Portugal	Dept. Biology / Univ. Minho (Sílvia Monteiro)	- SPVS - CEMMA - CESAM	- Genetic structure of common dolphins population based on stranded animals	18 000€	2006-2008	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
	SafeSea - Sustainable local fisheries and promotion of a safe sea for cetaceans	Mainland Portugal	Dept. Biology / Univ. Minho (EEA grants support) (José Vingada)	- SPVS - VianaPesca OP - CentroLitoral OP - CEMMA - IMR Norway	- Distribution and abundance of small cetaceans - Evaluation of mortality and by-catch - Essay of pingers and acoustic enhanced gillnets - Definition of codes of good practices	481 141€	2008-2011	www.safeseaproject.org
	Anthropogenic factors influencing the community of small cetaceans in the Centre/North of Portugal	Mainland Portugal	Dept. Biology / Univ. Minho (Marisa Ferreira)	- SPVS - CEMMA	- Evaluation of distribution and abundance of small cetaceans - Evaluation of mortality - Evaluation of exposure to contaminants	87 000€	2008-2011	
	Population Ecology of Long-finned pilot whale and minke whales along the Northern Coast of Portugal	Mainland Portugal	Dept. Biology / Univ. Minho (Sílvia Monteiro)	- SPVS - CEMMA - Univ. Aberdeen	- Evaluation of distribution and abundance - Diet analysis - Genetic structure of the populations	87 000€	2008-2012	
	Toxic elements and organochlorine contaminants in small cetacean populations in the Northwest of the Iberian Peninsula	Mainland Portugal and Northern Spain (Galicia)	Dept. Biology / Univ. Minho (Paula Mendez)	- SPVS - CEMMA - Univ. la Rochelle - Univ. Aberdeen	- Use of pollutants has biomarkers of the distribution of cetaceans	87 000€	2008-2012	
	Species identification, distribution and relative abundance program	Mainland Portugal (Southern region)	CIRCE - Portugal	CIRCE – Spain	- Expand knowledge about the occurrence, behaviour, composition and distribution of cetacean species in the south of Portugal with a dedicated objective of supporting conservation plans.		2009-2012	www.circe.biz
	Photo – id Catalogues	Mainland Portugal (Southern region)	CIRCE - Portugal	CIRCE - Spain	Creation of photo – id catalogues for the main species occurring in the area (Common dolphins, Bottlenose dolphins, Rissos's dolphins, Killer whales, Minke whales and Fin whales).		2009-2012	www.circe.biz
	Costs and benefits of interactions between cetaceans and Portuguese and Spanish fishing fleets in Atlantic waters"	Mainland Portugal and Northern Spain (Galicia)	CESAM (Sabine Goetz)	- Dept. Biology / Univ. Minho - SPVS - IEO Vigo - Univ. Aberdeen	- Evaluation of cetacean by-catch in Portuguese Waters - Evaluation of the economical cost of interactions - Identification of by-catch hot-spots - Essay of mitigation measures	87 000€	2010-2014	
	The use of helminth-host	Mainland	CESAM	- Dept. Biology /	- Evaluation of heavy metal	122 400€	2007-2012	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
	systems to assess heavy metal environmental pollution	Portugal	(Catarina Eira)	Univ. Minho - SPVS - Univ. Barcelona	contamination in cetaceans and their parasites			
	Dolphins from Portugal: Past, present and future”	Mainland Portugal (Central region)	Escola de Mar (Cristina Brito)		Occurrence, distribution, diversity, ecology and conservation status of cetaceans along central Portugal (between Nazaré and Sines)	40.000 €	2007-present	www.escolademar.pt
	Interaction between sardine fisheries and Small Cetaceans	Mainland Portugal (Southern region)	CESAM (Ana Marçalo)	- Dept. Biology / Univ. Minho - SPVS - IPIMAR - Univ. Aberdeen	- Evaluation of cetacean by-catch in sardine fisheries in the Algarve - Evaluation of cetacean diet - Evaluation of distribution and abundance - Essay of mitigation measures	122 400€	2010-2016	
	Neuroanatomical and pathological research by imaging diagnostic techniques of the central nervous system of marine mammals	Mainland Portugal and Northern Spain (Galicia)	CESAM (Josep Alonso Farré)	- Dept. Biology / Univ. Minho - SPVS - CEMMA - Univ. Leon	- Use of imaging diagnostic to study damages in the central nervous system in stranded cetaceans	122 400€	2010-2016	
	Whale Watching network in the South of Portugal	Mainland Portugal (Southern region)	CIRCE - Portugal	CIRCE – Spain, various Whale Watching Companies	- Standardize the data collection methodology, allowing the integration of all the information. - Inform and help implementing good practices in the marine environment as to minimize impacts on wild populations of dolphins. - Sustain potential environmental education programs of companies.		2010 and yearly renewed	www.circe.biz
	MarPro - Conservation of marine protected species in Mainland Portugal	Portuguese EEZ	CESAM (Catarina Eira)	- Dept. Biology / Univ. Minho - SPVS - SPEA - IPIMAR - ICNB	- Distribution and abundance of cetaceans in offshore areas - Identification of marine offshore Natura 2000 sites - Evaluation of mortality and by-catch - Reduction of by-catch -Improvement of the stranding networks	2 773 032€	2011-2015	

ANNEX 3 (information provided by the National Focal Point)

Cetacean research projects in the Cantabrian sea and Spanish and Portuguese Atlantic waters

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
1	SCANS II project (Small Cetacean Abundance in the North Sea and adjacent waters)	European continental Atlantic waters	St Andrews University - LIFE04NATG B000245		1.- To determine the absolute abundance of small cetacean populations 2.- To develop and test methods to monitor cetacean populations 3.- To develop a framework for management of bycatch	3 113 260 €	2004-2005	http://biology.st-andrews.ac.uk/scans2/
2	CODA (Cetacean offshore Distribution and Abundance in European waters)	European off-shore Atlantic waters	St Andrews University	AZTI, MARM, IEO, Environmental Ministry of Ireland, Irish Sea Fisheries Board, Univ. Cork, Univ. La Rochelle, French Ministry of Defence, DEFRA (UK), JNCC (UK)	1.- To estimate abundance of common dolphin and other cetacean species in offshore European Atlantic waters. 2.- To provide information for a management framework to assess the impact of bycatch and recommend safe bycatch limits for common dolphin.	1 900 646 €	2006-2008	http://biology.st-andrews.ac.uk/coda/
3	Distribución y abundancia de cetáceos en el Golfo de Bizkaia: Campaña del Buque Oceanográfico Investigador en el marco de CODA (Cetacean Distribution and Abundance in the Bay of Biscay: Campaign of the Research Oceanographic Ship in the Framework of CODA)	Bay of Biscay	Fundación AZTI		To obtain information about cetaceans distribution, abundance and habitat use in Spanish waters of the Bay of Biscay	94 491 €	Apr 2006 – Dec 2007	
4	Red de Varamientos de Euskadi (Euskadi Strandings Network)	Basque Country	AMBAR (Association for the study and conservation of marine fauna)	112 SOS (Emergency Service), Ertzaintza (Regional Police), Local Police, Cruz Roja, Salvamento Marítimo	1.- To register strandings, autopsies, and samples 2.- To advice the Public Administration	External funding for two years. AMBAR funding: aprox. 17000 €/year)	From 1996 on	http://www.ambarcetaceos.com/index_archivos/red_varamientos.htm

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
5	Avistamientos desde plataformas oportunistas (Ferry) (Casual sightings from ferries)	Bay of Biscay and English Channel	AMBAR	Atlantic Research Coalition (ARC)	To register marine fauna sightings (cetacean, sharks and birds) and study trends.	Funding from P&O company	From Nov. 2000 on	http://www.ambarcetaceos.com/index_archivos/ferry.htm
6	Campaña de avistamientos oportunistas desde embarcaciones de recreo (Casual Sightings from recreational fishing vessels campaign)	Basque Country coastal waters (20 miles)	AMBAR		To raise awareness and involve actively recreational fishing vessels in the conservation of cetaceans in the Basque Country waters.	5 000 €	May-Dec 2004	http://www.ambarcetaceos.com/index_archivos/red_opo_rtunistas.htm
7	En busca de la Ballena (In search of the whale)	Basque Country coastal waters (20 miles)	AMBAR	Basque Country yacht clubs, Fasnaper	Two days of simultaneous sightings in the whole Basque Country.	24 240 €	Jan and Sept 2006	
8	Red de avistamientos costeros- Composición grupal y grado de residencia de las manadas de delfines mulares en aguas costeras del País Vasco (Coastal sightings Network- Pods of bottlenose dolphins composition and degree of residence)	Basque Country coastal waters (5 miles)	AMBAR	Cruz Roja de Bermeo	To establish the number of individuals that makes up the pods of bottlenose dolphins in coastal waters of the Basque Country, their structural composition and the degree of residence.	12 000 €	2004 - 2005	http://www.ambarcetaceos.com/index_archivos/red_tierra.htm
9	Distribución y uso del hábitat del delfín mular, calderón de aleta larga y zifio de Cuvier en aguas cercanas a la costa vasca (Habitat distribution and use of Bottlenose <i>dolphin</i> , Long-finned pilot <i>whales</i> , and Cuvier's beaked <i>whale</i> in the Basque Country coastal waters)	Basque Country coastal waters (20 miles)	AMBAR		Establish spatio-temporal distribution patterns and relative abundance of three cetacean species: Bottlenose <i>dolphin</i> (<i>Tursiops truncatus</i>), Long-finned pilot <i>whales</i> (<i>Globicephala melas</i>) and Cuvier's beaked <i>whale</i> (<i>Ziphius cavirostris</i>) in the Basque Country coastal waters	15 000 €	2004 - 2005	http://www.ambarcetaceos.com/index_archivos/red_velero.htm

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
10	DIVER 2008	Basque Country coastal waters (20 miles)	ORCA, Marine Life, AMBAR, The Seamark Trust		Distribution, abundance and habitat preferences of Cuvier's beaked <i>whale in the South of the Bay of Biscay</i> .	Not available	Julio 2008	
11	Biscay Dolphin Research Programme	Bay of Biscay and English Channel	Marinelife		To further the conservation of cetaceans (whales and dolphins) and other marine life through scientific investigation and educational activities.		From 1995 on	http://www.biscay-dolphin.org.uk/biscay/index.html
12	Biscay Cetacean Monitoring Network (Biscaycetnet)	Bay of Biscay and English Channel	Organisation Cetacea (ORCA)		To raise awareness of the importance of the Bay of Biscay as a region of exceptional cetacean abundance and diversity through a variety of media, publications and public events.		From 1995 on	http://www.orcaweb.org.uk/biscaycetnet.htm
13	Impact of fisheries on small cetaceans in coastal waters of Northwest Spain and Scotland	Galicia and Scotland	Department of Zoology (University of Aberdeen), European Union (DG XIV) Research chief: Dr. Graham J. Pierce	IIM (CSIC)	Analysis of fishing impacts on marine mammals populations		1998-2000	
14	Effects of pollutants' bioaccumulation of on the reproductive success of small cetaceans in European waters (BIOCET). Contract number EVK3 - 2000 - 00027	Galicia, Scotland, Ireland, France	Department of Zoology (University of Aberdeen) Union Europea (DG XIV) Research chief: Dr. Graham J. Pierce	IIM (CSIC), Univ. Leiden, Univ. Cork (Ireland), La Rochelle, France	Analysis of pollutants' impacts on marine mammals populations and their reproduction	1180000 €	2001 -2003	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
15	Estatus do arroaz, T. truncatus, na provincia de Pontevedra (Situation of bottlenose dolphin in the Spanish region of Pontevedra)	Galicia	CEMMA, Xunta de Galicia Research chief: Alfredo López Fernández		Situation of bottlenose dolphin in the Spanish region of Pontevedra	6 000 €	2001	
16	Variaciones poblacionales del delfín mular y marsopa común después del vertido del Prestige en el ámbito del Parque Nacional de las Islas Atlánticas y aguas exteriores (Changes in bottlenose dolphin and harbour Porpoise populations in the National Park of Atlantic Islands and its external waters after Prestige oil spill)	Galicia	CEMMA, Spanish Ministry of Environment Research chief: Alfredo López Fernández		Situation of the bottlenose dolphin (Tursiops truncatus) and the Harbour Porpoise (Phocoena phocoena) after Prestige oil spill.	58 992 €	2003	
17	Impact assessment of Prestige oil spill on the turtle, seal and cetacean populations in Galician coastal waters	Galicia	CEMMA, Fundación La Caixa Research chief: Alfredo López Fernández		Impact assessment of marine mammals, marine turtles, and bottlenose dolphin after Prestige oil spill	60 000 €	2003 - 2006	
18	Os sons do mar (The sounds of the sea)	Galicia	CEMMA, Fundación Pedro Barrié de la Maza Research chief: Dr.		Implementation of a passive acoustic monitoring devise for cetaceans.	50 000 €	2006 - 2007	http://www.arrakis.es/~cemma/inve/inve_sonsdomar.htm

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
			Alfredo López Fernández					
19	Uso e abuso de litoral e medio mariño nas Rías de Galicia: Evaluación do impacto no medio e as especies. (Use and abuse of marine environment and Galicia coast: impact assessment of certain species)	Galicia	CEMMA Territori i paisatge Research chief: Dr. Alfredo López Fernández		Analysis of bottlenose dolphin population and alteration of its habitat in the coast of Galicia.	40 000 €	2007	
20	Bases para la Conservación y Gestión de las especies de cetáceos del Atlántico gallego y Cantábrico peninsular (Cetaceans conservation and Management basis in Atlantic waters of Galicia and Cantabrian Sea)	Galicia Asturias País Vasco	CEMMA Fundación Biodiversidad Research chief: Dr. Alfredo López Fernández	AMBAR CEPESMA	Comparative analysis of cetacean populations between Galicia and the Basque Country using marine and coastal monitoring.	142 857 €	Jul 2006 - Jul 2007	
21	EUROPHUKES	Galicia	LIFE Research chief: Ruben Huele, The Netherlands.	Centre of Environmental Science (CML) Leiden University, Netherlands, Centrum voor Wiskunde en Informatica (CWI), Netherlands, Marine Information Service MARIS B.V., Netherlands, Sea Watch Foundation, United Kingdom, Asociación Cultural Proyecto Alnitak (ALNITAK), Spain, Tethys Research Institute (Tethys), Italy, University College	Analysis of Photo-identification methodology and implementation of digital comparison methodologies.		2001 -2003	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
				<p>Cork, National University of Ireland (UCC), Ireland, Wild Idea, Similä Consulting, Norway, Ecologic, United Kingdom, Greenland Institute of Natural Resources, Greenland, Marine Mammal Research Laboratory (Océanopolis), France, Groupe de recherche sur les Cetaces (GREC), France, Whale Watch Azores (WWA), United Kingdom, Sociedad para el Estudio de los Cetáceos en el Archipiélago Canario (SECAC), Spain, Asociación para la Conservación, Información y Estudio de los Cetáceos (CIRCÉ), Spain, Sociedad Andaluza para la conservación y estudio de los cetaceos (ESPARTE), Spain, Coordinador parao Estudio dos Mamíferos mariños (CEMMA), Spain, Camara Municipal de Machico, Museu de Baleia, Portugal.</p>				

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
22	Dive into Science, A noite dos Investigadores en Galicia (Night for researchers in Galicia)	Galicia	CETMAR Xunta de Galicia Research chief: Lucía Fraga	IIM (CSIC), CETMAR, Universities of Vigo, Santiago, and A Coruña, Xunta de Galicia	Exhibition of marine research methodologies. Public approach	300 000 €	2006	
23	INDEMARES	Spain	LIFE Fundación Biodiversidad Research chief: Ignacio Torres, Fundación Biodiversidad	Spanish Ministry of Environment, Rural and Marine Affairs, Spanish Institute of Oceanography, el Consejo Superior de Investigaciones Científicas, ALNITAK, la Coordinadora para el Estudio de los Mamíferos Marinos, OCEANA, la Sociedad para el Estudio de los Cetáceos en el Archipiélago Canario, SEO/BirdLife y WWF España.	Proposal of a Marine Natura Network	15 400 000 €	2009 - 2013	
24	Recopilación, análisis, valoración y elaboración de protocolos sobre las labores de observación, asistencia a varamientos y recuperación de mamíferos y tortugas marinas en aguas españolas (Protocols on observation, assistance in strandings and recovery of marine mammals and turtles in Spanish waters)	Spain	SEC Spanish Ministry of Environment Research chief: Erika Urkiola Pascual	Instituto de Investigaciones Marinas, Universidad de Valencia, Sociedad española de Cetáceos	Implementation of cetacean research protocols	2000000 Ptas (12 020 €)	1998 - 1999	
25	Convenio para la conservación y recuperación de mamíferos marinos en las costas de Galicia (Convention on conservation and recovery of marine mammals in Galician coasts)	Galicia	IIM-CSIC Xunta de Galicia Research chief: Ángel Guerra Sierra	CEMMA	Assistance in strandings and recovery of turtles and marine mammals	24000000 Ptas (144 243 €)	1999-2002	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
26	Convenio para la asistencia y recuperación de mamíferos y tortugas marinas en las costas de Galicia	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Assistance in strandings and recovery of turtles and marine mammals	129 000 €	2003-2005	
27	Convenio para la asistencia y recuperación de mamíferos y tortugas marinas en las costas de Galicia	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Assistance in strandings and recovery of turtles and marine mammals	141 000 €	2006-2008	
28	Diagnóstico do estado de conservación das poboacións de toniña e arroz (Diagnosis of tuna and bottlenose dolphin conservation status)	Galicia	Astropenta Medioambiente SL, Xunta de Galicia Research chief: Alfredo López Fernández	CEMMA	To study the tuna and bottlenose dolphin conservation status	60 000 €	2008	
29	Servizo para o desenvolvemento da rede de asistencia aos varamentos de mamíferos e reptis mariños en Galicia (Network to assist stranded marine mammals and reptiles)	Galicia	CEMMA, Xunta de Galicia Research chief: Alfredo López Fernández		Assistance in strandings and recovery of turtles and marine mammals	41 751 €	2009	
30	Servizo para o desenvolvemento da rede de asistencia aos varamentos de mamíferos e reptis mariños en Galicia	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Assistance in strandings and recovery of turtles and marine mammals	129 000€	2010	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
31	Divulgando a pe de mar (Raising awareness at sea)	Galicia	CEMMA Consellería do Mar Research chief: Alfredo López Fernández		To raise awareness and exchange information with small fishing boats of Galicia, aiming at improving the knowledge of interactions between cetaceans and fishing.	135 000 €	2008-2010	http://www.arrakis.es/~cemma/inve/inve_pedemar.htm
32	Red de observación costera de cetáceos en Galicia. 53 puntos mensuales (Cetacean observation network of Galicia. 53 observation sites)	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Marine mammals monitoring	-	2003-2006	
33	Red de observación costera de cetáceos en Galicia. 30 puntos mensuales (Cetacean observation network of Galicia. 30 observation sites)	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Marine mammals monitoring	-	2007-2010	
34	Campaña de monitorización marítima de cetáceos en la plataforma de Galicia. 10 embarques anuales (Cetaceans monitoring campaign in Galician platform)	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Marine mammals monitoring	-	2003-2010	
35	Campañas de seguimiento de la población de delfín mular mediante fotoidentificación (Bottlenose Dolphin monitorign campaign by means of Photo-identification)	Galicia	CEMMA Xunta de Galicia Research chief: Alfredo López Fernández		Marine mammals monitoring	-	2003-2010	
36	Campañas Thunnus: os cetaceos na costeira do bonito (Thunnus campaigns: cetaceans at the beautiful coast)	North of the Iberian Peninsula	CEMMA Consellería do Mar Research chief: Alfredo		Cetacean monitoring	-	2007-2010	

	PROJECT NAME	GEOGRAPHICAL SCOPE	ORGANISM (coordinator)	OTHER INSTITUTIONS	GENERAL OBJECTIVES	BUDGET	DATE	LINK
			López Fernández					
37	Estudo do impacto dos portos nos cetáceos (Impact study of harbours on cetaceans)		CEMMA		To study the impact of harbours in coastal cetacean populations		2007-2009	http://www.arrakis.es/~cemma/inve/inve_portosdeportivos.htm
38	Trans North Atlantic Sightings Survey (TNASS)	North Atlantic waters between approximately 40°N to 80°N and between Norway and Canada	The North Atlantic Marine Mammal Commission		To estimate the summer distribution and absolute abundance of cetacean populations in the North Atlantic between approximately 40°N to 80°N and between Norway and Canada	4200000 €	2006-2008	http://www.nammco.no/Nammco/Mainpage/Tnass/
39	Conservación de las poblaciones de calderón común (<i>Globicephala melas</i>) en el mediterráneo español (Conservation of long-finned pilot whales in the Mediterranean Sea)	Mediterranean and Cantabrian Seas, and Atlantic Ocean (Galicia and Portugal)	CIRCÉ (Conservación Información y Estudio de los Cetáceos)	Spanish Ministry of Environment, Rural and Marine Affairs, CEMMA, EIBE y AZTI.	To study the abundance, population trend, diet and genetic distance between long-finned pilot whales populations of Mediterranean Sea and other Atlantic and Cantabrian populations	101455 €	July 2007 – July 2009	
40	Planes de conservación de especies de cetáceos migradoras en el mediterráneo peninsular (Migratory Species Conservation Plans in the Peninsular Mediterranean Sea)	Atlantic Ocean (Galicia, Canary Islands, and Strait of Gibraltar), and Mediterranean Sea	CIRCÉ - Conservación Información y Estudio de los Cetáceos		To improve the scientific knowledge of the four migratory cetacean species of the Spanish Mediterranean Sea (Fin whale, Sperm whale, Killer whale, and Long-finned pilot whale) and make conservation proposals	118067 €	June 2010 – June 2011	
41	ATLANCETUS	Spanish and Portuguese Atlantic coasts, including Madeira, Azores, and Canary Islands	AMBAR, Museo Marítimo del Cantábrico, Instituto Español de Oceanografía de Cantabria, CEPESMA y Universidad de Oviedo, CEMMA, Instituto de Investigaciones Marinas-CSIC, Instituto Español de Oceanografía de Galicia, Aula del Mar de Andalucía, SECAC y Viceconsejería de Medio Ambiente de Canarias, Instituto da Conservação da Natureza, Universidade dos Açores, Museo Municipal de Funchal		To establish a protocol to standardize the records on stranding and by-catches of marine mammals and to produce a report on data recorded in the South-Western European coasts.		1996- 1999	http://www.secem.es/GALEMYS/PDF%20de%20Galemys/13%20(NE)%20PDF/09%20Covelo%20(93-106).pdf

ANNEX VI

REPORT OF THE BUREAU

During the last triennium three Bureau Meetings were held:

- the Fifth Meeting of the Bureau was convened in the premises of ACCOBAMS Permanent Secretariat, in Monaco, from 15th to 16th December 2008,
- the Sixth Meeting of the Bureau was held in the same premises, from 9th to 10th February 2010,
- the last Meeting held in Rome from 18th to 19th May 2010 was the First Extended Bureau.

The Bureau was made up of:

- Chairperson: Ms Ana Štrbenac (Croatia)
- Vice- Chairperson: Mr Oliviero Montanaro (Italy)
- Vice- Chairperson: Mr Volodymyr Domashlinets (Ukraine)
- Vice- Chairperson / Rapporteur: Ms Amina Moumni (Morocco). Mr. Abderaouf Ben Moussa participated to all the Bureau Meetings during the triennium.

Ms. Ana Štrbenac chaired all these Meeting, which were attended by the Bureau's Members, the Chair of the Scientific Committee of ACCOBAMS and the Executive Secretary. Moreover, three experts, nominated by the Chair of the Bureau in collaboration with others Members, participated to the Meeting of the Extended Bureau:

- Mr. Mohamed Hadj Ali Salem
- Mr. Simion Nicolaev
- Mr. Andreas Demetropoulos

Report was prepared for each Meeting (ACCOBAMS-BU5/Doc19, ACCOBAMS-BU6/Doc16 and ACCOBAMS-BU_EXT1/ Doc17). All these reports are Reference Documents for the Fourth Meeting of the Parties. The report hereafter provides a comprehensive overview of the main issues of the three Meetings of the Bureau.

1. Institutional and administrative matters

a) Adhesion to the Agreement

The Bureau was informed about the exchanges of the Secretariat with the riparian States not yet Parties to the Agreement concerning their involvement in the Agreement ratification. The Secretariat also stressed that the appointment of some ACCOBAMS National Focal Points was still pending and reported on the status of the payment of the ordinary contributions .

Decision 1 The Bureau mandated the Secretariat :

- to contact the competent authorities in order to explain the importance of appointing a National Focal Point;
 - to ask the Parties about the pledges they want to allocate as voluntary contribution to ACCOBAMS during the triennium 2011-2013;
 - to approach the relevant General Directors of the European Commission concerning the possible ratification of the European Union to ACCOBAMS.
- to contact, before MOP4, the Focal Points in the South Mediterranean Parties and in the Black Sea Parties to investigate whether they wish to host MOP5.

b) Future Shape of CMS

The Executive Secretary informed the Bureau about the process launched within the framework of the CMS for the definition of the future shape of the institutional components of the CMS Family.

Decision 2: The Bureau decided that the ACCOBAMS Parties should be consulted before taking any decision involving changes in the ACCOBAMS governing structure. The Bureau Members agreed that for each option an analysis of the financial implication should be made.

c) Headquarter Agreement

To clarify the juridical personality of the Permanent Secretariat of the Agreement, a draft Headquarter Agreement between the Government of H.S.H. the Prince Albert II of Monaco and the Permanent Secretariat of ACCOBAMS was prepared by the Authorities of the Principality of Monaco.

The Bureau reviewed the draft Headquarter Agreement and proposed recommendations with the view of finalising the Headquarter Agreement in order to adopt it during the Fourth Meeting of the Parties.

d) Preparation for the Fourth Meeting of the Parties

The First Meeting of the ACCOBAMS Extended Bureau was convened in Rome (Italy) in the premises of the: “Direzione per la Protezione della Natura, Ministero dell’Ambiente e della Tutela del Territorio e del Mare”, from the 18th to the 19th of May 2010.

Pursuant with Article 3 of the Rules of Procedure of the Meeting of the Bureau, the Meeting concerned notably the preparation of the Fourth Meeting of the Parties, and examined in particular the 24 draft Resolutions to be submitted to the next Meeting of the Parties.

2. Budgetary matters

Pursuant with Resolution 3.2, the Secretariat regularly informed the Bureau about the status of the Trust Fund and of the Supplementary Conservation Fund, taking into account the Work programme as adopted by the Parties.

The non payment of the ordinary contributions was examined. For the last two years some Parties haven’t settled their contribution nor did they partially (ACCOBAMS-MOP4/2010/Doc14).

Decision 3: The Bureau asked the Secretariat to appeal to the Foreign Affairs Authorities in Libya and Portugal to inform them about the unpaid pledges and invited them to take the necessary steps for the payment.

The Bureau requested the Secretariat to adjourn any support to Parties having more than 2 years pending contributions.

3. Activities of the Scientific Committee

The Chair of the Scientific Committee (Dr. Giuseppe Notarbartolo di Sciarra) presented progress reports on the activities of the Scientific Committee.

He presented the Recommendations issued by the Scientific Committee and drew the attention of the Bureau members to the Declaration prepared by the Scientific Committee. He emphasised that the Scientific Committee was aware of the difficulties (social, economic, legal, etc.) faced by the Parties in implementing the ACCOBAMS, but the level of implementation of the Agreement provisions and of the Resolutions adopted appears to be too slow to effectively address the environmental problems that are rapidly developing in the Agreement area, generating increasing conservation challenges to cetaceans.

Decision 4 : Following the Recommendations of the Chair of the Scientific Committee, the Bureau asked

- the Secretariat to:

- revise the “Survey initiative” project, with a particular focus on the necessary activities for the evaluation of populations, and reduce the budget,
- collaborate with other bodies (the Bern Convention, GFCM, etc.) in order to improve the population status of the common dolphin in the ACCOBAMS area (Kalamos and in other areas relevant for the species),
- inform the Parties about the Declaration of the Sixth Meeting of the Scientific Committee,
- modify the National Report Form, in particular to enable Parties to clearly identify problems and difficulties they face in the implementation of the Agreement,
- establish, in collaboration with National Focal Points, a list of experts having extensive experience in social and economical aspects of cetacean conservation

- the Chair of the Scientific Committee to prepare an analysis document about how ACCOBAMS work could contribute to identification of descriptors being undertaken within the Marine Strategy Framework Directive of the EU.

The Bureau designated an independent expert, Mr. Andreas Demetropoulos, to carry out an evaluation of the functioning of the Scientific Committee with recommendations to harmonize the mandates of the Scientific Committee and of the Extended Bureau, newly established.

The independent expert presented the main conclusions of his evaluation during the Meeting of the Extended Bureau. The final report will be submitted to the Fourth Meeting of the Parties.

4. Projects and Activities

During each Bureau Meeting, the Secretariat presented the ongoing and futures projects. Thanks to the information provided by the Secretariat, the Bureau issued advices and Recommendations to help the Secretariat in the guidance of undertaken projects.

The Meeting also invited the Secretariat to post on the web site of ACCOBAMS information about the ongoing projects.

Decision 5 : The Bureau mandated the Secretariat to:

- prepare a document about the needs of the Parties for the implementation of ACCOBAMS, including:

- conclusions and recommendations of the Regional Workshops being organised by the Secretariat,
- the activities undertaken by the Parties to implement ACCOBAMS,
- gaps and priority actions,
- orientations for the elaboration of a mid- term strategy.

- pursue contacts with the relevant Institutions and Organisations in order to strengthen collaborations: UNEP, IWC, European Commission, Black Sea Commission, RAC/SPA, REMPEC, IMO, IUCN, GFCM, IFAW, CMS.

5. Partners

During the triennium 2008-2010, three applications for the Status of ACCOBAMS Partner were examined by the Bureau:

- écoOcéan Institute (France), represented by Nathalie Di-Méglio
- Turkish Marine Research Foundation TUDAV (Turkey), represented by Bayram Öztürk
- Projecte ninam (Spain), represented by Gemma Gonzalez.

The Bureau welcomed these three requests.

Decision 6: The Bureau suggested amending the Resolution regarding the request to become an ACCOBAMS Partner at the next Meeting of the Parties.

The Bureau decided that:

- any application form shall be submitted, to the relevant Nation Focal Point, for their opinion,
- there should be a presentation sheet, in English and French, downloadable from the Organisation's website in order to facilitate the understanding of the activities carried out,
- all Partners should sign a Declaration of Commitment vis-à-vis their future status.

ANNEX VII

REPORT OF THE BLACK SEA SUB-REGIONAL COORDINATION UNIT

Prepared under the supervision of the Permanent Secretariat of the Black Sea Commission *for the 4th Meeting of Parties to ACCOBAMS (Monaco, 9-12 November 2010)*⁴.

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⁴ The BSC Permanent Secretariat thanks Dr. Alexei Birkun, Jr., the regional consultant of the Secretariat in issues related to the conservation of Cetaceans, for drafting this document.

Introduction

The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) has been founded in November 1996 in order to reduce the threat to whales, dolphins and porpoises in the region and to improve general knowledge about these animals. Four Black Sea states – Bulgaria, Georgia, Romania and Ukraine – have ratified the Agreement so far. Since the very beginning, strong cooperation was established between the ACCOBAMS and the Convention on the Protection of the Black Sea Against Pollution (the Bucharest Convention). In June 2002, a Memorandum of Understanding was signed for the first time between the two secretariats, and, thereafter, the Permanent Secretariat of the Black Sea Commission (BSC/PS) assumed the responsibility of the Black Sea Coordination Unit (BS/SRCU) supporting the ACCOBAMS.

This report covers basically the period between the 3rd and 4th Meetings of Parties to ACCOBAMS, from late October 2007 to June 2010 inclusive.

Conservation Plan for Black Sea Cetaceans needs to be implemented

With the view of practical improvement of the state of Black Sea dolphins and porpoises, the Conservation Plan for Black Sea Cetaceans (CPBSC)⁵ has been produced under the joint auspices of the ACCOBAMS and the Black Sea Commission. This document consists of 18 concrete actions and 57 sub-actions aimed to facilitate the cooperation among Black Sea states and enhance their abilities essential for the protection of cetaceans and their habitats. In October 2007, the CPBSC was approved by the 3rd Meeting of Parties to ACCOBAMS (Resolution 3.11). Later on, some principal components of the plan were incorporated for further implementation into the new Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea (Black Sea SAP) adopted in April 2009 in Sofia by the Ministerial Meeting/Diplomatic Conference of the Contracting Parties to the Bucharest Convention.

The realization of CPBSC was considered at the meetings of the BSC Advisory Group on Conservation of Biological Diversity (September 2009) and Advisory Group on Fisheries and Other Marine Living Resources (November 2009). As a result, the detailed analysis of achievements, gaps and needs was presented by the BSC/PS in the Progress report on implementation of CPBSC: October 2007 – October 2009 (ACCOBAMS ref. SC6-Doc08). The latter document was positively evaluated at the 6th Meeting of the ACCOBAMS Scientific Committee (Casablanca, Morocco, 11-13 January 2010). A Recommendation on the Monitoring, Assessment and Reducing Cetacean Bycatches in the Black Sea was produced at the end of the discussions. The Scientific Committee suggested also to shift the term of CPBSC implementation up to 2019.

Besides, cetacean research and conservation items (including the execution of CPBSC activities) were considered at the 22nd Regular Meeting of the Black Sea Commission (Istanbul, 19-21 January 2010) and during the Black Sea Regional Workshop of ACCOBAMS focal points (Istanbul, 23-24 February 2010).

It was repeatedly underlined at the mentioned meetings that further implementation of CPBSC needs to be accelerated by means of:

- strengthening the coordination;
- more interest from the governments and intergovernmental organisations;
- more cooperation between actors; and
- supporting with adequate funds which were critically limited during the reporting period.

The state of implementation and preliminary results of actions and activities specified in CPBSC are presented below.

⁵ Birkun A., Jr., Cañadas A., Donovan G., Holcer D., Lauriano G., Notarbartolo di Sciara G., Panigada S., Radu G., and van Klaveren M.-C. 2006. Conservation Plan for Black Sea Cetaceans. ACCOBAMS, Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area. 50 pp.

Action 1: Broadening the ACCOBAMS scope

Recommended activities	Priority	State of implementation
(a) promotion of accession of the Russian Federation and Turkey to ACCOBAMS	Primary	ongoing/partly implemented
(b) initiate the ACCOBAMS awareness process in European states connected to the Black Sea via rivers	Secondary	no evident progress
Results/Comments It could be assumed that both non-ACCOBAMS Black Sea states – the Russian Federation and Turkey – came somewhat nearer to joining the Agreement because of new Black Sea SAP adopted by all six riparian countries at the the Ministerial Meeting/Diplomatic Conference of the Parties to the Bucharest Convention (Sofia, April 2009). The Black Sea SAP includes a series of management targets which correspond to objectives of ACCOBAMS and activities stipulated in CPBSC (for more details see below comments to Actions 2, 3, 4, 6, 11, 12, 13 and 15).		

Action 2: Proper conservation status of cetacean populations

Recommended activities	Priority	State of implementation
(a) proper listing Black Sea cetaceans in the IUCN Red List of Threatened Animals	Primary	completed
(b) providing correct references to the IUCN status of Black Sea cetaceans in relevant international instruments	Primary	ongoing/partly implemented
(c) recurrent re-evaluation of the status of Black Sea cetaceans in accordance with the updated knowledge	Secondary	no evident progress
Results/Comments <ul style="list-style-type: none"> The IUCN Red List assessment procedure has been finalized in 2008. All three Black Sea subspecies of cetaceans are listed in the IUCN Red List of Threatened Animals (2008 and 2009): <ul style="list-style-type: none"> - harbour porpoise (<i>Phocoena phocoena</i> ssp. <i>relicta</i>) – EN <http://www.iucnredlist.org/details/17030>; - bottlenose dolphin (<i>Tursiops truncatus</i> ssp. <i>ponticus</i>) – EN <http://www.iucnredlist.org/details/133714>; and - common dolphin (<i>Delphinus delphis</i> ssp. <i>ponticus</i>) – VU <http://www.iucnredlist.org/details/133729>. Since 2002, all three Black Sea cetacean species are listed as EN in the Provisional List of Species of the Black Sea Importance (Annex 2 to the Black Sea Biodiversity and Landscape Conservation Protocol of the Bucharest Convention). According to the Black Sea SAP (2009; Management Target 11), the conservation status of threatened species (including cetaceans) should be regularly updated in: <ul style="list-style-type: none"> - Red List of Species (Annex 2 to the Black Sea Biodiversity and Landscape Conservation Protocol) – in 2 years at first; and - Black Sea Red Data Book – in 4 years at first. 		

Action 3: Cetacean conservation approach in fishery regulations

Recommended activities	Priority	State of implementation
(a) adopting the Black Sea legally binding document for fisheries and conservation of marine living resources	Primary	ongoing/partly implemented
(b) to ensure compliance of national fishery regulations with above legally binding document for fisheries and conservation of marine living resources in the Black Sea	Secondary	no evident progress
Results/Comments According to the Black Sea SAP (2009; Management Target 1), the adoption and implementation of Regional Agreement for fisheries and conservation of living resources of the Black Sea is a matter of high priority. This document should be adopted by all Black Sea countries, but the position of EC on behalf of Bulgaria and Romania makes the end of negotiation process uncertain.		

Action 4: Improvement and harmonization of national legislation

Recommended activities	Priority	State of implementation
(a) improvement of national legislation in respect of international requirements on the conservation of cetaceans	Primary	ongoing/partly implemented
(b) all species/populations of Black Sea cetaceans should be properly classified in national instruments	Secondary	no evident progress
Results/Comments <ul style="list-style-type: none"> • In Bulgaria and Romania, national legislation has been harmonized with EU legislation and ACCOBAMS. In other Black Sea countries, national legislations still need to be improved and harmonized. • According to the Black Sea SAP (2009; Management Target 12), all the six countries should adopt and implement during next 5-10 years a regional Conservation Plan for Black Sea endangered species (including cetaceans) and develop appropriate national action plans. • During the reporting period (2007-2010), there was no comprehensive (and based on IUCN criteria and categories) assessment of the conservation status of Black Sea cetaceans on the national level in any riparian country. 		

Action 5: Retrospective analysis of human-induced cetacean mortality

Recommended activities	Priority	State of implementation
(a) study of potential realization of detailed assessment of human-induced cetacean mortality in bygone years	Secondary	no evident progress
(b) assessment of available information on cetacean removals in the past	Secondary	no evident progress
(c) assessment of historical data with their reference to the current status of Black Sea cetacean species	Secondary	no evident progress
Results/Comments <p>Experts from Bulgaria, Romania, Turkey and Ukraine presented national overviews on the current status of cetacean-fisheries conflicts including critical review of relevant historical data at the International Workshop on Cetacean Bycatch within the ACCOBAMS Area organized by ACCOBAMS and GFCM (Rome, 17-18 September 2008).</p>		

Action 6: Strategy for reducing cetacean bycatches

Recommended activities	Priority	State of implementation
(a) establishment of a regional bycatch network	Primary / URGENT	ongoing/partly implemented
(b) estimation of bycatch levels and temporal and geographical distribution of bycatches	Primary	ongoing/partly implemented
(c) evaluation of sustainable bycatch levels for each cetacean species	Primary	no evident progress
(d) investigation of effects causing by mitigation measures including pingers and acoustically reflective nets	Primary	no evident progress
(f) developing management objectives for reducing bycatches in the Black Sea region	Primary	ongoing/partly implemented
Results/Comments <ul style="list-style-type: none"> • Four projects were implemented in Ukraine and Turkey in 2008-2009 to address and reduce the bycatch problem: <ul style="list-style-type: none"> - Involvement of Black Sea artisanal fisheries in anti-bycatch and anti-marine litter activities (implemented by BSCMM and Brema Lab, Ukraine; supported by BSC, ACCOBAMS and UNEP/RSP); - Project of cetacean bycatch and stranding related to turbot fishery and marine litter pollution in the western Turkish Black Sea coast (implemented by TUDAV, Turkey; supported by BSC, ACCOBAMS and UNEP/RSP); - Comprehensive assessment of cetacean bycatch problem in the Ukraine. Phase 1: Onboard monitoring of cetacean bycatches during turbot and spiny dogfish fishing seasons (implemented by BSCMM and Brema Lab, Ukraine; supported by WDCS); - Recording cetacean bycatches during turbot fishery off the Crimea coast in the northwestern Black Sea (implemented by Brema Lab and Nazaret MTDC Ltd, Ukraine; authorized by the Ministry of Environment 		

and the State Committee for Fisheries of Ukraine).
<ul style="list-style-type: none"> • Some preparatory activities to study cetacean bycatches in the northern Bulgarian area and outline appropriate mitigation measures were carried out within the MOMEDOL-project (MONitoring and MEasures for DOLphin populations; 2008-2009) implemented by the Institute of Fish Resources (Varna) and supported by the Bulgarian Ministry of Environment and Water. • The BSC Secretariat collects national statistics on cetacean bycatches for the Black Sea Information System (BSIS). This activity goes ahead owing to annual information provided by national fishery experts, members of the Advisory Group on Fisheries and Other Marine Living Resources (AG FOMLR). • Three project proposals were prepared in 2009 by research teams in Bulgaria, Georgia and Romania to monitor cetacean strandings and bycatches. The proposals were submitted to the ACCOBAMS Secretariat and reviewed by the ACCOBAMS SC. The project has started in Georgia in February 2010. • Experts from Bulgaria and Ukraine took part in the 1st meeting of the GFCM/SCMEE/SCSA Transversal Working Group on Bycatch/ Incidental Catches (Rome, 15-16 September 2008). • Experts from Bulgaria, Romania, Turkey and Ukraine presented national overviews on the current status of cetacean-fisheries conflicts including bycatch at the International Workshop on Cetacean Bycatch within the ACCOBAMS Area organized by ACCOBAMS and GFCM (Rome, 17-18 September 2008). • According to the Black Sea SAP (2009; Management Targets 7, 9 and 12), following activities are planned to be implemented on the regional level during next 5-10 years: <ul style="list-style-type: none"> - developing regulations and methodology aimed at significant reducing the bycatch level; - minimising ghost fishing caused by discarded, abandoned or lost fishing nets including those used in illegal/unregulated fishing activities; - developing bycatch network.

Action 7: Mitigation of conflicts between cetaceans and fishery

Recommended activities	Priority	State of implementation
(a) evaluation of the magnitude, temporal and geographical scope of adverse cetacean/fisheries interactions	Secondary	no evident progress
(b) socio-economic study and modeling of adverse cetacean/fisheries interactions	Secondary	no evident progress
(c) developing strategies for mitigating conflict interactions in collaboration with fishery specialists	Secondary	no evident progress
Results/Comments <ul style="list-style-type: none"> • The knowledge on adverse cetacean-fisheries interactions (except bycatch) is scarce and based merely on anecdotal testimonies by fishermen. • Experts from Bulgaria, Romania, Turkey and Ukraine presented national overviews on the current status of cetacean-fisheries conflicts including depredation at the International Workshop on Cetacean Bycatch within the ACCOBAMS Area organized by ACCOBAMS and GFCM (Rome, 17-18 September 2008). 		

Action 8: Elimination of live capture of Black Sea cetaceans

Recommended activities	Priority	State of implementation
(a) improvement of control assigned to eliminate live capture of cetaceans	Primary	ongoing/partly implemented
(b) preparation and adoption of national legal acts banning any intentional capture of Black Sea cetaceans	Primary	ongoing/partly implemented
(c) evaluate the level, time/location characteristics, legality and biological features of bottlenose dolphin removals in the past	Secondary	no evident progress
(d) evaluate the impact of past removals on Black Sea bottlenose dolphin population in general and on local communities of this species	Secondary	no evident progress
Results/Comments <ul style="list-style-type: none"> • At present, live capture of cetaceans is prohibited or postponed by national legislation and/or some other regulatory acts in all Black Sea countries. • However in 2006-2007, more than 20 bottlenose dolphins (<i>T. truncatus</i>) were captured alive in the Turkish seas with the permission from the Ministry of Agriculture and Rural Affairs of Turkey. At least four or six of those animals were taken from the Marmara Sea and, thus, most likely they belonged to the Black Sea 		

subspecies, *T. t. ponticus*.

- In 2007, the Ministry of Environment and Natural Resources of Ukraine granted several permits for removal live stranded Black Sea bottlenose dolphins from the wild for the purpose of their rescue and rehabilitation in case of their sickness or trauma. As a result, at least three but, probably, more healthy individuals of this subspecies were captured with no return into the sea until now. Finally, on 31 March 2008 the ministry issued its Order #165 regarding the prohibition of any removal of Black Sea cetaceans from the wild during 3 years.

Action 9: Mitigation of disturbance caused by shipping

Recommended activities	Priority	State of implementation
(a) evaluation of the magnitude, temporal and spatial characteristics of marine traffic levels in comparison with data on cetacean distribution, migrations and abundance	Secondary	no evident progress
(b) assessment of shipping/cetacean interactions (including direct collisions and disturbance caused by vessel noise) in the areas representing important cetacean habitats	Secondary	no evident progress
(c) developing management strategies for reducing adverse impact of the marine traffic on Black Sea cetaceans	Secondary	no evident progress
(d) guidelines on mitigation of disturbance caused by shipping	Secondary	no evident progress
Results/Comments During the reporting period (2007-2010) and earlier, there was no any specific disturbance-related research or cetacean protection project in the Black Sea region.		

Action 10: Management of threats from gas-and-oil producing industry

Recommended activities	Priority	State of implementation
(a) evaluation of maritime areas inhabited by cetaceans and, at the same time, exploited or projected for exploitation by gas and oil industry	Secondary	no evident progress
(b) assessment of the impact of gas and oil industry on cetaceans in the areas of their seasonal aggregation or preferential occurrence	Secondary	no evident progress
(c) developing measures for controlling and mitigation of adverse influences of the offshore gas and oil industry on cetacean populations	Secondary	no evident progress
Results/Comments During the reporting period (2007-2010) and before, there was no any research and conservation project dedicated to interactions between gas-and-oil industry and Black Sea cetaceans.		

Action 11: Network of existing protected areas eligible for cetaceans conservation

Recommended activities	Priority	State of implementation
(a) assessment of existing protected areas with regard to their relevance to cetacean conservation	Primary	no evident progress since December 2006
(b) developing the regional network of eligible protected areas	Primary / URGENT	ongoing/partly implemented
(c) preparation of the network's cetaceans-oriented strategy, action plan and guidelines	Primary	no evident progress
(d) protected areas involved in the network should restrain human activities potentially harmful for cetaceans	Primary	no evident progress
Results/Comments • The Workshop on Black Sea PAs Eligible for the Conservation and Monitoring of Marine Mammals (Istanbul, December 2006), organized by the BSC Secretariat and supported by UNEP/RSP and ACCOBAMS, produced a list of existing eligible PAs which can constitute a frame for regional network. The participants set up a working group for drafting the network's strategy and guidelines. The minutes of that workshop appeared in August 2007. However, the working group did not start its work till present.		

- According to the Black Sea SAP (2009; Management Target 12), a network of MPAs eligible for cetaceans conservation should be developed during next 5-10 years.

Action 12: Special marine protected areas dedicated to cetacean conservation

Recommended activities	Priority	State of implementation
(a) developing management plans and creating <i>ad hoc</i> marine protection areas in the defined localities	Primary	no evident progress
(b) evaluation of other critical habitats used by cetaceans for resident habitation, reproduction, feeding and migrations, for the purpose of making up a list of areas which are eligible for the creation of new MPAs	Secondary	no evident progress
(c) preparation of proposals and pushing them forward to establish special protection modes in the areas recognized as expedient for cetacean habitats conservation	Secondary	no evident progress
Results/Comments <ul style="list-style-type: none"> • The development of management plans and creation <i>ad hoc</i> MPAs for the conservation of Black Sea cetaceans were defined reasonable for three localities designated as the “areas of special importance for Black Sea cetaceans” (Resolution 3.22 adopted by ACCOBAMS MoP3, Dubrovnik, October 2007): <ul style="list-style-type: none"> - the Kerch Strait for the bottlenose dolphin and the harbour porpoise (Russian Federation, Ukraine); - Cape Sarych to Cape Khersones for bottlenose and common dolphins and the harbour porpoise (Ukraine); - Cape Anaklia to Sarp for the common dolphin and the harbour porpoise (Georgia). • The implementation of this activity seems to be realistic in frames of specific project(s) commended and supported by local communities, national authorities and intergovernmental organisations. Some incentive should be provided to push this activity ahead on the national level. • According to the Black Sea SAP (2009; Management Target 21) the progress in the implementation of nationally developed management plans of PAs should be facilitated as a matter of high priority. 		

Action 13: Basic cetacean surveys

Recommended activities	Priority	State of implementation
(a) carrying out region-wide survey and assessment of cetacean abundance, distribution and hot spots	Primary / URGENT	no evident progress
(b) carrying out cetacean survey in the Turkish Straits System	Primary	ongoing/partly implemented
(c) developing long-term monitoring scheme(s) based on periodic surveying throughout the entire range of Black Sea cetaceans	Secondary	no evident progress
Results/Comments <ul style="list-style-type: none"> • Unsuccessful search for funds during five years (since October 2005) is a basic obstacle on the way of activity 13a. Fund rising “for the assessment of the abundance and distribution of Black Sea cetaceans” was included in the Workplan of the BSC Permanent Secretariat for the year 2006/2007. However, no funds for this project were found. • It was suggested to expand the list of observation objects (to add floating marine litter and oil spills to marine mammals and sea birds). • At present, the European Commission’s Joint Operational Programme “Black Sea 2007-2013” is under consideration of experts as a potential source of financial support. In theory, the idea of Black Sea basin-wide line-transect survey could be suitable for this programme in frames of its Priority 2: Sharing resources and competencies for environmental protection and conservation (Measure 2.1 “Strengthening the joint knowledge and information base needed to address common challenges in the environmental protection of river and maritime systems” and Measure 2.2 “Promoting research, innovation and awareness in the field of conservation and environmental protection for protected natural areas”). • According to the Black Sea SAP (2009; Management Target 12), a regional survey should be carried out not later than within the next 5-10 years. 		

Action 14: Cetacean photo-identification programme

Recommended activities	Priority	State of
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		implementation
(a) developing long-term photo-identification programme	Secondary	no evident progress
(b) the photo-identification datasets established earlier (2003-2005) and arranged as initial “Black Sea Fins” cetacean identification catalogue should be replenished with new data/images	Secondary	ongoing/partly implemented
(c) the photo-identification constituent should be incorporated in subsequent monitoring schemes covering the entire range of Black Sea cetaceans	Secondary	no evident progress
Results/Comments Black Sea regional photo-identification programme was not developed or even drafted during the reporting period. Turkish team from TUDAV (Istanbul) started systematic photo-identification study of bottlenose dolphins in the Bosphorus. The trained researchers in Georgia, Russia and Ukraine collected new images on occasions.		

Action 15: Regional cetacean stranding network (CSN)

Recommended activities	Priority	State of implementation
(a) developing the existing national CSNs with their functional fusion into the basin-wide network	Primary / URGENT	ongoing/partly implemented
(b) developing a Black Sea regional database of cetacean strandings	Primary	ongoing/partly implemented
(c) establishing cetacean tissue bank(s) accumulating samples from stranded and bycaught cetaceans	Primary	no evident progress
(d) multidisciplinary study of samples collected from stranded and bycaught animals	Primary	ongoing/partly implemented
Results/Comments <ul style="list-style-type: none"> • Three projects were implemented in Bulgaria, Georgia, Romania, Turkey and Ukraine in 2007-2009 with the aim to develop national and regional CSNs and record/study cetacean strandings: <ul style="list-style-type: none"> - Development of Black Sea cetacean stranding networks (implemented by BSCMM, Simferopol, in Bulgaria, Georgia, Romania and Ukraine; supported by ACCOBAMS). Results: six CSN meetings in Odessa, Vilkovo, Batumi, Varna, Pomorie and Constantza; training on common approach and methods; sections of the coastline were selected for regular stranding surveys; awareness and educational tools were produced and disseminated; - Project of cetacean bycatch and stranding related to turbot fishery and marine litter pollution in the western Turkish Black Sea coast (implemented by TUDAV, Istanbul; supported by BSC, ACCOBAMS and UNEP/RSP); - The monitoring and measures for dolphin populations (MOMEDOL-project implemented by the Institute of Fish Resources, Varna; supported by the Ministry of Environment and Water of Bulgaria). • The BSC Secretariat continues to collect for BSIS the national statistics on cetacean strandings. The requested data come on annual basis from national experts-members of AG FOMLR. • Three new project proposals were prepared in 2009 in Bulgaria, Georgia and Romania (submitted to the ACCOBAMS Secretariat). The project has started in Georgia in February 2010. • According to the Black Sea SAP (2009; Management Target 12), regional CSN should be developed during next 5-10 years. • See also comments to Action 18. 		

Action 16: Strategies for capacity building and raising awareness

Recommended activities	Priority	State of implementation
(a) establishing training courses on research methodology, conservation and management of Black Sea cetaceans	Secondary	ongoing/partly implemented
(b) developing a grant mechanism providing Black Sea students and young scientists with access to European system of education and making available their participation in international trainings on cetacean research and conservation	Secondary	no evident progress
(c) developing a regional public awareness strategy dedicated to cetacean conservation	Secondary	ongoing/partly implemented

Results/Comments

- The International Black Sea Action Day (31 October 2007) was celebrated in six riparian countries under the symbol of jumping dolphin and slogan “Save the dolphins for a healthy Black Sea! Where there are dolphins, there are fish!”.
- 18 lectures on how to monitor strandings were presented in late 2007 and early 2008 by Ukrainian specialists at six meetings of cetacean stranding networks in Bulgaria (Varna and Pomorie), Georgia (Batumi), Romania (Constanza) and Ukraine (Odessa and Vilkovo); two additional talks were given to teaching staff and students in the Batumi University. Those training activities were carried out in frames of ACCOBAMS project on the development of Black Sea CSNs (implemented by the Black Sea Council for Marine Mammals).
- One of the tasks of MOMEDOL-project (Bulgaria, 2008-2009) was to improve the awareness among general public and fishermen. There has been an increase in awareness among the locals resulted in increase in the number of volunteers reporting strandings.
- In 2009-2010, WWF-Turkey in cooperation with BSC Secretariat, UNDP and CocaCola were involved in the preparation of the “Black Sea Box”. This educational kit for schoolchildren and teachers is provided with basic information on biology and conservation of Black Sea cetaceans.

Action 17: Access to information and cetacean libraries

Recommended activities	Priority	State of implementation
(a) developing web sites dedicated to Black Sea cetaceans in every Black Sea country	Secondary	ongoing/partly implemented
(b) developing links between world's collections of marine mammal literature and Black Sea scientific libraries	Secondary	no evident progress
(c) compiling comprehensive annotated bibliography on Black Sea cetaceans	Secondary	no evident progress
(d) development of the Digital Library on Black Sea Cetaceans	Secondary	no evident progress
(e) information aids (booklets, posters, stickers, etc.) for public awareness	Secondary	ongoing/partly implemented

Results/Comments

- In 2007-2010, there were no specific projects to implement activities 17a–d. The specialized web sites <www.dolphin.com.ua> established in 2003 in Ukraine (Black Sea Council for Marine Mammals) and <www.delfini.cier.ro> established in 2006 in Romania (Mare Nostrum) operate in Russian and Romanian, respectively.
- Public awareness aids produced and disseminated:
 - poster “A Sign of Nature in Balance” dedicated to the International Black Sea Action Day (BSC *et al.*, 2007; in English and national languages; with a picture of bottlenose dolphin);
 - poster, leaflet and T-shirt produced for the Black Sea Day (Mare Nostrum, 2007; in Romanian; with images of dolphins);
 - poster “How to behave in the presence of a stranded cetacean” (Brema Laboratory, 2008; in English);
 - leaflet against ghost fishing “Derelict fishing nets represent harmful type of marine litter” (Brema Laboratory, 2008; in Russian and English);
 - poster “Our dolphins” about Black Sea cetaceans (TUDAV, 2008; in Turkish).
- BSC publications bearing a relation to cetacean conservation:
 - Birkun A., Jr. 2008. The State of cetacean populations. Pp.365-399 in: *State of the Environment of the Black Sea: 2001-2006/7* (Ed. by T.Oguz). BSC Publ., Istanbul, Turkey, 448 pp.
 - Birkun A., Jr. 2008. Plastic wastes aggravate dolphin by-catch in fishing nets. *Saving the Black Sea* (BSC Newsletter), 11:12-14.
 - BSC. 2007. Marine litter in the Black Sea Region: A review of the problem. BSC Publ., Istanbul, Turkey, 160 pp.
 - BSC. 2009. Implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (2002-2007). BSC Publ., Istanbul, Turkey, 252 pp.
 - Tonay A.M., Topcu E.N., Dede A., Ozturk A.A. 2008. Cetacean by-catch and stranding related to turbot fishery and marine litter pollution on the western Turkish Black Sea coast. *Saving the Black Sea* (BSC Newsletter), 11:11-12.
- 27 presentations on Black Sea cetaceans at the 5th International Conference on Marine Mammals of the Holarctic (Odessa, Ukraine, 14-18 October 2008).

- 14 presentations on Black Sea cetaceans at the 23rd Annual Conference of the European Cetacean Society (Istanbul, Turkey, 2-4 March 2009; hosted by TUDAV; co-sponsored by BSC).

Action 18: Measures for responding to **emergency situations**

Recommended activities	Priority	State of implementation
(a) assessment of emergency situations demanding special response (e.g. rescue-and-release operations)	Primary	ongoing/partly implemented
(b) developing guidelines on how to respond to emergency situations affecting Black Sea cetaceans	Primary	no evident progress
(c) developing regional strategy (contingency plan) and national teams for responding to emergency situations	Primary	no evident progress
Results/Comments <ul style="list-style-type: none"> • During the period from late May to early September 2009, a mass stranding event was recorded almost simultaneously in the northern, eastern and western Black Sea by stranding networks of Ukraine (Brema Lab), Georgia (Flora and Fauna Association) and Bulgaria (Institute of Fish Resources and Green Balkans). Prominent elevation of cetacean strandings number was accompanied with reiterated strandings of live individuals represented mainly (but not only) by common dolphins (<i>D. d. ponticus</i>). Clinical symptoms observed in live-stranded animals were similar to those reported 15 years ago in summer 1994 during the first epizootic of morbilliviral disease among Black Sea common dolphins. In 2009, this basin-wide emergency situation affected also cetaceans at the western Black Sea coast of Turkey (circular message by Arda Tonay, TUDAV, 19 August 2009). • Rescue-and-release activities: in 2009, a total of 23 cetaceans stranded alive in Ukraine (13 animals), Georgia (5) and Bulgaria (5) were released into the open sea; in June 2010 only one cetacean stranded alive was rescued and released in Ukraine (Kerch Strait). 		

ANNEX VIII

REPORT OF THE MEDITERRANEAN SUB-REGIONAL COORDINATION UNIT⁶

INTRODUCTION:

The RAC/SPA (the Regional Activity Centre for Specially Protected Areas) provides technical follow-up for the implementation of the Action Plan for the Conservation of Cetaceans in the Mediterranean adopted as part of the Mediterranean Action Plan (Barcelona Convention) in 1991.

The Meeting of the Parties to ACCOBAMS, at its first session, taken place in Monaco from 28 February to 02 March 2002, approved the Resolution 1.4 which entrusted RAC/SPA with the duties of a Sub-regional Coordinating Unit (Med SRCU).

The present report was drafted by RAC/SPA to inform the Focal Points for ACCOBAMS at their four Meeting (Monaco, 9-12 November 2010) about the activities in the field of cetacean conservation carried out by Med SRCU since their third Meeting, (Dubrovnik, Croatia 22-25 October 2007).

The undertaken actions in the field of cetacean conservation concerned mainly the following:

ASSISTANCE TO COUNTRIES

Within the framework of its assistance to the Mediterranean countries in the implementation of the Action Plan for the conservation of cetaceans, RAC/SPA has:

- Prepared a National Action Plan for the Conservation of Cetaceans in Syria following a series of consultation meetings held with the concerned actors in Syrian coastal areas (March 2008); the NAP will be discussed and approved during a national workshop to be organised in collaboration with the Ministry of Environment of Syria on 28-29 September 2010.
- Offered its financial and technical support to the University of Istanbul for the carrying-out of a sub-regional project and related oceanographic campaign for the estimation of cetacean population in the Eastern Mediterranean (Turkish, Syrian, Lebanese and Egyptian coasts). The results of this study were presented during the 23rd Annual European Cetacean Society Conference (Istanbul, March 2009);
- Provided its technical and financial support to the Egyptian Environment Affairs Agency in order to prepare a National Action Plan for the Conservation of Cetaceans and to enhance national capacities on this issue;
- Supported a field mission carried out in the North-Eastern Tunisian coast, (June-July) in order to study cetacean interaction with fisheries and evaluate various cetacean species populations present in the area. The study is led by the Faculty of Sciences of Bizerte (Tunisia).
- Provided its support to the Ionian Dolphin Project, a long-term research and conservation programme conducted by the Tethys Research Institute in the coastal waters of Western Greece (Kalamos area, Amvrakikos and Corinth gulf), in order to ensure its continuation and to build upon existing knowledge to turn the available scientific information into management proposals, conservation action and increased appreciation of the natural heritage in this part of Greece.

⁶ © 2010 United Nations Environment Programme
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The original version (in French) of this document was prepared by the RAC/SPA Secretariat.

UPDATE OF MEDACES

In order to promote the setting-up of national cetaceans stranding networks, a progress report of the Mediterranean Database of Cetaceans Strandings (MEDACES) has been elaborated and presented during the Fifth and sixth Meeting of the Scientific Committee of ACCOBAMS (April 2008, January 2010). The report includes an analysis of the stranding data received and introduced in MEDACES and proposes a set of recommendations with the aim to improve the MEDACES functioning and efficiency at management and participation levels.

ORGANISATION OF CONFERENCES AND SEMINARS

RAC/SPA has supported, as in previous editions:

- The 23rd and the 24th Annual European Cetacean Society Conference (Istanbul (Turkey) 1-4 March 2009 - Stralsund (Germany), 22-24 March 2010);
- The Seventh and the Eighth European Seminar on Marine Mammals : Biology and conservation (Valencia (Espagne), 17-19 September 2008 and 13-17 September 2010)

RAC/SPA contributed also to the organisation, by ACCOBAMS, of the First Biennial Conference on Cetacean Conservation in Southern Mediterranean Countries held in Tabarka (Tunisia), from 12 to 14 October 2009.

MEASURES FOR SUSTAINABLE MANAGEMENT OF FISHERIES

A Memorandum of Understanding between GFCM and RAC/SPA has been concluded.

Thorough work to help addressing by-catch and incidental catches of threatened species has been done in cooperation with regional fisheries institutions. Outputs included guidelines and recommendations for reducing by-catch and reinforcing laws and regulations for the conservation and management of species such as cetacean, cartilaginous fish, seabirds and monk seals and turtles. RAC/SPA participates to the scientific committee and subcommittees of the GFCM, as well as to their COP as observer. The by-catch mitigation measures have been supported by the GFCM SCME and the SAC for adoption proposal to the GFCM COP. Collaboration on the issue of SPAMIs creation on open seas, including deep seas has been agreed by the GFCM Secretariat.

A questionnaire has been established in collaboration with GFCM and sent to NFPs for SPAs and GFCM members. Its aim is to identify fishing reserves and fishery restricted zones in the Mediterranean countries. The partial results of this questionnaire were presented during the meeting of the sub-committees of GFCM (Antalya, October 2008).

RAC/SPA contributed to the organisation of the workshop "by-catch and incidental catches of threatened species" in collaboration with GFCM and ACCOBAMS. That was held in Rome (September 2008). Conclusions and recommendations were presented during the meeting of the sub-committees of GFCM (Antalya, October 2008).

PROGRAMME OF WORK FOR THE DEVELOPMENT OF PROTECTED AREA

A detailed Programme of Work on Marine and Coastal Protected Areas in the Mediterranean region has been established by RAC/SPA and presented to partner organizations (ACCOBAMS, WWF MEDPO, UICN, medpan) during a meeting held in Tunis on 1-2 April 2008. Based on the meeting discussions and the partners' inputs, this programme has been finalized. This Programme of Work has been eventually adopted by the Sixteenth ordinary Meeting of the Contracting Parties and made the object of a specific decision.

INSCRIPTION OF SPECIALLY PROTECTED AREAS FOR MEDITERRANEAN INTEREST (SPAMIS) WITHIN NATIONAL JURISDICTION

Four new SPAMI sites have been eventually endorsed by the Sixteenth ordinary Meeting of Contracting Parties (Marrakech, November 2009) and included in the SPAMI List. These sites are:

- The Bouches de Bonifacio Nature Reserve (France)
- The Al-Hoceima National Park (Morocco).
- The Marine Protected Area of Capo Caccia - Isola Piano (Italy)
- The Marine Protected Area of Punta Campanella (Italy)

The two first SPAMIs present Interest for cetacean conservation.

IDENTIFICATION OF POSSIBLE SPAMIS IN THE MEDITERRANEAN AREAS BEYOND NATIONAL JURISDICTION

The Joint Management Action of the European Community with the United Nations Environment Programme/Mediterranean Action Plan aims to promote the establishment of a representative ecological network of protected areas in the Mediterranean, through the SPAMI system, including open and deep sea sites. The action envisages a process developed in two phases.

The first phase of the initiative, entitled “Identification of possible SPAMI in the Mediterranean areas beyond national jurisdiction”, includes a feasibility assessment to identify areas beyond national jurisdiction in the Mediterranean Sea that could be qualified as SPAMIs, on the basis of sound science.

The process was assisted by a Steering Committee integrated by representatives of Mediterranean regional institutions and organisations, in which ACCOBAMS Secretary took part actively.

A set of feasible SPAMI to be proposed for consideration and further definition to the Contracting Parties to the Barcelona Convention, and a GIS on open seas, were the main deliverables provided on 2009. The most proposed areas contain cetacean critical habitats.

The second-phase of the project should be conducted in close consultation with the National Focal Points. For each site to be considered, the following main activities will be included: Legal analysis about the site status, data collection including field surveys and elaboration of the draft SPAMI presentation report.

CAPACITY BUILDING

Within the framework of the improvement of capacity building on cetacean biology and conservation RAC/SPA provided full grants to Mediterranean attendants to participate on the following events:

- The Seventh European Seminar on Marine Mammals (Valencia (Spain), 15-19 September 2008): Four Mediterranean participants from Algeria, Syria, Tunisia, and Turkey were designated by the SPA Focal Points in order to take part to this seminar.
- The 23rd Annual European Cetacean Society Conference (Istanbul (Turkey) 1-4 March 2009: four Mediterranean participants (Algeria, Libya, and Tunisia) participated to this conference.
- The 24th Annual European Cetacean Society Conference - Stralsund (Germany), 22-24 March 2010: four Mediterranean participants (Spain, Turkey, Italy and Israel) attended this conference.
- The Eighth European Seminar on Marine Mammals: Biology and conservation (Valencia, September 13-17, 2010): three participants from Egypt, Croatia and Morocco were designated by the SPA Focal Points in order to take part to this seminar.
- Training course aiming on study of the behaviour, communication, habitat use and social lives dolphins off the north-eastern coast of Sardinia Island, Italy, was attended by one expert from Egypt during three months on the Bottlenose Dolphin Research Institute – BDRI (Sardinia, Italy).

CONCLUSION:

With the view of ensuring synergies between the activities carried out within the ACCOBAMS framework and those carried out in the context of the Barcelona Convention, a Memorandum of Understanding, including a detailed work programme, is signed between the ACCOBAMS Secretariat and RAC/SPA each triennium.

ANNEX IX

<p>REPORT ON THE ACTIVITIES OF THE SCIENTIFIC COMMITTEE OF ACCOBAMS</p>
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Giuseppe Notarbartolo di Sciara
Chair of the Scientific Committee

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This report summarises the activities of the Scientific Committee of ACCOBAMS occurred between the Third and the Fourth Meetings of the Parties to the Agreement. During this period, the Committee met twice (Rome, 17-19 April 2008; and Casablanca, 11-13 January 2010).

To carry out specific actions adopted by the Meetings during the intersession, working group activities continued. This report includes a list of the recommendations adopted, and summaries of the outcomes of the activities. A more detailed description of the SC work is contained in the full reports of the meetings and annexed documentation, which can be obtained from the Secretariat.

1. Summary of meetings

Fifth meeting (Rome, 17-19 April 2008): The meeting was attended by 31 participants. Of these, 12 were members of the Committee, two represented, respectively, the Mediterranean/Atlantic and the Black Sea Sub-Regional Coordinating Units, and 13 were observers or experts invited by the Secretariat.

Sixth meeting (Casablanca, 11-13 January 2010): The meeting was attended by 31 participants. Of these, 8 were members of the Committee, two represented, respectively, the Mediterranean/Atlantic and the Black Sea Sub-Regional Coordinating Units, and 21 were observers or experts invited by the Secretariat.

2. Recommendations adopted (13 January 2010)

1. ACCOBAMS Survey Initiative (Recommendation SC6.1)
2. Programme of work on population structure (Recommendation SC6.2)
3. Conservation of Mediterranean common dolphin (Recommendation SC6.3)
4. Ship strikes (Recommendation SC6.4)
5. Marine Protected Areas (Recommendation SC6.5)
6. Anthropogenic noise (Recommendation SC6.6)
7. Monitoring, assessing and reducing bycatch in the Black Sea (Recommendation SC6.7)
8. Climate change (Recommendation SC6.8)
9. Minimum funding for the Scientific Committee (Recommendation SC6.9)

3. Declaration of the Sixth Meeting of the Scientific Committee

The impetus for the adoption of the Declaration was provided by strong concern which was felt by Committee Members in noting the slow rate of progress in conservation achievements by the Agreement, in spite of all the good intentions and efforts undertaken since ACCOBAMS came into force by the Parties, the Secretariat, and the Scientific Committee itself. This Declaration was adopted in a constructive spirit, with the conviction that the effectiveness with which ACCOBAMS will achieve its statutory goals might be greatly enhanced through an analysis of the mechanisms for the implementation of the Agreement's provisions at the national and international level, an assessment of the effectiveness and challenges of the various conservation actions implemented so far, with a view to clarify the reasons why progress has been so slow; and the adoption of actions to improve the Agreement's performance (e.g., through the adoption of a compliance mechanism). The Committee will be pleased to do all that is possible to support the Parties in this effort.

4. Issues arising from the Meetings

The essence of the discussions during the two meetings of the Scientific Committee is synthesized below, and the main relevant elements for the determination of the work to be carried out during the next triennium were extracted into an ad hoc draft of the future Programme of Work.

4.1. Strengthening knowledge of population ecology, structure and conservation status

The effort of increasing knowledge of cetacean populations in the ACCOBAMS area continued along three main directions: a) the implementation of an Agreement-wide survey; b) the implementation of population structure investigations, and c) the establishment of an organised sighting database.

a) An update on the status of the survey initiative was provided by the ad hoc Working Group. While the fundamental scientific work is now completed, the primary limitations to the implementation of the survey now relate to questions of funding, logistics, and administration. To this end, **Recommendation 6.1** was adopted.

b) The conservation relevance of the detection of structure within cetacean populations in the Agreement area is well known, and making progress in this direction is considered by the Scientific Committee to be very important. A document outlining a programme of work was presented. A recommendation to the Parties (**Recommendation 6.2**) to support this effort was adopted.

c) With encouragement from the Bureau, the Committee agreed on a simplified (in terms of resources and time needed) method for systematically recording and mapping sightings in the ACCOBAMS area, by interfacing with the Ocean Biogeographic Information System Spatial Ecological Analysis of Mega Vertebrate Populations (OBIS-SEAMAP) global online database. A small working group was established by the Chair and the work is now in progress.

Furthermore, specific conservation actions were discussed, including:

- Black Sea cetaceans;
- Mediterranean short-beaked common dolphins, which continue their decline in the region without the benefit of even minimal management attention; to this effect, **Recommendation 6.3** was adopted;
- Mediterranean common bottlenose dolphins;
- Fin whales, which provided the opportunity for a discussion of their main threat, i.e. collisions with ships, and for the adoption of **Recommendation 6.4** (see 4.2, this document);
- Cuvier's beaked whales, which are the subject of a habitat modelling study expected to be completed by 2010;
- a resolution to place greater impetus in understanding the conservation status of lesser known species, such as harbour porpoises in the Aegean Sea and rough-toothed dolphins in the Levantine Sea.

4.2. Ship strikes

With funds provided by the Italian Ministry of the Environment, a project to assess and identify priority conservation and mitigation measures in the Mediterranean Basin concerning the interaction between maritime traffic and cetaceans is being carried out. Activities are ongoing to document mortality from ship strikes to obtain reliable estimates of rates of human-caused removals, to generate a database for analysis, and to conduct feasibility studies to assess the efficiency of onboard dedicated observers to detect whales. The issue of ship strikes and fin whale conservation provided the Scientific Committee with opportunities for cooperating with a number of other organisation, namely

REPCET (an initiative developed also in cooperation with the Pelagos Sanctuary), and the Scientific Committee of the IWC: more specifically, a Joint IWC-ACCOBAMS Workshop on Reducing Risk of Collisions between Vessels and Cetaceans, which will be held in Beaulieu (France) from 21-24 September 2010. The expected outcome of the workshop is a report that will include a series of detailed research and conservation actions and a two-year work plan to be considered in the framework of the collaboration between the IWC and ACCOBAMS. It will be submitted to the IWC and ACCOBAMS and made publicly available on the respective websites. An effort is being made of organizing a side event at the MOP4.

4.3. Marine protected areas

It was recalled that to date the Scientific Committee had completed an initial programme of work on MPAs, fulfilling the requests of the Parties; however, minimal progress from the Parties for carrying forward these actions was noticed, with only one of the seventeen areas being established (Regno di Nettuno - Ischia), and another iconic area for cetaceans (the Cres-Lošinj bottlenose dolphin reserve) not firmly established yet. The case of the management (or lack thereof) of the Pelagos Sanctuary (which is the subject of a separate Agreement but still central to the concern of ACCOBAMS given that a) the Sanctuary's boundaries are within the ACCOBAMS boundaries, b) cetaceans living within Pelagos are the also the objects of ACCOBAMS' conservation goals, and c) the Parties to the Pelagos Agreement are all Parties to ACCOBAMS) was recalled, with concern about the missed opportunity for experimenting with new management and governance challenges on the only Areas Beyond National Jurisdiction (ABNJ) protected area on the eve of the creation of a set of new High Seas SPAMIs by Mediterranean countries. A recommendation was adopted (**Recommendation 6.5**) with the objective of, and suggestions for, instilling new lymph into cetacean MPA work in the ACCOBAMS area.

4.4. Anthropogenic noise

It was recalled that the Contracting Parties decided to establish a separate Working Group outside the Scientific Committee to consider this issue further and report directly to MOP4. While recognising the ongoing work of the Working Group, with a new recommendation on the subject (**Recommendation 6.6**) the Scientific Committee reiterated the need to address fully the issue of anthropogenic noise, the need for precaution, and the foremost need for transparency in the disclosure to the ACCOBAMS Secretariat of approved activities conducted within the Agreement area that are known or likely to impact acoustically on the cetacean environment.

4.5. Strandings

Discussions were made to promote a more complete work on MEDACES, the region's stranding database managed by the University of Valencia, and to improve capacity to intervene in the case of live strandings. In this specific case the Committee suggested that ACCOBAMS supports an effort announced by Italy or organising a workshop on live strandings to discuss the various options for intervention and help drafting guidelines to support such occurrences in the future.

4.6. Tissue Banks

The importance that existing tissue banks in the ACCOBAMS area was recalled, along with appreciation for the work done, and continuity of the Banks should be assured by the States where they were established. The Committee also suggested that the number of Banks should increase to create a network able to ensure storage and availability of tissues for study deriving from stranded and

bycaught cetaceans. To this end, coordination should be established and maintained between the tissue bank network and the stranding networks, also through the support of MEDACES.

4.7. Emergency Task Forces

A roster of contact persons and experts from the scientific and conservation communities was established, who could contribute with their expertise (e.g. pathology, epidemiology, toxicology, biology, ecology, acoustics) to support intervention in the case of unusual mortality events, including epizootics and atypical mass strandings, and maritime disasters.

Furthermore, in support of possible future events, the Scientific Committee formally adopted guidelines for “coordinated cetacean stranding response during mortality events caused by infectious agents and harmful algal blooms”, and “concerning best practices and procedures for addressing cetacean mortality events related to chemical, acoustical and biological pollution”, and recommended that they be posted on the ACCOBAMS website.

4.8. Interactions between cetaceans and fisheries: bycatch and depredation

The Scientific Committee adopted the guidelines for the testing and use of acoustic mitigation devices for depredation mitigation in the ACCOBAMS area and recommended that these guidelines and the document reviewing the effectiveness of acoustic devices and depredation mitigation be posted on the ACCOBAMS website as soon as possible, as well as the protocol developed by Simon Northridge and Caterina Fortuna (2008). Considering the level of risk posed to Black Sea cetaceans by the high number of accidental captures occurring in the region, a recommendation (**Recommendation 6.7**) was adopted by the Scientific Committee on this subject.

4.9. Climate change

The Scientific Committee discussed the way forward with climate change work in the Agreement area, noting that ACCOBAMS has already made a commitment to further work in this area and this is reflected in its Work Programme. The Committee discussed the previous instruction to hold a workshop on climate change, noting that it had been waiting on the results of an IWC workshop on the same subject and concluded that it would give consideration as to whether a further workshop would be useful at this time. In order to determine whether the time was ripe for a regional workshop, the Committee agreed that a working group of interested members could develop a proposal for such a workshop. The Committee could then consider the merits of a proposal and determine if such a workshop would be productive and if so, when it could be held. The Committee decided to adopt a recommendation on the subject (**Recommendation 6.8**).

4.10. Whale watching

The SC revised the guidelines for commercial whale watching in the ACCOBAMS area, noted the new Pelagos guidelines and stressed the importance of trainings for whale watching operators.

4.11. Impact of pollution

The SC looked forward to examining a report from an IWC workshop on this subject and, where possible, integrating the results into its own considerations of this issue.

4.12. Other matters

In addition to the recommendations related to the agenda items, the Scientific Committee also adopted a recommendation concerning the minimum funding for the Scientific Committee (**Recommendation 6.9**), once again respectfully requesting that serious consideration be given to the allocation, within the budget of ACCOBAMS, of *minimum seed funding* to ensure that some action occurs on the highest priority issues (e.g., Mediterranean short-beaked common dolphin conservation plan, phase I of population structure programme), noting that this funding is not to carry out the actions themselves but to enable progress to be made in terms of co-ordination and the search for full funding.

5. Next meeting

The Seventh Meeting of the Scientific Committee is expected to take place during early 2011, in a location still to be determined.

A handwritten signature in blue ink, appearing to read 'G. Notarbartolo di Sciara', with a stylized, cursive script.

Giuseppe Notarbartolo di Sciara
Chair of the Scientific Committee

ANNEX X

<p align="center">RESOLUTIONS ADOPTED DURING THE FOURTH MEETING OF THE CONTRACTING PARTIES</p>

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RESOLUTION 4.2

APPROVAL OF THE HEADQUARTERS AGREEMENT WITH THE HOST COUNTRY

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Recalling Article IV of ACCOBAMS, providing for establishment of the Secretariat of the Agreement,

Desiring to clarify the international juridical personality of the Secretariat of the Agreement,

Expressing all the gratitude to the Government of H.S.H the Prince of Monaco for the support provided since the adoption of ACCOBAMS and in particular for the offer to host the Secretariat of the Agreement which was accepted on 28 February 2002 by the First Meeting of the Parties (Resolution 1.2),

Thanking also the Government of H.S.H the Prince of Monaco for having accepted to cover the expenses for the Executive Secretary and for a full time staff member of the Secretariat,

Recalling that the financial arrangements between the Government of H.S.H the Prince of Monaco and the Secretariat of ACCOBAMS are specified in Annex 2 to the present Resolution,

1. *Approves* the Headquarters Agreement between the Government of H.S.H the Prince of Monaco and the Secretariat of ACCOBAMS, which is Annex 1 to the present Resolution, as well as the Financial Arrangements between the Government of H.S.H the Prince of Monaco and the Secretariat of ACCOBAMS, which is Annex 2 to the present Resolution;
2. *Mandates* the Chair of the ACCOBAMS Bureau and the Executive Secretary to sign the above mentioned Headquarters Agreement on behalf of the Parties to ACCOBAMS;
3. *Mandates* the Executive Secretary, after the signature, to notify to the Government of H.S.H the Prince of Monaco that the requirements concerning the coming into force of the Headquarters Agreement have been met, as provided for in Article XVII, paragraph 1, of the said Agreement.

Headquarters Agreement between the Government of H.S.H the Prince of Monaco and the Permanent Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area

(Original: French)

On the one side, the Government of H.S.H the Prince of Monaco and, on the other, the Permanent Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area, hereafter called the “Organisation”;

Considering Article III 7 of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area, signed in Monaco on 24 November 1996 and entered into force on 1 June 2001, which provides that the Meeting of Parties at its first session would establish a Secretariat to carry out the secretarial functions enumerated in Article IV 2 of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area;

Considering that the Headquarters of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area is established in Monaco in accordance with the offer made by the Government of H.S.H the Prince of Monaco to host a Permanent Secretariat and the acceptance of the said offer by the Meeting of Parties in its Resolution 1.2 of 28 February 2002 of the First Meeting of Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area;

Wishing to determine the conditions which govern the establishment of this Headquarters and to define the privileges and immunities granted to the Organisation and its staff in the Principality of Monaco;

Agree on the following:

Article 1: Legal personality

The Government of H.S.H the Prince of Monaco shall recognize the legal personality of the Organisation and, for the purposes of carrying out its statutory responsibilities, its capacity:

- to contract,
- to acquire and dispose of movable and immovable property,
- to be a party to legal proceedings.

Article 2: Establishment of the Headquarters of the Organisation – Premises

1. The Headquarters of the Organisation shall include the premises it occupies or may occupy for the needs of its activity, with the exception of its staff’s residential premises. These premises have been graciously granted by the Government of H.S.H the Prince of Monaco for the requirements of the functioning of the Organisation for a period of (99 years) starting from the date when the present Agreement enters into force.
2. At present the premises occupied by the Organisation are located at Jardin de l’UNESCO – Les Terrasses de Fontvieille – 98000 Monaco.

3. The Government of H.S.H the Prince of Monaco, besides taking charge of the usual expenses of the owner, agrees to take charge, with the exception of expenses caused by negligence or omission on the part of the Organisation's staff, of the Secretariat's functioning expenses, as well as expenses for heating, lighting, water supply, sewage disposal and garbage collection facilities of the Organisation the Organisation itself taking charge of those other expenses of internal maintenance that are usually borne by a tenant.
4. Without prejudice to the conditions of the present Agreement, the Organisation shall not allow its Headquarters to be used as a refuge for persons who are wanted for a crime or for a flagrant offence, or are subjected to a legal warrant, a criminal conviction, an expulsion order or a decision to be deported or extradited issued by the Monacan authorities.
5. The Headquarters of the Organisation shall be inviolable. The Monacan authorities may only enter it with the consent or at request of the representative of the Organisation. This consent may be presumed in case of fire or other emergency requiring prompt protective action.

Article 3: Immunities of the Organisation

1. Except as otherwise provided by the present Agreement, the Organisation's official activities shall be carried out in compliance with Monacan law in the Principality of Monaco.
2. Within the limits of its official activities, the Organisation and its movable property, wherever found, its premises and its assets shall enjoy immunity from jurisdiction, except insofar as the Chair of the ACCOBAMS Bureau or his representative expressly waives this immunity by notifying the Government of H.S.H the Prince of Monaco.
3. The property mentioned in Paragraph 2 of the present Article shall be immune from all forms of search, requisition, confiscation and seizure, as well as from all other forms of administrative or legal restraint.
4. The immunities provided for in the present Article do not apply to property, premises and assets abandoned by the Organisation.

Article 4: Archives

The Organisation's archives shall be inviolable.

These archives shall include all correspondence, documents, manuscripts, photographs, computer databases, films and records belonging to or held by the Organisation.

Article 5: Flag and emblem

The Organisation shall have the right to display its flag and its emblem in its premises and on its means of transport or those used on its behalf.

Article 6: Exemption from dues and taxes

1. Within the limits of its official activities, the Organisation, its assets, income, premises and other property shall be:
 - exempted from all direct taxes, it being understood however that the Organisation shall not ask to be exempted from the taxes that in fact only constitute payment of services provided;

- exempted from import or export taxes and dues, interdictions and restrictions on imports or exports as regards goods or articles imported or exported by the Organisation for its operating requirements, it being however understood that, on Monacan or French territory, the goods or articles imported in accordance with this exemption can only be ceded or lent freely or for money under the conditions previously agreed by the competent Monacan or French authorities.

The above exemptions shall in no way be interpreted as preventing the adoption by the Monacan authorities of appropriate security measures.

2. The Organisation shall pay, as provided for in ordinary law, those indirect taxes that are included into the price of the goods sold or the services provided. However, the taxes relating to major purchases or operations carried out by the Organisation for the requirements defined in the preceding paragraph, shall be reimbursed according to modalities to be decided by mutual agreement between the Government of H.S.H the Prince of Monaco and the Organisation, with the exception of alcohol and tobacco products.

Article 7: Currency and exchange rate

1. Without being subjected to any monitoring, regulation or financial moratorium, the Organisation, within the context of its official activities, can freely:
 - receive, acquire, hold or cede funds, currency and valuables of all kinds and hold bank or other accounts in any currency whatsoever;
 - transfer its funds, currency and valuables within the territory of Monaco and from the Principality of Monaco to another State, or vice-versa.
2. In exercising the rights granted to it in accordance with the present Article, the Organisation takes account of any representation made by the Government of H.S.H the Prince of Monaco insofar as it deems that it can act on it without prejudice to its interests.

Article 8: Communications

Insofar as it is compatible with the provisions of the international conventions, regulations and arrangements to which the Principality of Monaco is a Party, the Organisation shall enjoy, for its official communications of whatsoever kind, treatment that is at least as favourable as that granted to the diplomatic missions in the Principality of Monaco as regards any communications priority.

Article 9: Publications

Importing and exporting the Organisation's publications or any other information materials imported or exported by the Organisation within the limits of its official activities shall not be subjected to any restriction.

Article 10: Representatives at and participants to ACCOBAMS meetings

1. The Government of H.S.H the Prince of Monaco commits itself, unless some reason of public order prevents it, to authorizing the entry and staying in the Principality of Monaco, without visa charges and without delay, for the duration of their functions or missions, of representatives of member States and observers from correspondent States who have been invited to participate to the meetings of the Organisation organs or to conferences and meetings convened by it, as well as of experts or personalities called upon for consultation.

2. The persons referred to in Paragraph 1 of the present Article shall not, for the entire duration of their functions or missions, be obliged by the Monacan authorities to leave the territory of Monaco, unless they have abused the privileges of staying they were granted and are pursuing any activity not related to their Organisation functions or missions. The Government of H.S.H the Prince of Monaco should, however, exercise its right to expel these persons only after having first consulted Chair of the ACCOBAMS Bureau or his representative.
3. The persons referred to in Paragraph 1 of the present Article shall not be exempted from the application of quarantine and public health regulations where appropriate.
4. During their assignments, and during their movements on Monacan territory, the persons referred to in Paragraph 1 of the present Article shall enjoy:
 - personal immunity from arrest or detention or seizure of their personal luggage, except in cases of flagrant offence;
 - inviolability of all their official papers, documents and materials;
 - the right to use codes and to send and receive correspondence and other papers and documents by post or in sealed bags.

In order to help the Government of H.S.H the Prince of Monaco to implement the provisions of the present Article, the Organisation shall communicate to the Government of H.S.H the Prince of Monaco the names of the representatives four weeks before their arrival in the Principality of Monaco.

Article 11: Staff Members

The Organisation's staff shall include the permanent and non-permanent members in charge of the scientific, technical or administrative functions.

Article 12: Staff immunity

1. Except for Monacan nationals, people permanently resident in the Principality of Monaco and employees in charge of administrative functions, the staff shall enjoy:
 - immunity from jurisdiction, even after its functions have ended, for all acts, including words and writings, undertaken in the exercise of its functions and within the limits of its mandate. This immunity shall not apply in the case of any breach of the rules of road traffic committed by a member of the Organisation's staff, or of harm caused by an automobile vehicle belonging to or driven by a member of staff;
 - exemption from any tax on salaries and emoluments paid for his/her activities for the Organisation;
 - the regime set forth in Article 10 as regards entry and staying in the Principality of Monaco;
 - if the person previously lived abroad, the right to import duty free furniture and personal effects owned by or in the possession of that person or which have already been ordered and are intended for his/her personal use or household establishment, when first settling in, with the exception of automobile vehicles, alcohol and tobacco products;
 - a special staying permit issued by the Government of H.S.H the Prince of Monaco;
 - at times of international tension, repatriation facilities granted to members of diplomatic missions.
2. Additionally, staff members in charge of administrative functions shall enjoy the regime of temporary duty free import for their automobile vehicles.

Article 13: Object and waiver of privileges and immunities

1. The privileges and immunities provided for by the present Agreement shall not be established with a view to giving personal advantages to those enjoying them, but solely to ensure that, in all circumstances, the Organisation can operate freely and that the persons on whom they are conferred are completely independent.
2. The Chair of the ACCOBAMS Bureau or his representative or, in the case of representatives of member States, the Government of the State concerned, shall, have the right and duty to waive these immunities when they deem that they prevent the normal carrying out of justice and that it is possible to dispense with them without prejudicing the interests of the Organisation.

Article 14: Cooperation

1. The Organisation shall fully cooperate in all circumstances with the Government of H.S.H the Prince of Monaco in order to prevent any abuse of the privileges, immunities and facilities provided for by the present Agreement.
2. The provisions of the present Agreement shall in no way affect the right of the Government of H.S.H the Prince of Monaco to take the measures it could deem useful for the security of the Principality of Monaco and the protection of public order.

Article 15: Notification of appointments

1. The Chair of the ACCOBAMS Bureau or his representative shall notify the Government of H.S.H the Prince of Monaco of the appointment of the Executive Secretary and the date on which the Executive Secretary begins or end his/her functions.
2. The Chair of the ACCOBAMS Bureau or his representative shall notify the Government of H.S.H the Prince of Monaco when a member of the staff other than the Executive Secretary begins or end his/her functions.
3. An advance notice of four weeks shall be required for the arrival and final departure of the persons mentioned in 1 and 2.
4. The Chair of the ACCOBAMS Bureau or his representative shall communicate twice a year to the Government of H.S.H the Prince of Monaco a list of all members of staff. The Organisation shall state if these persons are Monacan nationals or are permanently resident in the Principality of Monaco.
5. The Government of H.S.H the Prince of Monaco shall deliver to all the members of staff as promptly as possible after notification of their appointment a "special" card carrying the picture identification of the occupant and identifying him/her as a member of staff, according to the case. This card shall be accepted by the Monacan authorities as proof of identity and of appointment. When the member of staff ends his/her functions, the Organisation shall send the concerned person's "special" card back to the Government of H.S.H the Prince of Monaco.

Article 16: Settlement of Disputes

Any dispute between the Government of H.S.H the Prince of Monaco and the Organisation about the interpretation or the implementation of the present Agreement or any question affecting the relations between the Government of H.S.H the Prince of Monaco and the Organisation, when not settled by

consultation or negotiation or a method acceptable to both parties, shall be submitted for final decision without appeal to a Committee of three arbitrators composed of:

- a) an arbitrator designated by the Government of H.S.H the Prince of Monaco;
- b) an arbitrator designated by the Organisation;
- c) an arbitrator designated by mutual agreement by the Government of H.S.H the Prince of Monaco and the Organisation, or, when there is disagreement, by the Chair of the International Court of Justice.

Article 17: Entry into force and termination

1. The present Agreement shall enter into force after mutual notification in writing, by the Government of H.S.H the Sovereign Prince and by the Organisation, that their respective requirements concerning the entry into force of the present Agreement have been met.
2. The present Agreement can be modified or terminated on the common decision by the Government of H.S.H the Prince of Monaco and by the Organisation. In deciding to modify or to terminate the present Agreement, the Organisation can only act in compliance with a decision taken by the Meeting of Parties.
3. Should negotiations not lead on to an understanding within one year, the present Agreement may be denounced by the Government of H.S.H the Prince of Monaco or by the Organisation acting in compliance with a decision taken by the Meeting of Parties, with previous notice of two years.
4. Should the Headquarters of the Organisation cease to be located in the Principality of Monaco, the present Agreement shall cease to apply at the end of a reasonable period necessary for the transfer and the cession of the Organisation's property in the Principality of Monaco. In either case, the date of the end of the Agreement is confirmed by an exchange of notes between the Government of H.S.H the Prince of Monaco and the Organisation.

IN WITNESS WHEREOF, the undersigned, being duly authorised to do so, have signed the present Agreement, in two copies, in French language.

Signed in Monaco on Thursday 11th November 2010

For the Principality of Monaco

For ACCOBAMS

H.E. M. Michel ROGER
Government Minister

M. Cyril GOMEZ
Chair of the ACCOBAMS Bureau

For the Permanent Secretariat of ACCOBAMS:

Marie-Christine GRILLO-COMPULSIONE
Executive Secretary of ACCOBAMS

**Financial arrangements between the Government of H.S.H the Prince
of Monaco and the Secretariat of ACCOBAMS**

The Agreement Secretariat will be governed by the following terms of reference:

1. The Agreement Secretariat will be made up of an Executive Secretary and a full time Secretary provided by the Host Country.
2. Staff expenses, along with welfare cost, (Executive Secretary and Assistant) are the responsibility of the Host Country. Staff expenses will be limited to the pay scale for the department head of the 3rd group in the Monacan Civil Service for the Executive Secretary, and that in the scale for shorthand typists in the Monacan Civil Service for the Assistant.
3. Secondment of staff members by Governments of the Parties will be encouraged, provided this is subject to mutually acceptable arrangements between the Host Country and the Government concerned.
4. The Executive Secretary of the Agreement will report to the Executive Secretary of the CMS on his/her relations with UNEP and with other international organisations. She will report to the Parties, especially at the Meeting of the Parties, and to the competent bodies of the Agreement, on his/her work program.
5. The Executive Secretary will report to the competent bodies of the CMS on the implementation of the Agreement and other matters of common interest. He will also ensure followed-up contact with the CMS Secretariat and the CMS Agreements Secretariats Unit, with which he will have regular meetings.
6. The Agreement's Permanent Secretariat will have recourse to suitable local banking services to conduct day-to-day transactions.
7. The Host Country will facilitate the financial execution of the Agreement's budget, in particular authorizing tax-free expenses.
8. The Host Country will provide facilities and office equipment for the day-to-day functioning of the Secretariat.
9. Operating costs of the Agreement Secretariat: the Host Country will take in charge the following expenses :
 - rents for the premises (with cellar) and their tenant's maintenance costs,
 - lease hold expenses,
 - telephone costs and subscription
 - rent and maintenance costs of a photocopier,
 - internet subscription,
 - computer stock with maintenance,
 - office equipment and maintenance,
 - upkeep and heating of the premises,
 - cleaning of the premises, and cleaning products,
 - water consumption and electricity,
 - rent and maintenance cost of the archiving place,
 - rent and maintenance cost of 2 flats for the accommodation of the employees,
 - insurance premises,
 - local taxes.

RESOLUTION 4.3

FINANCIAL AND ADMINISTRATIVE MATTERS FOR 2011-2013

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Recalling Article IX, paragraphs 1 and 2, of the text of the Agreement, stating that the Parties shall determine the scale of contributions to the Budget and that the Meeting of the Parties shall adopt a Budget by consensus,

Acknowledging with appreciation:

- the financial support and the contributions in kind provided by the Government of H.S.H. the Prince of Monaco for the Agreement Secretariat;
- the voluntary contributions provided by France, Italy, Monaco and Spain during the triennium 2008-2010;
- the support of Partner Organisations for Agreement activities,

Stressing the importance of the payment by all Parties of the contributions due to the Budget of the Agreement,

1. *Takes note* with satisfaction of the audited accounts for the period 2008-2010 presented by the Secretariat;
2. *Agrees* to transfer, if appropriate, part of the outstanding resources from the 2008-2010 Budget to the Supplementary Conservation Grants Fund, as stated in Resolution 2.4, and *mandates* the Bureau to set the amount thereof on the basis of recommendations by the Secretariat;
3. *Agrees* to provide financial support for the participation to the ACCOBAMS Meetings of the Parties of delegates (one delegate by Country) from Countries with middle and low incomes, as defined in the Human Development Report of the UN and as listed in Annex 5 to the present Resolution excluding Countries in arrear of more than three years of contribution to the Trust Fund;
4. *Adopts* the Budget for 2011-2013, as in Annex 1 to the present Resolution;
5. *Confirms* that Parties shall contribute to the Budget at the scale agreed upon by the Meeting of the Parties in accordance with Article III, paragraph 8 (e), of the Agreement;
6. *Agrees* to the scale and amounts of contributions of Parties to the Agreement as listed in Annex 2 to the present Resolution and to the application of that scale to new Parties *pro rata* of the remaining annual financial exercise;
7. *Takes note* of Resolution 4.5 of the Meeting of the Parties on the Work Programme for the period 2011-2013 and invites the Secretariat to consult with the Scientific Committee and the Bureau on funding priorities related to scientific aspects of the Agreement, according to the priorities set forth by the Work Programme;
8. *Requests* Parties, in particular those that pay the minimum contribution, to consider paying for the entire triennium in one instalment at the beginning of the period;

9. *Further requests* Parties to pay their contributions as promptly as possible, but in any case no later than at the end of March of the year to which they relate;
10. *Recommends* that Parties provide additional support for developing Countries and Countries with economies in transition to participate in and implement the Agreement throughout the triennium 2011-2013;
11. *Invites* Contracting Parties, Range States and Organisations to consider the feasibility of providing adequate personnel for the Secretariat;
12. *Also invites* States that are not Parties to the Agreement as well as governmental, intergovernmental and non-governmental Organisations and other possible donors to consider contributing to the implementation of the Agreement on a voluntary basis;
13. *Asks* the Parties that have unpaid pledges to pay their pending contributions within a reasonable time, at the latest two to three months after the end of 2010, in order to close the budget for the 2008-2010 triennium, as soon as possible;
14. *Encourages* individual Parties and Range States, when allocating funds for national ACCOBAMS related research, to take into account the priorities identified by the Scientific Committee and ask, as appropriate, for the advice of the Scientific Committee in identifying work that (a) is most directly in accord with the conservation priorities identified in Resolutions adopted by the Parties and (b) will directly assist the Scientific Committee in its priority work;
15. *Approves* the terms of reference for administration of the Agreement Budget for the period 2011-2013, as set out in Annex 3 to the present Resolution, as well as the guidelines for the acceptance of financial contributions, as set out in Annex 4, provided that no voluntary contribution shall entail any present or future financial liability for the Agreement Trust Fund without the prior consent of the Parties or the Bureau;
16. *Entrusts* the Secretariat to explore the availability of appropriate additional funds to support the implementation of the Agreement.

ANNEX 1

Draft Budget 2011 - 2013

		2011		2012		2013	
		Expected Trust Fund	External contribution	Expected Trust Fund	External contribution	Expected Trust Fund	External contribution
Administration and general management		€		€		€	
10	General management						
110	Administrative staff						
1 101	Executive Secretary ⁷	20 000	65 190	20 000	65 190	20 000	65 190
1 102	Administrative Assistant	38 500		38 500		38 500	
1 103	Fund management controller	1 500		1 500		1 500	
1 104	Assistant ⁸	-	25 260	-	25 260	-	25 260
1 105	Project Assistant	8 000	27 500	8 000	27 500	8 000	27 500
120	Administrative support						
1 201	Coordination Units	10 000		10 000		10 000	
1 202	Translators	1 500		1 500		1 500	
1 203	Reviewers	-		-		-	
1 204	External Assistance	5 000		5 000		5 000	
130	Trips						
1 301	Secretariat staff	16 500		16 500		14 500	
	Total	101 000	117 950	101 000	117 950	99 000	117 950
20	Meetings						
210	Meeting of the Parties	-		-		60 000	
220	Scientific Committee	24 000		24 000		-	
230	Bureau	5 000		5 000		10 000	
	Total	29 000		29 000		70 000	
30	Equipment and premises						
310	Expendable equipments						
3 101	Miscellaneous office supplies	1 500		1 500		1 500	
320	Non-expendable office equipment						
3 201	Office equipment	2 000		2 000		2 000	
330	Premises						
3 301	Rent and maintenance costs	-		-		-	
	Total	3 500	5 000	3 500	5 000	3 500	5 000
40	Miscellaneous						
410	Operation and maintenance						
4 101	Computers maintenance	2 000		2 000		2 000	
4 102	Photocopier	1 000		1 000		1 000	
4 103	Telephone and fax	-		-		-	
4 104	Posting fees	1 000		1 000		1 000	
4 105	Network fees	800		800		800	
4 106	Bank fees	500		500		500	
4 107	Subscriptions	250		250		250	
420	Hospitality	1 000		1 000		1 000	
	Total	6 550	4 000	6 550	4 000	6 550	4 000
Total administration and general management		140 050	126 950	140 050	126 950	179 050	126 950

⁷ Gross Salary. The Salary of the Executive Secretary is covered by the Host Country, only 20,000€ are covered by the Trust Fund.

⁸ Gross Salary. The Salary of the Assistant is totally covered by the Host Country.

DRAFT Budget 2011 - 2013		2011		2012		2013	
		Expected Trust Fund	External contributions	Expected Trust Fund	External contributions	Expected Trust Fund	External contributions
Conservation actions		€		€		€	
100	National legislations / Scientific and technical assistance / Capacity building	35 000		35 000		27 814	
	Assistance to Countries						
200	Human-cetacean interactions / Emergency situations	15 000		15 000		10 000	
	Collisions						
	Interactions with Fisheries						
	Live stranding and ETFs					-	
300	Habitats / Research and monitoring	20 000		20 000		10 000	
	Strandings and tissue banks						
	Conservation plans						
	Abundance and distribution						
	Marine Protected Areas						
400	Public awareness / Dissemination of information	30 000		30 000		26 000	
	Databases management						
	Awareness campaigns						
	Newsletter						
	Information material						
405	Site web management						
	Promoting sustainable whale-whatching						
Sub total conservation actions		100 000		100 000		73 814	
Total administration and conservation		240 050		240 050		252 864	
		732 964					

ANNEX 2

Scale of Contributions

	UN KEY 2010	Key for the ACCOBAMS zone	2011 (€)	2012 (€)	2013 (€)
Albania	0,010	0,09	1 000	1 000	1 000
Algeria	0,128	1,12	2 605	2 605	2 605
<i>Bosnia and Herzegovina</i>					
Bulgaria	0,038	0,33	1 000	1 000	1 000
Croatia	0,097	0,85	1 974	1 974	1 974
Cyprus	0,046	0,40	1 000	1 000	1 000
Egypt	0,094	0,82	1 913	1 913	1 913
France	6,123	28,00	65 155	65 155	65 155
Georgia	0,006	0,05	1 000	1 000	1 000
Greece	0,691	6,04	20 000	20 000	20 000
<i>Israel</i>					
Italy	4,999	28,00	65 155	65 155	65 155
Lebanon	0,033	0,29	1 000	1 000	1 000
Libyan Arab Jamahiriya	0,129	1,13	2 625	2 625	2 625
Malta	0,017	0,15	1 000	1 000	1 000
Monaco	0,003	0,03	1 000	1 000	1 000
Montenegro	0,004	0,03	1 000	1 000	1 000
Morocco	0,058	0,51	1 180	1 180	1 180
Portugal	0,511	4,47	10 399	10 399	10 399
Romania	0,177	1,55	3 602	3 602	3 602
<i>Russian Federation</i>					
Slovenia	0,103	0,90	2 096	2 096	2 096
Spain	3,177	24,00	55 847	55 847	55 847
Syrian Arab Republic	0,025	0,22	1 000	1 000	1 000
Tunisia	0,030	0,26	1 000	1 000	1 000
<i>Turkey</i>					
Ukraine	0,087	0,76	1 770	1 770	1 770
<i>United Kingdom</i>					
<i>European Union</i>					
TOTAL	16,586	100	244 321	244 321	244 321

ANNEX 3

Terms of reference for administration of the Budget

1. The terms of reference for administration of the Budget of ACCOBAMS shall refer to the financial years beginning 1st January 2011 and ending 31st December 2013.
2. The Budget shall be administered by the Executive Secretary.
3. The Budget shall be administered according to these Terms of Reference.
4. The financial resources of the Budget shall be derived from:
 - (a) Contributions from the Parties according to Annex 2, as well as contributions from new Parties, and
 - (b) Voluntary contributions from Parties, contributions from States not Party to the Agreement, other governmental, intergovernmental and nongovernmental Organisations and other sources.
5. All contributions to the Budget shall be paid in Euros.
6. With regard to contributions from States that become Parties after the beginning of the financial period, the initial contribution (from the first day of the third month after the deposit of the instrument of ratification, acceptance or accession, until the end of the financial period) shall be determined *pro rata* on the basis of the contributions of other Parties according to the adopted scale of assessments and depending on the remaining annual financial exercise.
7. Contributions for all Parties throughout the triennium 2011-2013 are calculated on the basis of the UN Scale of Assessments applicable for 2010.
8. The contributions are due on 1st January 2011, 1st January 2012 and 1st January 2013. Contributions shall be paid into the following account:

<i>Account holder</i>	<i>Swift code</i>	<i>IBAN code</i>
ACCOBAMS	CFMOMCMX	MC 02 1273 9000 7001 0702 3000 M76

9. For the convenience of the Parties, the Executive Secretary shall notify as soon as possible the Parties to the Agreement of their assessed contributions for each of the years of the financial period.
10. Contributions received into the Budget and not immediately required for financing activities shall be invested at the discretion of the Executive Secretary, and any income shall be credited to the Budget.
11. The Budget shall be audited by a fund management controller.
12. The Budget estimates of income and expenditures for each calendar year of the financial period shall be prepared in Euros and submitted to the Meeting of the Parties to the Agreement.
13. The estimates for each calendar year covered by the financial period shall be divided into sections and objectives of expenditure, be specified according to Budget lines, be consistent with the programmes of work to which they relate, and be accompanied by information as may be required by or on behalf of the contributors.

14. The proposed Budget, including all the necessary information, shall be dispatched by the Secretariat to all Parties at least 90 days before the date fixed for the opening of the Meeting of the Parties.

15. The Budget shall be adopted by consensus at the Meeting of the Parties.

16. With the authorization of the Bureau, the Secretariat of the Agreement can make transfers from one Budget line to another.

17. Should the Secretariat anticipate a shortfall in resources over the financial period, the Secretariat shall consult the Bureau about its priorities for expenditure.

18. Commitments against the resources of the Budget may be made only if they are covered by sufficient income.

19. A secured fund is created, equivalent to thirty per cent of the administrative Budget.

20. At the end of each calendar year of the financial period, the Secretariat shall submit the accounts of the year to the Bureau. These shall include details of actual expenditure and comparisons with the original provisions for each Budget line.

21. The Secretariat shall give the Bureau an estimate of proposed expenditures for the coming year simultaneously with, or as soon as possible after the communication of the accounts and reports referred to in the preceding paragraphs.

22. The Secretariat shall present the audited accounts for the financial exercises to the Meeting of the Parties.

23. The present terms of reference shall be implemented by the Executive Secretary.

Guidelines for accepting voluntary financial contributions

1. General Rules

No voluntary contribution, gift or donation for a specific purpose may be accepted if incompatible with the policies and aims of the Agreement or the CMS.

2. Approval of donors

- 2.1 Donors who are not governmental Institutions of Parties or Economic Integration Organisations or riparian States not Party to the Agreement, must be approved as such by the Bureau before their contributions are accepted by the Secretariat.
- 2.2 Sources known to have been involved in interests or activities which conflict with the aims of the Agreement or the CMS and any Organisation or individual who has deliberately brought, or might bring, the Agreement into public disrepute, shall be excluded. The same shall apply where there is a risk that this source might try to influence the decisions of any organ of the Agreement where in the opinion of the Scientific Committee, this source has, or has had in the past, an environmentally unfriendly attitude.

3. Acceptance of voluntary contributions

- 3.1 Voluntary contributions shall only be accepted when the purpose is consistent with the policies and aims of the Agreement.
- 3.2 No voluntary contributions shall have an immediate or ultimate financial liability for the Agreement Trust Fund without the prior consent of the Parties or the Bureau.
- 3.3 All monetary contributions shall be paid in freely convertible currency; exceptions may, however, be made for special projects if the currency in question can effectively be used.
- 3.4. Voluntary contributions in kind may be accepted, provided that they are used to cover activities approved by the Meeting of the Parties. These may include *inter alia*, direct or indirect involvement in a joint project, free office accommodation, equipment, or the secondment of staff.

Eligibility for funding to attend the Meetings of the Parties to ACCOBAMS

Based on the scale of middle and low incomes, as defined in Human Development Report 2007/2008 published by the United Nations Development Programme, the Secretariat is authorised to cover, upon budget availability, the travel and accommodation fees of the representatives of the following Parties for the Meetings of the Parties of ACCOBAMS (one delegate/Party):

- Albania
- Algeria
- Bulgaria
- Croatia
- Egypt
- Georgia
- Lebanon
- Libyan Arab Jamahiriya
- Montenegro
- Morocco
- Romania
- Syrian Arab Republic
- Tunisia
- Ukraine

RESOLUTION 4.4

COMPOSITION OF THE SCIENTIFIC COMMITTEE FOR THE PERIOD 2011 / 2013

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Recalling Article VII of the Agreement on the composition and tasks of the Scientific Committee,

Desirous of establishing a closer link between the Scientific Committee of ACCOBAMS and the rest of the scientific community working on cetaceans in the Agreement area,

Stressing the need for continuing the representativeness of the Parties' scientific community in the Scientific Committee of ACCOBAMS,

Commending the participation, as members of the Scientific Committee, of representatives from the Mediterranean Science Commission (CIESM), the International Union for Conservation of Nature (IUCN), the European Cetacean Society (ECS) and the Scientific Committee of the International Whaling Commission (IWC),

Noting the need to adapt the selection procedure for the Scientific Committee to the increasing challenges the Agreement is facing;

1. *Requests* the Scientific Committee and the Bureau, with the help of the Secretariat, to present to the Contracting Parties and Partners a proposal six months before the Fifth Meeting of the Parties on matters related to the composition of the Scientific Committee. In this spirit, it is proposed to put forward to the Scientific Committee, for further consideration, the document in Annex 1;

2. *Decides* that during the interim period the Scientific Committee continues to consist of twelve members, comprising:

- one Chair;
- four Task managers, including a Vice-Chair;
- four regional representatives from the ACCOBAMS area;
- one representative each from the International Union for Conservation of Nature (IUCN), the European Cetacean Society (ECS) and the Scientific Committee of the International Whaling Commission (IWC).

Task managers shall be chosen by the Scientific Committee according to the main topics of the Working Programme.

3. *Appoints* the following scientists to the Scientific Committee until the Fifth Meeting of the Parties (Annex 2):

- five experts, nominated by the CIESM,
- the four regional representatives and their alternates, nominated by the 3rd Meeting of the Parties (Resolution 3.3), whose mandate is extended,
- three experts nominated by the International Union for Conservation of Nature (IUCN), the European Cetacean Society (ECS) and the Scientific Committee of the International Whaling Commission (IWC);

4. *Elects* Dr Alexei Birkun as the Chair and Dr Vincent Ridoux as the Vice Chair of the Scientific Committee;

5. *Invites* the Sub-Regional Coordination Units to fully participate in the work and the Meetings of the Scientific Committee;

6. *Invites* the Agreement Secretariat to ensure, where necessary, the participation in the Meetings and/or work of the Scientific Committee of experts in disciplines that are not covered by the members of the Scientific Committee, including legal and socio-economic aspects. The Secretariat shall consult with the Chair and the Vice-Chair of the Scientific Committee as for the selection and the definition of tasks of these experts;

7. *Invites* the Mediterranean Science Commission (CIESM), the World Conservation Union (IUCN), the European Cetacean Society (ECS) and the Scientific Committee of the International Whaling Commission (IWC) to pursue their contribution in the Scientific Committee of ACCOBAMS;

8. *Adopts* the interim Rules of Procedure of the Scientific Committee for the period 2011 – 2013 as presented in Annex 3.

ANNEX 1

Draft terms of reference on matters related to the composition of the Scientific Committee and the provision of advice on scientific and socio-economic matters to the Parties

As a result of the evaluation of the Scientific Committee (ACCOBAMS MOP4/2010/Doc 18) and discussions within the Parties during the Fourth Meeting of the Parties, it was **agreed** that the Scientific Committee and the Bureau, with the help of the Secretariat, would present to the Contracting Parties and Partners a proposal on matters related to the Scientific Committee on the following issues:

- (1) Composition of the Scientific Committee (including areas of expertise, geographical representation, numbers);
- (2) Selection procedures for members of the Scientific Committee (including criteria for nomination and criteria for selection);
- (3) Rules of Procedure of the Scientific Committee (including election of the Chair and of the Vice Chair, task managers, responsibilities of Parties and the Committee);
- (4) Provision of advice on socio-economic matters to the Parties (including alternate options);
- (5) Provision of information on financial support possibilities to implement projects.

The proposal should *inter alia*:

- (1) include a short review of similar matters in other intergovernmental organisations;
- (2) provide options under each of the 4 items above, noting the strengths and weaknesses of different options;
- (3) provide one or more consolidated models incorporating all four issues above for final consideration by the Parties.

Scientific Committee Members for 2011 - 2013

Regional representatives nominated during the Meeting:

- BAKER, Mohamed (Eastern Mediterranean, alternate)
- BEAUBRUN, Pierre (Western Mediterranean and contiguous Atlantic area, alternate)
- BOUTIBA, Zitouni (Western Mediterranean and contiguous Atlantic area)
- BRADAI, Mohamed Nejmeddine (Central Mediterranean, alternate)
- HOLCER, Drasko (Central Mediterranean)
- IBRAHIM, Ameer (Eastern Mediterranean)
- KRIVOKHIZHIN, Sergey (Black Sea)
- MIKHAILOV, Konstantin (Black Sea, alternate)

Other members:

- BIRKUN Alexei, CIESM (Chair)
- DONOVAN Greg, IWC
- KEREM Dani, CIESM
- NOTARBARTOLO DI SCIARA Giuseppe, CIESM
- OZTURK Ayaka, CIESM
- PANIGADA Simone, ECS
- RIDOUX Vincent, CIESM (Vice-Chair)
- TROYA Antonio, IUCN Med

ANNEX 3

Interim rules of procedure of the Scientific Committee of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) for the period 2011-2013

GENERAL FUNCTIONS

Rule 1

The Scientific Committee, established in accordance with Article VII of the Agreement, provides scientific advice and information to the Meeting of the Parties or through the Secretariat to the Parties. Its functions are defined in Article VII, paragraph 3 of the Agreement.

Rule 2

In particular, the Scientific Committee provides Recommendations to the Meeting of the Parties concerning the implementation of the Agreement and of the Conservation Plan, and on further research to be carried out.

REPRESENTATION AND PARTICIPATION

Rule 3

Members

The terms of office of the members shall expire at the closure of the ordinary Meeting following that at which they were appointed.

Rule 4

Observers

- 4.1** The Chair, in consultation with the Executive Secretary, may invite observers representing riparian Countries.
- 4.2** The Agreement Secretariat, where necessary and accordance with the agenda, may admit the participation in the meetings and/or works of the Scientific Committee of experts in disciplines that are not covered by the members of the Scientific Committee, including legal and socio-economic aspects.
The selection and definition of tasks of these experts shall be determined in consultation with the Chair and Vice-Chair.
These additional experts shall attend the Scientific Committee as observers.
- 4.3** Partners may participate as observers to the Meeting of the Scientific Committee, except when otherwise decided by the Meeting of the Parties.

Rule 5

Secretariat

The Secretariat of the Agreement, with the support of the Sub-Regional Coordination Units, shall undertake secretarial tasks during the Meetings of the Scientific Committee and shall provide administrative and logistical support.

THE CHAIR, THE VICE-CHAIR AND THE TASK MANAGERS

Rule 6

- 6.1** The newly elected Chair shall assume his/her functions at the end of the Meeting of the Parties where election takes place. His/her function expires at the end of the next Meeting of the Parties, after the election of the new Chair. The newly elected Vice-Chair shall assume his/her functions

at the end of the Meeting of the Parties where election takes place. His/her function expires at the end of the next Meeting of the Parties, after the election of the new Vice-Chair and his/her nomination as Chair.

- 6.2** The Chair shall preside all the Meetings of the Scientific Committee, prepare in close consultation with the Secretariat the provisional agenda, and liaise with members between Meetings of the Committee. The Chair may represent the Committee as required, within the limits of the Committee mandate, and shall carry out such other functions as may be delegated to him/her by the Committee.
- 6.3** The Vice-Chair in addition to his/her role as Task manager shall assist the Chair of the Scientific Committee.
- 6.4** The Task managers, in addition to their role as member of the Scientific Committee, will coordinate the works of the Scientific Committee concerning the respective fields as decided by the Meeting of the Parties.

DECISIONS

Rule 7

Decisions of the Committee shall be taken by consensus unless a vote is requested by the Chair or by at least four members.

Rule 8

Methods of Voting

- 8.1** Each Committee member shall have one vote.
- 8.2** The Committee shall normally vote by show of hands at a Meeting, but any Committee member may request a roll-call vote. In the event of a vote during an inter-session period, there will be a postal ballot.

Rule 9

Majority and voting procedures

All votes shall be taken by simple majority among members present and voting. In the case of a tie, the proposal shall be considered rejected.

MEETINGS

Rule 10

Meetings of the Committee shall be convened in general on the basis of one annual meeting only during the two first year of the triennium by the Secretariat of the Agreement in consultation with the General Secretariat of the CIESM, the Chair and the Vice-Chair of the Committee. Extraordinary Meetings shall only be convened with the agreement of the Contracting Parties Bureau members.

Rule 11

When in the opinion of the Committee an emergency arises, requiring the adoption of immediate measures to avoid deterioration of the conservation status of one or more cetacean species, the Chair may ask the Agreement Secretariat to contact the relevant Parties urgently.

Rule 12

Notices of Meetings, including date and venue, shall be sent to all Parties by the Secretariat at least 45 days in advance and, in the case of extraordinary Meetings, at least 14 days in advance.

Rule 13

A quorum for an ordinary Meeting shall consist of the two third of the members of the Committee. This quorum shall be reduced to half of the members in extraordinary Meetings. No decision shall be taken at a Meeting in the absence of a quorum.

Rule 14

An executive summary of each Meeting shall be prepared by the Secretariat as soon as possible and shall be communicated to all members of the Committee, to all Parties, all riparian States and ACCOBAMS Partners.

Rule 15

- a) The working language is English. However, simultaneous interpretations in French and English will be provided upon availability of funds.
- b) The working documents are distributed in English. French translation, in some case will be possible upon availability of funds.

WORKING GROUPS

Rule 16

The Committee may establish *ad hoc* working groups as needed to deal with specific tasks. It shall define the terms of reference and composition of each working group. The meetings of these working groups will be held, when possible, in conjunction with other events.

Rule 17

Insofar as they are applicable, these Rules shall apply *mutatis mutandis* to the proceedings of working groups.

Rule 18

The Committee shall receive reports from other relevant meetings and working groups established under the Agreement, when necessary.

COMMUNICATION PROCEDURE

Rule 19

In application of Article II.2 of the Agreement, when any Party asks for advice on exceptions to the prohibition on deliberate taking of cetaceans, the Secretariat shall communicate the request to the members for advice within 30 days. The advice received within the 30 days will be immediately communicated to the requesting Party.

Rule 20

Between sessions, any member, the Sub-Regional Coordination Units or the Secretariat may submit through the Secretariat a written proposal to the Chair for decision. The Chair shall communicate the proposal to members for comment within 60 days of the date of that communication. Any comments received within the 60-day period shall also be communicated to members.

Rule 21

If, by the date on which comments on a proposal were due to be communicated, the Secretariat has not received any objection from a member of the Committee, the proposal shall be adopted, and notice of the adoption shall be given to all members.

Rule 22

If any member objects to a proposal within the 60 days time limit, the proposal shall be referred to the next Meeting of the Committee.

OTHER FUNCTIONS

Rule 23

To each ordinary Meeting of the Parties the Chair shall submit a written report on the Committee's work since the previous ordinary Meeting.

PROCEDURE

Rule 24

These Rules shall apply immediately upon their adoption by the Parties.

AMENDMENTS

Rule 25

The Rules of Procedure may be amended as required by a decision of the Meeting of the Parties.

RESOLUTION 4.5

WORK PROGRAMME 2011–2013

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Acting in accordance with the commitments of the Parties to conserve cetaceans in conformity with the Agreement, especially the fundamental obligations placed upon Parties in Article II,

Recognizing the need to set priorities,

Acknowledging the relevant work being carried out in other frameworks, in particular within the “Convention on the Conservation of Migratory Species of Wild Animals” (CMS) and the Instruments adopted within its framework, the system of the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, the United Nations Convention on the Law of the Sea, the International Convention for the Regulation of Whaling (IWC), the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), the Convention on the Protection of the Black Sea against Pollution (Bucharest Convention) and the Agreement for the Establishment of the General Fisheries Commission for the Mediterranean (GFCM),

Aware that scientific research in the area covered by the Agreement remains essential to identify populations with the least favourable conservation status and to address the conservation priorities,

Conscious that the current heterogeneity of management and research capacity in the area covered by the Agreement must be addressed by capacity-building and public awareness,

Taking into consideration the results of regional workshops organised within ACCOBAMS, where the needs of Parties for the implementation of the Agreement have been identified,

Thanking and congratulating the Scientific Committee for its involvement, its work and its wise advice to Parties in setting up accurate conservation measures,

Thanking also the Sub-Regional Coordination Units and the ACCOBAMS Partners for their continuous support to the implementation of the Agreement,

Recalling that Article IX, paragraph 3, calls for voluntary contributions to increase the funds available for monitoring, research, training and projects related to conservation,

Recalling Resolutions 1.7 and 2.4, establishing and implementing a Supplementary Conservation Fund,

Taking note of the previous decisions of the Council of the Arab Ministers responsible for the environment of the League of Arab States that called the International environmental conventions to provide extensive support to countries under occupation especially the State of Palestine to encourage it to participate in Meetings of the Parties and related activities,

Considering that Parties, particularly developing Countries and Countries with economies in transition, require clear priorities for conservation and research activities in order to use their limited resources most effectively in their national action plans,

1. *Notes* that identification of knowledge gaps, both thematic and geographical, is of particular importance for the Agreement;
2. *Adopts* the Work Programme for 2011–2013, as in the Annex to the present Resolution, without prejudice to the pursuance of existing conservation actions, and considers its implementation a priority;

3. *Urges* Parties to support projects and activities in line with the Work Programme by means of financial and in kind contributions and to report thereon to the Fifth Meeting of the Parties;
4. *Urges* Parties and specialized international Organizations to develop international cooperative projects for implementation of the Work Programme and to keep the Agreement Secretariat fully informed of progress;
5. *Further urges* the Parties and the other donors to provide financial assistance to developing Countries and Countries with economies in transition to support the implementation of the Agreement and of the Work Programme, directly or through the financial mechanisms of the Agreement, in particular through the Supplementary Conservation Fund;
6. *Calls on* the Scientific Committee, the Agreement Secretariat and Bureau, the Sub-Regional Coordinating Units, ACCOBAMS Partners and international and national non-governmental Organizations to promote the actions necessary to facilitate implementation of the Work Programme, bearing in mind the Resolutions adopted by the Meetings of the Parties;
7. *Calls on* the Scientific Committee to further promote cooperation with scientific Institutions of the South shore of the ACCOBAMS area;
8. *Instructs* the Agreement Secretariat:
 - to disseminate the Work Programme for priority actions for 2011–2013, to collaborate closely in its implementation with the Secretariats of other relevant Conventions, international Organizations and ACCOBAMS Partners and to seek appropriate donors;
 - to inform in time the National Focal Points of workshops and work programmes, as well as the establishment of working groups within the ACCOBAMS framework;
9. *Requests* the Agreement Secretariat to strengthen co-operation with other relevant bodies, in particular within the “CMS Family”, the Barcelona Convention system, the IWC, the Bern Convention, the Bucharest Convention and the GFCM.

ANNEX

Work Programme for 2011-2013

The Work Programme hereinafter illustrates activities related to the Contracting Parties to the Agreement, to the Secretariat and to the Scientific Committee, in collaboration with relevant Partners, Organizations and Institutions.

CONSERVATION ACTIONS

	Priority
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS	
• RMTM 1 - The ACCOBAMS Survey Initiative	Very High
• RMTM 2 - Population Structure	High
• RMTM 3 - Species Conservation Plans: Mediterranean short-beaked common dolphin	High
• RMTM 4 - Species Conservation Plans: Black Sea cetaceans	High
• RMTM 5 - Species Conservation Plans: Mediterranean bottlenose dolphin	Medium
• RMTM 6 - Species Conservation Plans: Fin whales	Medium
• RMTM 7 - Species Conservation Plans: Cuvier's beaked whales	High
• RMTM 8 - Species Conservation Plans: Sperm whales	Medium
• RMTM 9 - Species Conservation Plans: Other species and populations	Low
• RMTM 10 - Bycatch and interactions with fisheries	Very High
• RMTM 11 - Anthropogenic Noise	High
• RMTM 12 - Ship Strikes	High
• RMTM 13 - Whale-watching	Medium
• RMTM 14 - Responses to emergency situations	High
• RMTM 15 - Marine Protected Areas	High
• RMTM 16 - Chemical pollution	Medium
• RMTM 17 - Climate change	High

CB - CAPACITY BUILDING	
• CB 1 - Promoting National Plans on cetacean conservation	High
• CB 2 - Monitoring of cetacean stranding	High
• CB 3 - Promoting the use of cetacean photo-identification	High
• CB 4 - Establishing a Clearinghouse mechanism for cetaceans (CETA-CHM)	Medium
• CB 5 - Biennial Conference	High

SP - STRATEGIC PLANNING	
• SP - Long term strategy for ACCOBAMS (2013 – 2023)	Very high

INSTITUTIONAL ISSUES

FIFTH MEETING OF THE CONTRACTING PARTIES TO ACCOBAMS	-
MEETINGS OF THE EXTENDED BUREAU	-
MEETINGS OF THE BUREAU	-
MEETINGS OF THE SCIENTIFIC COMMITTEE	-
REGIONAL WORKSHOPS	-

CONSERVATION ACTIONS			
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS			
RMTM 1 - The ACCOBAMS Survey Initiative			Links with the Agreement text :
Rationale: The knowledge about abundance and distribution of cetacean species is important to assess the actual status of their populations and to develop activities to mitigate the present and potential threats.			<ul style="list-style-type: none">Article IIAnnex 2
			Links with the Recommendations of the Scientific Committee (SC): <ul style="list-style-type: none">Rec SC2.9Rec SC4.4Rec SC4.5Rec SC6.1
Objectives: To estimate abundance and distribution of cetacean population in the ACCOBAMS area.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none">Res 2.19Res 3.15Res 4.12
Actions	Timing	In collaboration with	Links with CMS Resolutions : — Priority: Very High Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution
To hire a project coordinator.	2011	RAC/SPA, BSC, ACCOBAMS Partners, French <i>Agence des Aires Marines Protégées</i>	
To propose project’s funding and management structure.			
To finalize and submit project proposal to relevant funding institutions.			
To implement the project.	2012		
To present preliminary results of the project.	2013		

CONSERVATION ACTIONS			
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS			
RMTM 2 - Population Structure			Links with the Agreement text :
Rationale: The importance of assessing “stock identity and structure” through a dedicated working group was highlighted in recommendations adopted by the 3 rd ACCOBAMS Meeting of the Parties and reconfirmed when the 5 th ACCOBAMS Scientific Committee agreed to create a Population Structure Working Group (PSGW).The initial efforts of the PSWG shall focus on genetic analyses.			<ul style="list-style-type: none">Article IIAnnex 2
Objectives: To start assessment of the population identity and structure of the cetacean species regularly encountered in the ACCOBAMS area.			Links with the Recommendations of the SC: <ul style="list-style-type: none">Rec SC6.2
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions : <ul style="list-style-type: none">Res 4.11
To develop a communications network involving the Tissues Banks and the National stranding networks of the ACCOBAMS Area.	2011	ASCOBANS IWC	Links with CMS Resolutions : –
To co-operate and exchange information with similar initiatives being undertaken within the IWC and ASCOBANS.	2011 - 2013		Priority: Very High
To review information on population structure presented to the Scientific Committee in the context of other broad topics.			Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 3 - Species Conservation Plans: the Mediterranean short-beaked common dolphin			Links with the Agreement text : <ul style="list-style-type: none">Article IIAnnex 2	
Rationale: <p>Once one of the most common cetacean species in the Mediterranean, the Mediterranean short-beaked common dolphin has declined throughout the region during the last 30-40 years. The causes of this generalized decline remain poorly understood but are thought to include prey depletion caused by overfishing, bycatch in fishing gear and habitat degradation.</p> <p>At their Second Meeting the Contracting Parties to ACCOBAMS strongly welcomed the Conservation Plan for Mediterranean short-beaked common dolphins (Resolution 2.20) and their Third Meeting stressed the importance of implementing it urging Parties to undertake concrete measure to achieve the objective of the Action Plan.</p>			Links with the Recommendations of the SC: <ul style="list-style-type: none">Rec SC4.1Rec SC6.3	
Objectives: <p>To improve implementation of the existing Mediterranean short-beaked common dolphin conservation tools in the ACCOBAMS area.</p>			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none">Res 2.20Res 3.17Res 4.13	
Actions	Timing	In collaboration with		
To compile existing information on distribution, abundance and mortality of the species, particularly in the southern and eastern portions of the Mediterranean basin.	2011	RAC/SPA GFCM ICCAT CMS		
To assist Countries in implementing existing tools devoted to the Mediterranean short-beaked common dolphin conservation.				
To implement specific projects (photo identification projects, organisation of joint workshops with GFCM – cooperation with fisheries sector, etc.)	2012 - 2013			
			Links with CMS Resolutions : <ul style="list-style-type: none">Res 8.22	
			Priority: High	
			Budget	
			☒ Trust Fund ☒ External contribution	

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 4 - Species Conservation Plans: Black Sea cetaceans			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: It is generally recognized that all three Black Sea cetacean species – the harbour porpoise (<i>Phocoena phocoena</i>), short-beaked common dolphin (<i>Delphinus delphis</i>) and common bottlenose dolphin (<i>Tursiops truncatus</i>) – experienced a dramatic decline in abundance in the 20th century as a result of large directed catches, extensive habitat degradation and some other anthropogenic impacts. The data about the abundance, distribution and the status of conservation of these species in the Black Sea area are rare, scarce and by far below the level that allows the proper development of efficient conservation measures.			Links with the Recommendations of the SC: <ul style="list-style-type: none"> Rec SC2.4 Rec SC4.5 Rec SC4.6 Rec SC6.7 	
Objectives: To promote the implementation of the plan by the relevant Countries.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 3.11 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To finalize Black Sea Red Data Book.	2011 - 2013	BSC PS, BREMA Laboratory (Ukraine), TUDAV (Turkey), Mare Nostrum (Romania) Scientific Institutions, BS NGO Network	Priority: High	
To develop the project “ACCOBAMS Survey initiative” in the Region to analyse current population status (Chapter in SoE 2012 – the State of Cetacean populations in the Black Sea in 2006-2010/11).			Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To carry out analyses of human-induced cetacean mortality (monograph, archive).				
To further develop strategies for capacity building, public awareness, and emergency situations response.				
To further develop stranding and by- catch networks.				
To promote designation of MPAs eligible for cetaceans conservation.				
To develop a methodology to reduce significant by-catches of cetaceans.				
To adopt officially the Regional Conservation Plan for Cetaceans.				

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 5 - Species Conservation Plans: the Mediterranean bottlenose dolphin			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: At last meetings of the ACCOBAMS Scientific Committee a procedure was adopted to draft an ACCOBAMS Plan of Priority Actions for the conservation of the Mediterranean bottlenose dolphin. This initiative was made within the framework of the activities that should be carried out in order to finalise the ACCOBAMS Mediterranean bottlenose dolphin Conservation Plan.			Links with the Recommendations of the SC: –	
Objectives: Finalize a "Mediterranean bottlenose dolphin Conservation Plan".			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 1.12 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To appoint regional coordinators and organise local teams of experts.	2011	RAC/SPA GFCM	Priority: Medium	
To collect and analyse information on abundance and distribution bottlenose dolphin in the area and prepare proposal of conservation measures.			Budget	
To discuss the proposal with International Organisations representing relevant sectors (fisheries, maritime traffic, etc.).	2012 - 2013		<input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To submit the draft plan to Parties.	2013			

CONSERVATION ACTIONS			
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS			
RMTM 6 - Species Conservation Plans: Fin whales		Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: Fin whales in ACCOBAMS area face a number of actual and potential anthropogenic threats, including collisions with vessels, chemical and acoustic pollution, entanglement in fishing gear and disturbance by boats. Appropriate habitat use and distribution studies, to describe fin whales' habitat preferences and to investigate the existence of critical habitats for this species, are therefore needed to aid implementation of management measures to regulate naval traffic, fishing and whale watching notably within the Sanctuary.		Links with the Recommendations of the SC: <ul style="list-style-type: none"> Rec SC 1.3 Rec SC 2.5 Rec SC 4.7 	
Objectives: To assess the state of the fin whales in the ACCOBAMS area and define conservation measures.		Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 3.14 Res 3.16 	
Actions	Timing	In collaboration with	
To collect and analyse information on the distribution, abundance and threats to fin whales in the whole ACCOBAMS area. This action will be undertaken under Activity RMTM 1 (The ACCOBAMS Survey Initiative).	2011 - 2013	ACCOBAMS Partners	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22
To maintain long-term systematic programmes to monitor trends in abundance and shifts in distribution in selected targeted areas and other areas of importance for the species such as: <ol style="list-style-type: none"> “Golfe du Lion” and in general productive areas W of the Pelagos Sanctuary (mostly off France) Central Tyrrhenian Sea to the S of the Sanctuary, where whales have been seen in good numbers recently Sicily Strait, particular in late Winter – early Spring Western Ionian Sea 			Priority: Medium
To use existing photo-identification databases as a long-term management and conservation tool. To compare photo-id data from the Strait of Gibraltar and western Mediterranean with data from the North Atlantic area.			Budget
To analyses population structure. This action will be undertaken under Activity RMTM 2 (Population Structure).			<input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 7 - Species Conservation Plans: Cuvier's beaked whales (<i>Ziphius</i>)			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: The Meeting on Mediterranean cetacean Red List (Monaco 2006) was unable to assess this sub-population because "appropriate data on distribution, population structure and abundance in the Mediterranean basin are lacking. Also, the species' biology is very poorly known. The status of Cuvier's beaked whales in the Mediterranean is therefore impossible to assess on available evidence". While the above statement cannot be disputed, concern exists for the sub-population's status in part due to the intense use of loud sound sources in the Mediterranean by navies and the oil & gas industry, and by this species' vulnerability to entanglement in driftnets.			Links with the Recommendations of the SC: –	
Objectives: To assess status of Cuvier's beaked whales and define conservation measures.			Links with ACCOBAMS Resolutions : –	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To examine temporal variability of the habitats of species that are known to be particularly vulnerable to man-made noise (e.g. <i>Ziphius cavirostris</i>) in at least two areas in the Mediterranean.	2011 - 2013	ACCOBAMS Partners	Priority: High	
To prepare an analysis of the habitat usage with proposal of conservation measures.			Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To provide conservation advice based on the result of this effort.				

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 8 - Species Conservation Plans: Sperm whales			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: The sperm whale is a species of the Agreement area that was suggested as being in greatest need of protection (“priority species”). The assessment of the status of the cetaceans of the Mediterranean undertaken jointly under ACCOBAMS and IUCN in 2006 considered the Mediterranean subpopulation of sperm whale as “Endangered”.			Links with the Recommendations of the SC: –	
Objectives: To assess status of Sperm whales and define conservation measures.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 3.14 Res 4.10 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To include acoustic methods in the ACCOBAMS Survey Initiative and ensure that transects conducted over sperm whale habitat.	2011 - 2013	ACCOBAMS Partners	Priority: Medium	
To collect baseline data over more limited or data-poor areas to help survey design.			Budget	
To investigate population structure (i.e., if the Mediterranean is inhabited by a single population or more) through photo-id, acoustics and genetic analyses.			<input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 9 - Species Conservation Plans: other species and populations			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: During the last Meeting of the Scientific Committee, it was noted that the situation of the harbour porpoise in the North Aegean was not well understood (including its relationship to other populations) and similarly <i>Steno bredanensis</i> was little studied in the Agreement area.			Links with the Recommendations of the SC: –	
Objectives: To start assessing status of the cetacean species not covered by a Conservation Plan within the ACCOBAMS area.			Links with ACCOBAMS Resolutions : –	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To establish an agenda to consider "other species".	2011	ACCOBAMS Partners	Priority: Low	
To provide a rationale of the abundance, distribution and threat status of harbour porpoise in Aegean waters. This action will be undertaken under Activity RMTM 1 (The ACCOBAMS Survey Initiative).				
To continue genetic investigations and analyse relations of the Mediterranean, Black and Marmara Seas population. This action will be undertaken under Activity RMTM 2 (Population Structure).	2011		Budget <input type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To conduct further research on the extent of the presence of <i>Steno bredanensis</i> in the Levantine Sea. This action will be undertaken under Activity RMTM 1 (The ACCOBAMS Survey Initiative).	- 2013			

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 10 - Bycatch and interactions with fisheries			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: The main types of fishing gear used in coastal ACCOBAMS waters where conflict with dolphins has been reported are bottom-set trammel nets and gillnets. Dolphins also interact with trawl nets, and with small purse seines targeting pelagic schooling fish. The Parties to ACCOBAMS adopted the ByCBAMS initiative and invited the Secretariat to assist Countries in its implementation.			Links with the Recommendations of the SC: <ul style="list-style-type: none"> Rec SC 1.1 Rec SC 1.2 Rec SC 2.2 Rec SC 4.2 Rec SC 4.11 Rec SC 4.12 Rec SC 6.7 	
Objectives: To assess the extent of the bycatch in cetacean species and to investigate ways of mitigating the impact of (i) fishing activities on the marine environment and in particular the endangered species and (ii) depredation and damages to fishing nets on the fishermen.				
Actions	Timing	In collaboration with		
To collect and analyse historical and present data about the cetacean by-catch in the area.	2011 - 2013	GFCM (Sub-Committee on Marine Environment and Ecosystems/SCMEE) FAO COPEMED RAC/SPA BSC	Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 2.13 Res 3.12 Res 4.9 	
To establish an official scheme for independent observers on fishing boats to quantify cetacean bycatch, estimating the magnitude of bycatch for all types of legal and illegal, unreported or unregulated (IUU) fishing.			Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.14 Res 8.22 Res 9.18 	
To assess the actual efficiency of pingers (and other ways of mitigating by-catch) and the associated environmental impacts.			Priority: Very High	
To raise knowledge on reasons, consequences, frequency and nature of interactions such as depredation of fisheries by bottlenose dolphins.				
To create interest in the use of mitigation measures, also in collaboration with ASCOBANS.			Budget	
To conduct a survey on dolphin-fisheries interactions to further evaluate sustainable bycatch levels for cetacean species with regard to their distribution and abundance in selected areas where a significant bycatch problem exists.			<input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS		
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS		
RMTM 11 - Anthropogenic noise		Links with the Agreement text :
Rationale: Although we know that anthropogenic noise in the ocean is a serious threat, we do not have sufficient information at this time to understand the full extent of the problem. One of the biggest challenges faced in regulating the effects of noise is our ignorance of the characteristics and levels of sound exposures that may pose risks to marine mammals. Given the current state of our knowledge we must therefore take a precautionary approach in the regulation of noise.		<ul style="list-style-type: none">Article IIAnnex 2
Objectives: To assess anthropogenic noise impacts in the ACCOBAMS area and start developing mitigation tools. To improve capacity to proper and prompt action in cases of atypical mass strandings.		Links with the Recommendations of the SC: <ul style="list-style-type: none">Rec SC 2.7Rec SC 4.3Rec SC 6.6
Actions	Timing	In collaboration with
To establish a common Working Group with ASCOBANS, Pelagos and OSPAR mandated to plan, implement and advise on anthropogenic noise mitigation activities.	2011	RAC/SPA BSC ASCOBANS Pelagos OSPAR
To continue describing the extent and temporal variability of the habitat of species that are known to be particularly vulnerable to man-made noise (e.g., <i>Ziphius cavirostris</i>) using and testing the modelling exercise currently undertaken. This action will be undertaken under Activity RMTM 7 (Species Conservation Plans: Cuvier’s beaked whales)	2011 - 2013	
To prepare and overview of activities within the ACCOBAMS region that have been approved and include a noise component.		
To identify anthropogenic noise impact “hot spots”.		
To organize at least one capacity building training to ensure proper and promptly action in case of atypical mass strandings. This action will be undertaken under Activity RMTM 14 (Responses to emergency situations).		
To collect information and support ongoing international efforts in the development and adoption of vessel-quieting technologies.		
		Links with CMS Resolutions : <ul style="list-style-type: none">Res 8.22Res 9.19
		Priority: High
		Budget <input type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 12 - Ship strikes			Links with the Agreement text : <ul style="list-style-type: none">Article IIAnnex 2	
Rationale: Collisions between ships and whales are nowadays regularly reported from all the world’s oceans. The Mediterranean Sea is particularly susceptible to ship-associated impacts due to a high-volume of shipping routes, long history of use, sensitive deep sea ecosystems and genetically and reproductively differentiated cetaceans populations. (cf IMO)			Links with the Recommendations of the SC: <ul style="list-style-type: none">Rec SC 2.8Rec SC 6.4	
Objectives: To assess the extent of ship strikes with large cetaceans and propose conservation and mitigation measures.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none">Res 3.14Res 4.10	
Actions	Timing	In collaboration with		
To facilitate exchange of information between scientists and shipping companies (watchmen and crew on deck) in organizing training.	2011-2013	IMO REMPEC Pelagos IWC RAC/SPA		
To identify high risk areas for ship strike.				
To extend to the Agreement area the REPCET programme tested in the Pelagos area with some shipping companies.				
To use and collect data on photo-identification and other methods (e.g., distributional data deriving from field observations, surveys, encounter rate measurements in different seasons and different portions of the species’ ranges, etc) to describe migration/movement patterns of sperm and fin whales, such as the North Atlantic and Mediterranean Sperm Whale Catalogue (NAMSC), throughout the ACCOBAMS area and to collect information on non-lethal ship strikes.				
To prepare and present joint documents to IMO–MEPC.				
To consider adapting systems, such as the Mandatory Ship Reporting Scheme or the establishment of Particularly Sensitive Sea Areas (PSSAs), under the IMO framework.				
			Links with CMS Resolutions : <ul style="list-style-type: none">Res 8.22	
			Priority: High	
			Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

To make the reporting of ship strikes mandatory and to fill the relevant databases that have been developed regionally and within the International Whaling Commission.			
To provide for detailed necropsies dedicated protocols to assess the cause of death for stranded large cetaceans. This action will be undertaken under Activity RMTM 14 (Responses to emergency situations).			
To create an ACCOBAMS database of ship collisions, to be automatically accrued by the entries in the IWC database relative to the ACCOBAMS area.			
To prepare a joint pilot project with Pelagos Secretariat to investigate ways of using the Pelagos Sanctuary as a model and testing ground for mitigation measures.			
To collect, in collaboration with the Parties, the Sub-Regional Coordination Units and the Secretariat, accurate information on the number of ship strikes and associated details to facilitate collaborations among Countries in targeted areas, such as between Spain and Morocco.			
To use the Strait of Gibraltar as a model and testing ground for mitigation measures through a pilot project.			

CONSERVATION ACTIONS			
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS			
RMTM 13 - Whale-watching			Links with the Agreement text :
Rationale: Whale-watching activities for commercial purposes are constantly increasing in the Agreement area. This activity could be a remarkable awareness and education tool provided it is properly carried on.			• Article II • Annex 2
Objectives: To regulate whale-watching activities and encourage the use of the label.			Links with the Recommendations of the SC: —
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions :
To collate and assess the national regulations on cetacean harassment.	2011	ACCOBAMS Partners, Pelagos	• Res 1.11 • Res 3.23 • Res 4.7
To continue to review the ACCOBAMS guidelines.	2011		Links with CMS Resolutions : —
To review the consequences of aircraft overflying cetaceans.	- 2012		
To collate new scientific literature concerning the biological impacts and the risks of whale- watching.	2011 - 2013		Budget ☒ Trust Fund ☒ External contribution
To monitor the activity of whale -watching operators by country and maintain the existing whale-watching database in order to monitor the industry’s development and growth and identify potential problems before they become too difficult to manage.			
To continue and expand the organisation of national or regional training courses (based notably on the Pelagos expertise) for operators to inform them about the biology of animals, risks, boat behaviour around the animals, how to achieve accreditation, involvement in scientific research, and so forth.			
To inform the general public (yachtsmen) concerning boat behaviour around cetaceans.			
To encourages Parties to test the creation of a joint Label Pelagos-ACCOBAMS in the Pelagos Sanctuary in priority and to report of this use for the next Meeting of the Parties.			

CONSERVATION ACTIONS					
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS					
RMTM 14 - Responses to emergency situations				Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: At present, the ACCOBAMS area has no system that can be rapidly activated to deal with emergency situations harmful to cetaceans, such as major pollution events, important strandings or epizootics.				Links with the Recommendations of the SC: –	
Objectives: To ensure proper and prompt response to emergency situations.				Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 3.25 Res 3.29 Res 4.16 	
Actions	Timing	In collaboration with		Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To set up a regional mechanism based on a multidisciplinary group of experts able to intervene over the whole Agreement area in case of emergency events.	2011	The group of experts, The regional emergency intervention mechanism and similar mechanisms that exist throughout the world Sub Regional Coordination Units, REMPEC, BSC		Priority: High	
To proceed with the establishment of a “maritime disaster” Emergency Task Force to address oil or chemical spills affecting cetacean critical habitat.				Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To work in close collaboration with the national scientists and adopt a learning-by-doing approach to enhance their capacities in dealing with such emergency events.	2011 - 2013				
To prepare technical manuals to be translated in the working languages of the riparian Countries.	2011 - 2012				

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 15 - Marine Protected Areas (MPAs)			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: During the MOP 3, Countries adopted a resolution supporting in principle the creation of all 17 MPAs as recommended by the Scientific Committee, as well as others to be defined, and welcoming the criteria and guidelines for setting up additional MPAs in the region which include management plans to address threats to cetaceans.			Links with the Recommendations of the SC: <ul style="list-style-type: none"> Rec SC 4.9 Rec SC 6.5 	
Objectives: To promote the establishment of a representative network of marine protected areas. To attain a significant reduction in the current rate of biodiversity loss and to establish a representative network of marine protected areas by 2012.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 2.14 Res 3.22 Res 4.15 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : –	
To make full use of existing regulations to promote the establishment of MPAs for cetaceans in the Agreement area, including in the High Seas, and with a special attention to the South and East portions of the Mediterranean basin.	2011 - 2013	RAC/SPA BSC	Priority: High	
The Scientific Committee to give advice on the proposals across the entire region and to facilitate assessment of regional coverage and conservation needs.			Budget	
To examine existing marine protected areas in the ACCOBAMS region for the presence of cetacean habitat.			<input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To give full consideration and, where appropriate, cooperate to the creation of marine protected areas for cetaceans in zones of special importance for cetaceans in the ACCOBAMS area, as presented in the Annex 1 to the Resolution 4.15.				

<p>To gather knowledge of the existence and location of sites containing important cetacean habitat in the Agreement area, and assess whether they fulfil the criteria adopted by the MOP3: (i) describe cetacean presence and assess the existence of cetacean critical habitat; (ii) detect the existence of threats to continued use of such habitat by the cetacean populations involved; (iii) provide arguments in favour of the establishment of specially protected areas as relevant tools to counteract and minimise such threats and contribute effectively to the favourable conservation status of cetaceans in the region.</p> <p>To ensure that these are provided with adequate management and monitoring, to ensure maximum effectiveness.</p> <p>To incorporate concern, design considerations and a regulatory framework for noise into management plans for MPAs. This action will be undertaken under Activity RMTM 11 (Anthropogenic Noise).</p>			
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CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 16 - Chemical pollution			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: Several micro- and macro-parasites that may negatively influence population growth have been identified and the role of chemical pollutants in facilitating the emergence of <i>morbillivirus</i> epidemics has been thoroughly investigated. Mediterranean cetaceans are exposed to a cocktail of toxic compounds, some time at very high concentrations.			Links with the Recommendations of the SC: –	
Objectives: To prioritize contaminants of interest as they relate to the risk of cetacean exposure in ACCOBAMS area, the negative impact on cetacean health and the methodology to use to make toxicological diagnosis.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 3.25 Res 3.29 Res 4.16 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.22 	
To continue to consider issues related to chemical pollution (which can be an anthropogenic threat to cetacean populations in the ACCOBAMS area and has been strongly implicated, for example, in the increased susceptibility of striped dolphins to <i>morbillivirus</i> through a suppressed immune system), and the conservation status of cetacean populations in the region.	2011 - 2013	IWC, MEDPOL	Priority: Medium	
To take into account relevant recommendations of the IWC workshop to design the follow-up to the POLLUTION 2000+ programme (the original programme had been endorsed by ACCOBAMS).			Budget	
To organise a joint ASCOBANS/ACCOBAMS workshop to 25 th Annual Conference of the European Cetacean Society that will take place in Cádiz (Spain) in 2011.			<input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS				
RMTM - RESEARCH, MONITORING AND THREATS MITIGATIONS				
RMTM 17 - Climate change			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annex 2 	
Rationale: Global climate change is occurring and that some scenarios envisage rapid environmental changes to occur in particular in the marine ecosystems of the ACCOBAMS area.			Links with the Recommendations of the SC: <ul style="list-style-type: none"> Rec SC 6.8 	
Objectives: To increase efforts on assessment and reduction of climate change impacts in the ACCOBAMS area.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 4.14 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 8.13 Res 8.22 Res 9.7 Res 9.12 	
To review the timeliness of holding a targeted region-specific workshop on this issue.	2011	IWC, ACCOBAMS Partners, NGOs	Priority: High	
To continue to monitor the results from work on this topic of other organisations, including the IWC Scientific Committee.	2011 - 2013		Budget	
To continue to work on studies of climate change and the impacts of other environmental changes on cetaceans as appropriate.			<input type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS				
CB - CAPACITY BUILDING				
CB 1 – National Action Plans on cetacean conservation			Links with the Agreement text :	
Rationale: Implementing the ACCOBAMS provisions at Country level becomes more effective when it is done not in the form of isolated actions but as part of a national plan that takes into account the Country's specific features and whose aims and actions are identified on the basis of scientific data via a consultation process that involves all the concerned stakeholders.			<ul style="list-style-type: none"> Article II Article VII 	
Objectives: To promote development of the national cetacean conservation plans, with emphasis on cooperation with stakeholders.			Links with the Recommendations of the SC: –	
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions :	
To support the organisation of national consultation workshops.	2011 - 2013	RAC/SPA, BSC, ACCOBAMS Partners	<ul style="list-style-type: none"> Res 1.8 Res 2.5 Res 3.7 Res 4. 6 	
			Links with CMS Resolutions : <ul style="list-style-type: none"> Res 9.12 	
			Priority: High	
			Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	
To assist Countries to elaborate their national action plans for cetacean conservation by organizing meetings between experts and stakeholders.				

CONSERVATION ACTIONS				
CB - CAPACITY BUILDING				
CB 2 - Monitoring of cetacean stranding (RMTM14)			Links with the Agreement text :	
Rationale: Cetacean strandings create an important opportunity for the gathering of much needed knowledge on natural and human-induced mortality of cetacean populations, and provide an available source for precious additional information, among other things, on the biology, pathology, toxicology and population genetics of the concerned species. Stranding networks exist in the Agreement area, each of them having various degrees of the extent of their spatial and temporal coverage, efficiency, and institutional involvement.			<ul style="list-style-type: none"> Article II Annexe 2 	
Objectives: To establish operational national networks for monitoring cetacean stranding in the ACCOBAMS's area coordinated through MEDACES.			Links with the Recommendations of the SC: <ul style="list-style-type: none"> Rec SC 2.6 	
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions :	
To organize at least 2 trainings for different aspects of strandings, including strandings and entanglement of live animals.	2011 - 2013	MEDACES, ACCOBAMS Partners	<ul style="list-style-type: none"> Res 2.15 Res 3.9 Res 3.25 Res 3.29 Res 4.16 	
To update the studies and the contingency plans periodically on the basis of past experience and new techniques and technologies.			Links with CMS Resolutions : <ul style="list-style-type: none"> Res 9.12 	
To support Countries for setting the network's structure in: - updating the roster of contact persons and experts from the scientific and conservation communities and from governmental environment and natural resource agencies who could contribute in appropriate fields of expertise, such as pathology, epidemiology, toxicology, biology, ecology, acoustics, and to strengthen the two emergency task forces on: (i) "mass mortality", to address unusual mortality events, including			Priority: High	

<p>epizootics and atypical mass strandings; and (ii) “maritime disaster”, to address oil or chemical spills affecting critical habitats of cetaceans; - preparing contingency plans for each task force, including descriptions of administrative procedures and modalities for interventions, the decision-making processes and the management of information, communication and relations with the media and for drafting an operational manual.</p>			<p style="text-align: right;">Budget</p> <p><input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution</p>
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CONSERVATION ACTIONS				
CB - CAPACITY BUILDING				
CB 3 - Use of cetacean photo-identification			Links with the Agreement text :	
Rationale: Photo-identification is a technique that is today seen as sufficiently reliable and useful for monitoring populations of several species of cetacean. Developing photo-identification programmes and databases is one of the international priorities for implementing the Agreement adopted by MOP1; however, only a few of the Countries bordering Agreement's area are able to undertake such programmes.			<ul style="list-style-type: none"> • Article II • Annexe 2 	
Objectives: To strengthen the capabilities of the Parties in using the photo-identification techniques. To set up a photo-identification regional programme and database.			Links with the Recommendations of the SC: –	
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions :	
To set up a network made up of at least one specialist per Contracting Party.	2011 - 2013	ACCOBAMS Partners, NGOs	<ul style="list-style-type: none"> • Res 2.19 • Res 2.28 • Res 3.15 • Res 4. 12 	
To collect data from Countries that have received assistance (training in photo-identification) from ACCOBAMS.			Links with CMS Resolutions : <ul style="list-style-type: none"> • Res 9.12 	
To develop a photo-identification programme/database that covers the Agreement area.			Priority: High	
To provide equipment to the national teams involved.			Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS				
CB - CAPACITY BUILDING				
CB 4 - Clearinghouse mechanism for cetaceans (CETA-CHM)			Links with the Agreement text :	
Rationale: Access to reliable and up-to-date information is likely to facilitate conservation action and thus enable the various actors to design and start up their activities on the basis of the most recent pertinent knowledge. The difficulty of getting information is one of the difficulties most frequently referred to by researchers and other cetacean conservation specialists in the Countries that border on the area of the Agreement. Alongside the difficulty of obtaining specialist information should be mentioned the major lack of exchange of information between counties, sometimes even between specialists in the same Country. Thus it is urgent that a system for collecting and compiling information that is pertinent to cetacean conservation be set up, with a view to making this available and readily accessible to the stakeholders involved in implementing ACCOBAMS.			<ul style="list-style-type: none">Article IIAnnexe 2	
Objectives: To facilitate the access to reliable, high quality and up-to-date information of relevance for cetacean conservation.			Links with the Recommendations of the SC: –	
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions : –	
To design a system for collection, compiling and circulating information in the various subjects that are pertinent to cetacean conservation in the Agreement's area.	2011	RAC/SPA, BSC	Links with CMS Resolutions : <ul style="list-style-type: none">Res 9.12	
To organise a training workshop on how the CETA-CHM works (techniques of information collection, quality control, posting on the website, link with other CHMs).	2012		Priority: Medium	
			Budget	
			<input type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS				
CB - CAPACITY BUILDING				
CB 5 - Biennial Conference			Links with the Agreement text :	
Rationale: The organisation of this Conference came from a need expressed by several scientist of the region. The First Biennial Conference was organized in 2009 in Tabarka, Tunisia.			• Article II • Annexe 2	
Objectives: To improve cooperation between southern Countries.			Links with the Recommendations of the SC: —	
Actions	Timing	In collaboration with	Links with ACCOBAMS Resolutions :	
To organise the second Biennial Conference.	2011	Cetacean specialist in the South of the Mediterranean	—	
To elaborate a mailing list system enabling all scientists, concerned with cetacean conservation including master and PhD students To evaluate the possibility to create a newsletter oriented towards the scientific community. To promote the exchange of experience between south Mediterranean Countries through the exchange of experts and the establishment of joint projects. To encourage the elaboration and implementation of National Action Plans on cetacean conservation.	2011 - 2013		Links with CMS Resolutions : • Res 9.12	
To organise the third Biennial Conference.	2013		Priority: High	
			Budget	
			<input type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

CONSERVATION ACTIONS				
SP - STRATEGIC PLANNING				
SP - Long term strategy for ACCOBAMS (2013 – 2023)			Links with the Agreement text : <ul style="list-style-type: none"> Article II Annexe 2 	
Rationale: Strategic planning provides a necessary framework for organizing activities to achieve Agreement's objectives. The implementing of ACCOBAMS gains in efficiency if it is done as part of an integrated strategy the elements of which are elaborated on the basis of an in-depth analysis.			Links with the Recommendations of the SC: –	
Objectives: To elaborate a long-term strategy for enhancing effectiveness of ACCOBAMS and of the resolutions adopted within ACCOBAMS framework.			Links with ACCOBAMS Resolutions : <ul style="list-style-type: none"> Res 4.24 	
Actions	Timing	In collaboration with	Links with CMS Resolutions : <ul style="list-style-type: none"> Res 9.12 	
To prepare preliminary analysis of effectiveness of ACCOBAMS.	2011 - 2013	RAC/SPA, BSC	Priority: Very High	
To organise a working group to prepare a draft Strategy using the preliminary analysis as basis.	2013		Budget <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution	

INSTITUTIONAL ISSUES		
FIFTH MEETING OF THE CONTRACTING PARTIES TO ACCOBAMS		
Rationale: Ordinary sessions of the Meeting of the Parties shall be held at intervals of not more than three years.		
Dates: <ul style="list-style-type: none"> • 2013 	Links with the Agreement text : <ul style="list-style-type: none"> • Article III 	Budget: <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

INSTITUTIONAL ISSUES		
MEETINGS OF THE EXTENDED BUREAU		
Rationale: During their Third Meeting, held in October 2007, the Contracting Parties to ACCOBAMS amended the Rules of Procedure of the Bureau with the view of further integrating the socio-economic aspects into the implementation of the Agreement. According to this amendment, three socio-economic experts are to be selected by the Chair of the Bureau and invited by the Secretariat to assist the Bureau in reviewing the Resolutions and other relevant documents to be submitted to the Meetings of Parties.		
Dates: <ul style="list-style-type: none"> • 2013 	Links with the Agreement text : –	Budget: <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

INSTITUTIONAL ISSUES		
MEETINGS OF THE BUREAU		
Rationale: The precise dates of the meetings will be set by the Chair of the Bureau, after consultation with the Secretariat and the other members. The Secretariat informs the members of the date, place and agenda of each meeting and invites them to participate. The Secretariat also informs the members of the Working Group of the date, place and agenda of the meeting of the Bureau preparatory to the Meeting of the Parties, and invites them to participate.		
Dates: <ul style="list-style-type: none"> • 2011 • 2012 • 2013 	Links with the Agreement text : <ul style="list-style-type: none"> • Article VI 	Budget: <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

INSTITUTIONAL ISSUES		
MEETINGS OF THE SCIENTIFIC COMMITTEE		
Rationale: Meetings of the Committee shall be convened in general on the basis of one annual meeting by the Secretariat of the Agreement in consultation with the General Secretariat of the CIESM and the Chair of the Committee. Extraordinary meetings shall only be convened with the agreement of the Contracting Parties Bureau Members.		
Dates: <ul style="list-style-type: none"> • 2011 • 2012 • 2013 	Links with the Agreement text : <ul style="list-style-type: none"> • Article VII 	Budget: <input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution

INSTITUTIONAL ISSUES		
REGIONAL WORKSHOPS		
<p>Rationale: The Fifth Meeting of the Bureau (December 2008) agreed upon the proposal of the Secretariat to organize Regional Workshops gathering groups of Countries Parties to ACCOBAMS in order to assess, and facilitate if needed, the implementation of the Agreement.</p>		
<p>Dates:</p> <ul style="list-style-type: none"> • 2012 	<p>Links with the Agreement text :</p> <ul style="list-style-type: none"> • Article IV, c) 	<p>Budget:</p> <p><input checked="" type="checkbox"/> Trust Fund <input checked="" type="checkbox"/> External contribution</p>

RESOLUTION 4.6

FORMAT FOR NATIONAL IMPLEMENTATION REPORTS

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS):

Referring to Article VIII of the Agreement establishing the need to report regularly on the national implementation of the Agreement,

Considering that these reports should primarily focus on the obligations as defined in the Agreement itself,

Recognizing that a follow up of the implementation of Resolutions and Recommendations is part of the execution of the Agreement and has to be included in the national reports,

Considering that national reports should also deal with the constraints and difficulties encountered in the implementation of the Agreement,

Also recognizing that information provided in the national reports will be necessary to determine whether ACCOBAMS is meeting its objectives,

Taking into account the functioning and user-friendliness of the online reporting system,

Desirous to draw up a reporting format that, meeting also reporting obligations under other agreements, could ease the burden of the Parties and could therefore increase the rate of submission of national reports,

Recalling Resolution 3.7, inviting the Agreement Secretariat to liaise regularly with other relevant intergovernmental bodies in order to harmonize data and information collection and management,

1. *Adopts* the new format of national reports, as here annexed;
2. *Urges* Parties to regularly update on-line the information provided as soon as it is appropriate to do so and at least once every year;
3. *Invites* Parties to regularly report to each Meeting of the Parties on the results and possible improvements of the on-line reporting system;
4. *Recommends* the Parties, to improve, on this matter, coordination between their ACCOBAMS National Focal Points and the Focal Points responsible for reporting to the Organizations listed in the Agreement preamble¹;
5. *Asks* the Agreement Secretariat to circulate the updated information on a regular basis to all Parties and the members of the Scientific Committee;
6. *Asks* the Agreement Secretariat to invite non-Parties within the Agreement area to report on a voluntary basis using the on-line format for implementation reports;

¹ The International Convention for the Regulation of Whaling, 1946; the Convention for the Protection of the marine environment and the coastal region of the Mediterranean, 1976, its related protocols and the Action Plan for the Conservation of Cetaceans in the Mediterranean Sea adopted under its auspices in 1991; the Convention on the Conservation of European Wildlife and Natural Habitats, 1979; the United Nations Convention on the Law of the Sea, 1982; the Convention on Biological Diversity, 1992; the Convention for the Protection of the Black Sea against Pollution, 1992; and the Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals of the United Nations Environment Programme, adopted in 1984; as well as initiatives of *inter alia* the General Fisheries Commission for Mediterranean, the International Commission for Scientific Exploration of the Mediterranean, and the International Commission for the Conservation of Atlantic Tunas.

7. *Encourages* the Agreement Secretariat to exchange views with these relevant Organizations on the manner to ease reporting burdens by Parties;
8. *Decides* that the present Resolution complements Resolutions 1.8, 2.5 and 3.7.

ANNEX

Proposed format for the on line reporting to ACCOBAMS¹⁰

Reporting item	Content	Filled in by ¹¹	Source of information for the Secretariat ¹²
1. Name of Party			
2. Date when report finalized		NFP	
3. Focal Point	Full name, organization, function, address, telephone, fax, e-mail	A	National reports Notification
4. Definition of the areas under national jurisdiction included in the Agreement's field of application	The limits of any area declared by the Party, in the Agreement area, that is beyond and adjacent to its territorial sea and subject to the legal regime of the Exclusive Economic Zone of the UNCLOS, including fishing zone, Ecological Protection Zones and PSSAs.	A	National reports Notification
5. The Party is a member of an organization of economic integration ¹³	No Yes (if yes, name of the Organisation)	A	National reports Notification Relevant documentation
6. Signature/ratification	Date of signature, ratification, accession Date from which the Country became a Party to ACCOBAMS	A	The Depositary National reports Notification
7. Ratification of amendments	Date when ratified the amendment, Date of entry into force of the Ratification	A	The Depositary National reports Notification
8. Reservation ¹⁴	Date, relevant Article of the Agreement and Subject Date of withdrawal of the reservation (if applicable)	A	The Depositary National reports Notification
9. National bodies	National authorities, organizations, research centres and rescue centres active in the field of study and conservation of cetaceans	A	National reports Notification
10. Legislation/Regulation	Main national legislative and regulatory texts pertinent to cetaceans: Date, Title, Objectives, Authorities responsible for application	A	National reports Notification

¹⁰ The online format will include examples to assist the users filling in the format

¹¹ NFP : National Focal Point of ACCOBAMS, A : Filled in by the Secretariat and then reviewed and completed as appropriate by the NFP

¹² National reports : previous national reports of the Party to ACCOBAMS, Notification : notification received from the NFP, Relevant Documentation : Reports and web sites of relevant International Governmental Organisations (IGOs)

¹³ as defined in Article I, paragraph (h) of the Agreement

¹⁴ Possible reservations expressed in accordance with Article XV or Article X of the Agreement

			Relevant documentation
11. Relevant International Conventions and Agreements to which the country is Party	Date of entry into force of the Ratification, Acceptance, Approval or Adhesion ¹⁵	A	National reports Notification Relevant documentation
12. Networks set up for monitoring cetacean strandings	Coordinating system, agents, means available, databases, publishing of results Transmission of data to MEDACES (yes or No)	A	National reports Notification
13. Data about cetacean stranding	Species, location and date.	A	MEDACES
14. Emergency plans	Conditions of activating, coordinating system, agents, means available, databases, publishing of results	A	National reports Notification
15. Cetaceans reported in the area under the jurisdiction of the country included in the distribution area	For each of the species listed in the Annex 1 to the Agreement and other species recorded in the national waters: Common, Rare or Occasional, list of relevant bibliographic references	A ¹⁶	National reports Notification Relevant documentation
16. Information on the national fishing fleet active in the area of the Agreement	Number of boats using fishing gears that may interact with cetaceans, in particular: <ul style="list-style-type: none"> • Fishing boats with fixed gill-nets and gill-net size • Fishing boats with purse seines • Fishing boats with drift-nets • Fishing boats with surface long lines • Others 	A	Notably GFCM National reports Notification
17. Conservation measures introduced to attain and maintain a state of conservation favourable to cetaceans	Measures concerning: <ul style="list-style-type: none"> • Deliberate removal • Reduction of man/cetacean interaction 	A	National reports Notification Relevant

¹⁵ The following Convention/Agreements will be considered :

Convention on Biological Diversity (Rio, 1992)
Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979)
Convention on the Conservation of European Wildlife and Natural Habitats (Berne, 1979)
United Nations Convention on the Law of the Sea (Montego Bay, 1982)
Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (Barcelona, 1995)
Convention on the Protection of the Black Sea Against Pollution (*Bucharest Convention*)
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)
Convention on International Trade in Endangered Species of Fauna and Flora (CITES - Washington, 1973)
International Convention for the Regulation of Whaling (Washington, 1946)
Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks(1995)
General Fisheries Commission for the Mediterranean
La Commission Internationale pour l'Exploration Scientifique de la Méditerranée

¹⁶ This information will be also checked by the President of the Scientific Committee

	<ul style="list-style-type: none"> • Protected areas of relevance to cetacean habitats • Reduction of pollution • Strengthen the national capacities, the institutional framework, the collection and dissemination of information and education • Other measures 		documentation
18. Research and monitoring programmes and projects done to improve knowledge about, the biology, ecology and conservation of cetaceans	Objectives, period (date), area covered, involved organisations and scientists, reference of published reports (if applicable).	A	National reports Notification Relevant documentation
19. Relevant bibliographical references	List of relevant scientific literature published during the triennium	A	
20. Bilateral or multilateral cooperation programmes	Title (if applicable), objectives, period (date), area covered	NFP	
21. Measures related to the Resolutions of the Meetings of the Parties	[For each Resolution, the information to be reported in the national reports of Parties will be decided by the Meeting of the Parties adopting the Resolution]	NFP	

RESOLUTION 4.7

GUIDELINES FOR COMMERCIAL CETACEAN-WATCHING IN THE ACCOBAMS AREA

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS):

Considering

- that cetacean-watching activities for commercial purposes are increasingly being developed in the ACCOBAMS area and require to be regulated,
- that commercial cetacean-watching activities, where properly conducted, should be encouraged as they do contribute to the building of education and awareness on cetaceans and their habitat,

Noting

- that the International Whaling Commission (IWC), at its 48th annual meeting (1996), adopted the Scientific Committee's recommendations on the general principles for the management of whale-watching (Resolution 1996-2),
- that the Workshop on the Legal Aspects of Whale Watching, held in Punta Arenas, Chile, in 1997 and sponsored by IFAW (International Fund for Animal Welfare), drafted the Options for the Development of Legislation or Guidelines Related to Whale Watching,
- the code of conduct for cetacean watching drafted under the Agreement between France, Italy and Monaco on the Mediterranean Sanctuary for Marine Mammals,
- that legislation or guidelines applying to cetacean-watching activities has been adopted by a number of Countries,

Acknowledging

- that under Article II, paragraph 1, of ACCOBAMS, the Parties shall prohibit and take all necessary measures to eliminate any deliberate taking of cetaceans, including harassing or attempting to engage in any such conduct,
- that under Chapter 2 of Annex 2 to ACCOBAMS, when necessary, the Parties shall develop guidelines and/or codes of conduct to regulate or manage activities which create interactions between humans and cetaceans, such as touristic activities,
- that under Chapter 1.c) of Annex 2 to ACCOBAMS, the Parties shall require impact assessments to be carried out in order to provide a basis for either allowing or prohibiting the continuation or the future development of activities that may affect cetaceans or their habitat in the ACCOBAMS area, including tourism and cetacean-watching, as well as establishing the conditions under which such activities may be conducted,
- that under Article III.8.c) of ACCOBAMS, the Meeting of the Parties makes recommendations to the Parties as it deems necessary or appropriate and adopts specific actions to improve the effectiveness of ACCOBAMS,

Aware that the First Meeting of the Parties already adopted a set of Guidelines for commercial cetacean-watching activities in the ACCOBAMS area (Resolution 1.11) and that the Scientific Committee has proposed a revision of these Guidelines on the basis of the evolution of the scientific knowledge,

1. *Invites* the Parties where commercial cetacean watching activities are carried out:
 - to adopt national legislation or regulations in conformity with the Guidelines for commercial cetacean-watching activities in the ACCOBAMS area as presented in Annex ;
 - to continue and expand the organisation of national or regional training for operators to inform them about the biology of animals, risks, boat behaviour around the animals, how to achieve accreditation, involvement in scientific research, and so forth;
2. *Asks* the Parties where legislation or regulations on commercial cetacean-watching activities have been adopted to provide the Secretariat with the relevant instruments;

3. *Entrusts* the Scientific Committee with the task to revise, if appropriate, the Guidelines for commercial cetacean-watching activities in the ACCOBAMS area on the basis of the evolution of scientific knowledge and national legislation and regulations;
4. *Decides* that the present Resolution replaces the Resolution 1.11

Guidelines for commercial cetacean-watching in the ACCOBAMS area

Point 1 Scope of the Guidelines

These Guidelines address cetacean-watching activities carried out for commercial purposes and subject to the jurisdiction of the Parties to ACCOBAMS.¹⁶

Point 2 Impact assessment

1. Before allowing cetacean-watching activities, the Parties shall require an assessment on their impact on the favourable conservation status for cetaceans.
2. The impact assessment shall be based on the best available scientific information.
3. No cetacean-watching activities should be authorised if there are threats of significant adverse impact on the behavioural patterns or physiological well-being of cetaceans, having regard to the number and effect of existing cetacean-watching operations.
4. Based on the results of the impact assessment, the Parties should establish special conditions to carry out cetacean-watching activities.
5. The impact assessment shall be repeated at periodic intervals.
6. The impact assessment shall be carried out under a precise procedure established by the Parties.

Point 3 Permit

1. Any commercial cetacean-watching activity should be carried out under a permit granted by the competent authority.
2. Every applicant for a permit for a vessel or aircraft cetacean-watching operations should submit to the competent authority an application in writing setting out:
 - a) the type, number and speed of vessels or aircraft intended for use and the maximum number of vessels or aircraft the operator proposes to operate at any time;
 - b) information relating to the noise level of each vessel or aircraft both above and below the sea;
 - c) the area of operation;
 - d) the base of operation;
 - e) the duration and frequency of trips;
 - f) the species of cetaceans with which the operation will have contact and the kind of contact;
 - g) the method of location of cetaceans;

¹⁶ These Guidelines are intended to be illustratory and used to inform the development of guidelines in the ACCOBAMS region. Local considerations may cause the development on national or regional basis of guidelines that differ from those presented here. However, it may be helpful if guideline developers explain why such differences exist. This information can be considered in the further development of these Guidelines.

- h) the maximum number of passengers to be taken on board;
 - i) the experience with cetaceans demonstrated by the persons in command of the vessel or aircraft;
 - j) the educational materials provided to the passengers;
 - k) the altitude of the aircraft.
3. No permit should be granted if the competent national authority is not satisfied that:
- a) the operator and the staff who approach cetaceans have sufficient experience with cetaceans;
 - b) the operator and the staff have sufficient knowledge of the local area and of sea and weather conditions;
 - c) the operator and the staff who approach cetaceans have no convictions for offences involving the mistreatment of animals;
 - d) the operation proposed has sufficient educational value to the public.
4. The competent national authority may at any time suspend or revoke a permit, or restrict the operation authorized by a permit, where:
- a) the holder contravenes or fails to comply with any statutory requirement relating to cetacean-watching or any condition specified in the permit;
 - b) to suspend, revoke or amend a permit is necessary, on reasonable grounds, for maintaining the favourable conservation status for cetaceans.

Point 4

Behaviour around cetaceans

The following conditions should apply where cetacean-watching activities are being carried out:

- a) vessels and aircraft should be operated so as not to disrupt the normal movement or behaviour of cetaceans¹⁷;
- b) contact with cetaceans should be abandoned at any stage if they show signs of becoming disturbed or alarmed;
- c) no cetacean should be separated from a group;
- d) no rubbish or food should be thrown near or around the cetaceans;
- e) no sudden or repeated change in the speed or direction of vessels or aircraft should be made except in the case of an emergency;
- f) where a vessel stops to enable the passengers to watch a cetacean, the engines should be placed in neutral;
- g) no aircraft should be flown below 183 metres (600 feet) above sea level;
- h) no vessel should approach intentionally within 100 metres of a cetacean;
- i) no vessel should cut off the path of a cetacean
- j) no cetacean should be prevented from leaving the vicinity of the vessel;
- k) a vessel less than 300 metres from cetaceans should move at a constant speed no faster than 5 knots and no faster than the slowest cetacean in the vicinity, and should stop when it approaches within 100 metres of a cetacean;
- l) a vessel departing from the vicinity of cetaceans should proceed slowly until the vessel is at least 300 metres from the nearest cetacean;
- m) aircraft should be operated in such a manner that, without compromising safety, the aircraft's shadow is not imposed directly on cetaceans;
- n) only one vessel or aircraft at any one time should be allowed to stay in the watching area;

¹⁷ How to recognize disturbance of whales and dolphins in general:

- Rapid changes in swimming direction or speed;
- Escape tactics such as prolonged diving, underwater course changes or rapid swimming away from the vessel;
- Forceful slapping of the tail against the surface of the water;
- Female attempting to shield a calf with her body or by her movements;
- Sudden stop in feeding or resting activities after the vessel's arrival.

- o) the presence in the watching area should be limited to around 15 minutes for vessels or 2 minutes for aircraft, especially if other vessels or aircraft are waiting for their turn;
- p) vessels should approach a cetacean only diagonally from the side;
- q) activities such as swimming with cetaceans should be forbidden or strictly regulated;
- r) cetaceans should not in any other way be disturbed or harassed.

Point 5

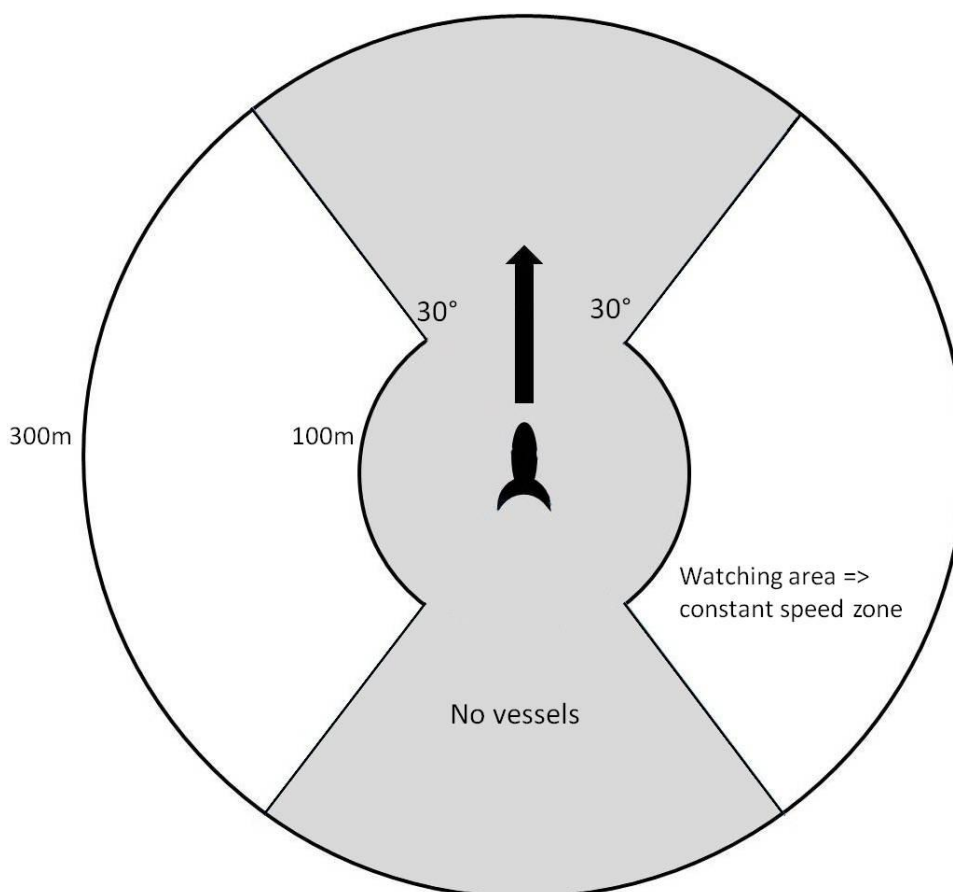
Training and special quality mark

1. The Parties should organise training courses for operators and staff and grant them a certificate.
2. The Parties should allow the use of [label] to the operators who have behaved in conformity with the applicable regulations or guidelines, have obtained a training certificate and have a qualified guide on board.

Point 6

Sanctions and remedies

1. The Parties should impose sanctions of sufficient gravity to deter violations of the present Guidelines, including the suspension or revocation of permits.



All distances taken from the animals

RESOLUTION 4.8

CONTRIBUTION FROM ACCOBAMS TO THE IMPLEMENTATION OF THE MARINE STRATEGY FRAMEWORK DIRECTIVE

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Considering the European Union Marine Strategy Framework Directive (2008/56/EC) a crucial policy regarding the protection of the marine environment, particularly for Contracting Parties that are EU Member States,

Recognising the important role that the implementation of the Marine Strategy Framework Directive will play in all aspects related to the protection of European Seas, including their cetacean species,

Considering the descriptors of good environmental status of the Marine Strategy Framework Directive 1 (biodiversity), 4 (food webs), 7 (hydrographical conditions), 8 (contaminants), 10 (marine litter) and 11 (energy) as particularly relevant to cetacean conservation,

Taking note of the recently published *Commission Decision on criteria and methodological standards on good environmental status of marine waters*, which among others includes some indicators applicable to cetacean conservation,

Taking note of the ongoing work within the Common Implementation Strategy of the Marine Strategy Framework Directive, which includes a working group on Good Environmental Status and technical subgroups on marine litter and noise, which are relevant to cetacean conservation,

Recalling that Contracting Parties that are EU Member States are under the obligation to prepare marine strategies, including an initial assessment, the determination of good environmental status, the identification of environmental targets, the establishment of monitoring programmes and the implementation of programmes of measures, and in doing so must provide for regional coordination,

Recognising that assessment, monitoring and management of cetacean species will be part of these marine strategies,

Considering that ACCOBAMS, in coordination with the relevant Regional Seas Conventions, should play an important role in the regional coordination of all aspects of marine strategies related to cetacean conservation,

Considering the request from the Bureau of ACCOBAMS to the Scientific Committee in order to explore what could be the potential contribution of ACCOBAMS to the implementation of the Marine Strategy Framework Directive, as far as the conservation of cetaceans is concerned,

1. *Takes note* of the study on the “Potential contribution by ACCOBAMS to the identification of qualitative descriptors for determining good environmental *status sensu* the E.U. Marine Strategy Framework Directive” prepared by the Chair of the Scientific Committee;
2. *Requests* that the Secretariat with the support of the Scientific Committee of ACCOBAMS, contributes, providing regional information, to the implementation of the Marine Strategy Framework Directive, particularly by participating in working groups and technical subgroups of the Marine Strategy Framework Directive Common Implementation Strategy relevant to cetacean conservation;
3. *Requests* to the Contracting Parties that are EU Member States to support ACCOBAMS in the regional coordination of aspects of their marine strategies relevant to cetacean conservation;

4. *Invites* the Scientific Committee to analyse the *Commission Decision on criteria and methodological standards on good environmental status of marine waters* and identify those indicators related to cetacean conservation, and to provide guidance to Contracting Parties that are EU Member States on how to implement these indicators regarding the assessment of cetacean populations, and how to quantify Good Environmental Status in relation to cetacean conservation and to inform Member States of the results of this analysis;
5. *Proposes* that the Scientific Committee of ACCOBAMS starts a process for identifying environmental targets and measures for cetacean conservation that should be incorporated in the marine strategies in the ACCOBAMS area, including the identification of thresholds for pressures and impacts of certain human activities, as well as providing information for abundances and dynamic populations;
6. *Invites* Parties to ACCOBAMS to share their experiences in the assessments, monitoring and measures that, within the framework of the European Union Marine Strategy Framework Directive, take into account the need for the conservation of cetaceans.

Potential contribution by ACCOBAMS to the identification of qualitative descriptors for determining good environmental status *sensu* the E.U. Marine Strategy Framework Directive

Introduction

A process is ongoing concerning the implementation of the E.U. Marine Strategy Framework Directive (MSFD). This includes the identification of qualitative descriptors for determining good environmental status in the marine environment.

There was a request from the Bureau of ACCOBAMS during its last meeting to explore what could be the potential contribution of ACCOBAMS to the identification of such descriptors, as far as the conservation of cetaceans is concerned.

This brief report begins to address such request by the Bureau, first by providing some relevant background on the MSFD, and second by suggesting ways in which the work of ACCOBAMS could support the identification of qualitative descriptors, within the frame of the Agreement's expertise and concerns. It should be circulated within the Scientific Committee to solicit comments and suggestions from Committee members, to produce a final report in time for the 4th Meeting of the ACCOBAMS Parties.

Good Environmental Status (GES)

This is the status that the MSFD intends to enable Europe to reach, as far as its marine environment is concerned. It is defined in the Directive as follows (Art. 3(5)):

- “ ‘good environmental status’ means the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations, i.e.:
 - “(a) the structure, functions and processes of the constituent marine ecosystems, together with the associated physiographic, geographic, geological and climatic factors, allow those ecosystems to function fully and to maintain their resilience to human-induced environmental change. Marine species and habitats are protected, human-induced decline of biodiversity is prevented and diverse biological components function in balance;
 - “(b) hydro-morphological, physical and chemical properties of the ecosystems, including those properties which result from human activities in the area concerned, support the ecosystems as described above. Anthropogenic inputs of substances and energy, including noise, into the marine environment do not cause pollution effects;
- “Good environmental status shall be determined at the level of the marine region or subregion as referred to in Article 4, on the basis of the qualitative descriptors in Annex I. Adaptive management on the basis of the ecosystem approach shall be applied with the aim of attaining good environmental status.”

The geographic attributes of the MSFD referred to in Article 4, relevant to ACCOBAMS, include (from West to East):

- in the North-east Atlantic Ocean, part of the subregion denominated “the Bay of Biscay and the Iberian Coast”;
- the Mediterranean Sea region;
- the Black Sea region.

Qualitative descriptors for determining good environmental status

Annex I to the MSFD lists the following 11 qualitative descriptors to support the determination of good environmental status at sea (which are also referred to in Articles 3(5), 9(1), 9(3) and 24):

- (1) Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.
- (2) Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.
- (3) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
- (4) All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.
- (5) Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.
- (6) Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.
- (7) Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.
- (8) Concentrations of contaminants are at levels not giving rise to pollution effects.
- (9) Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.
- (10) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.
- (11) Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.

Descriptors having relevance to the ACCOBAMS goals

In its Annex I, the MSFD states that “To determine the characteristics of good environmental status in a marine region or subregion as provided for in Article 9(1), Member States shall consider each of the qualitative descriptors listed in this Annex in order to identify those descriptors which are to be used to determine good environmental status for that marine region or subregion.”

Considering the specialised expertise on cetacean conservation which is contained within ACCOBAMS, coupled with the Agreement’s mandate to conserve cetacean populations in its area (which is vastly overlapping with the MSFD area), there is ample scope for ACCOBAMS to contribute to the MSFD effort through ensuring that the cetacean component is adequately considered when determining and defining descriptors. This is not only because cetaceans are concerned by the statement that “marine species and habitats are protected, human-induced decline of biodiversity is prevented and diverse biological components function in balance” (Art. 3(5a)), but also because their conservation presents special - and sometimes unique – concerns due to their special ecological and physiological characteristics of marine mammals.

The descriptors which are particularly relevant to cetacean conservation are n. 1, 4, 7, 8, 10 and 11.

Potential contribution by ACCOBAMS to the definition of descriptors, with reference to the 2010-2013 Work programme:

Descriptor n°	Item	Relevant Items of the Work Programme		
		Code	Title	Priority
1	<i>Biological diversity is maintained.</i>	RMTM 1	The Survey Initiative	Very High
		RMTM 2	Population Structure	High
		RMTM 3	Species conservation plans: Mediterranean common dolphin	High
		RMTM 4	Species conservation plans: Black Sea cetaceans	High
		RMTM 5	Species Conservation plans: Mediterranean bottlenose dolphin	Medium
		RMTM 6	Species Conservation Plans: Fin whales	Medium
		RMTM 7	Species Conservation Plans: Cuvier's beaked whales	High
		RMTM 8	Species Conservation Plans: Sperm whales	Medium
		RMTM 9	Species Conservation Plans: Other species and populations	Low
		RMTM 15	Marine Protected Areas	High

Cetaceans are a component of marine biodiversity in their own right, as clearly defined in Annex III (table 1) to the MSFD, which lists amongst the characteristics to be taken into account “a description of the population dynamics, natural and actual range and status of species of marine mammals and reptiles occurring in the marine region or subregion”. Updated knowledge of cetacean populations existing in the considered area, including considerations about their role in the ecosystem, their status and known trends could be contributed by ACCOBAMS. The presence within Task Group 1 of a member of the ACCOBAMS Scientific Committee will significantly facilitate the flow of information between ACCOBAMS and the MSFD effort.

Descriptor n°	Item	Relevant Items of the Work Programme		
		Code	Title	Priority
4	<i>All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.</i>	RMTM 10	Bycatch and interactions with fisheries	Very High

This descriptor is relevant to cetacean conservation in many ways: a) cases are known in which prey depletion by fisheries have negatively affected cetacean populations in the ACCOBAMS area (e.g.,

Bearzi et al. 2008¹⁸), demanding management intervention to maintain marine food web integrity, at the same time maintaining populations of commercially exploited fishes within safe biological limits (a clear connection with descriptor n. 3); b) marine food webs (particularly in the pelagic domain) may be disrupted by climate change (e.g., Gambaiani et al. 2009¹⁹), and cetacean populations concerned are likely to be dramatically affected if that happens; this not only has conservation relevance, but also makes cetaceans an easy feature of the ecosystem to monitor; and c) as top predators, cetaceans contribute to the stability of ecological communities they are part of, and thus their presence has a role in the maintenance of biodiversity (Bascompte et al. 2005²⁰).

Descriptor n°	Item	Relevant Items of the Work Programme		
7	<i>Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.</i>	Code	Title	Priority
		RMTM 17	Climate change	High

This descriptor is closely linked to point b) above.

Descriptor n°	Item	Relevant Items of the Work Programme		
8	<i>Concentrations of contaminants are at levels not giving rise to pollution effects.</i>	Code	Title	Priority
		RMTM 14	Responses to emergency situations	High
		RMTM 16	Chemical Pollution	Medium

As long-lived apex predators, cetaceans are strongly affected by bioaccumulation and biomagnification phenomena involving a number of xenobiotic compounds that are known to be highly toxic, and to impair reproductive and immune function in mammals.

Descriptor n°	Item	Relevant Items of the Work Programme		
10	<i>Properties and quantities of marine litter do not cause harm to the coastal and marine environment.</i>	Code	Title	Priority
		CB 2	Monitoring of cetacean stranding	High

Cetaceans are known to be affected by marine litter through ingestion and entanglement; the phenomenon is well-known in the ACCOBAMS area, and substantive information exists from the monitoring of strandings in the Mediterranean and the Black Seas. The presence within Task Group 10 of a member of the ACCOBAMS Scientific Committee (Alexei Birkun) will significantly facilitate the flow of information between ACCOBAMS and the MSFD effort.

¹⁸ Bearzi G., Agazzi S., Gonzalvo J., Costa M., Bonizzoni S., Politi E., Piroddi C., Reeves R.R. 2008. Overfishing and the disappearance of short-beaked common dolphins from western Greece. *Endangered Species Research* 5:1-12. doi: 10.3354/esr00103.

¹⁹ Gambaiani D.D., Mayol P., Isaac S.J., Simmonds M.P. 2009. Potential impacts of climate change and greenhouse gas emissions on Mediterranean marine ecosystems and cetaceans. *Journal of the Marine Biological Association of the United Kingdom* 89(1):179-201.

²⁰ Bascompte J., Melian C.J., Sala E. 2005. Interaction strength combinations and the overfishing of a marine food web. *PNAS* 102(15):5443-5447.

Descriptor n°	Item	Relevant Items of the Work Programme		
11	<i>Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.</i>	Code	Title	Priority
		RMTM 11	Anthropogenic Noise	High

Noise is known to be a significant hazard for cetaceans in the ACCOBAMS area, and a correspondence working group was established by the last Meeting of Parties to address the important conservation implications of this pressure factor.

Mode of contribution

The Scientific Committee should be requested to contribute to the effort of defining and determining relevant descriptors of good environmental status on the basis of modalities and procedures indicated by the Parties.

RESOLUTION 4.9

FISHERIES INTERACTIONS WITH CETACEANS

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendations from the Scientific Committee,

Renewing its concern about the negative impacts on cetacean populations of fishing activities in the Agreement area,

Noting that the problem of cetacean by-catch affects the entire area where ACCOBAMS applies and involves a variety of types of fishing gear,

Greatly concerned that fishing nets with mesh size equal to or exceeding 100 mm are still widely used, either legally or illegally, for turbot, spiny dogfish and sturgeon fisheries in the Black Sea sub-region,

Seriously concerned that other types of fishing gear commonly deployed even in accordance with the EU Regulations, in the Agreement area are known to cause significant mortality and can seriously affect cetacean populations,

Greatly appreciating the collaboration established between ACCOBAMS and the General Fisheries Commission for the Mediterranean (GFCM) to address the issue of by-catch of cetaceans and other endangered marine species,

Taking note of the work on bycatch done by the Scientific Council of the CMS lead by the Conference appointed councillor for bycatch, as well as of the activities undertaken in the framework of ASCOBANS towards mitigating bycatch and improving collaboration with fishing communities,

Recalling Resolution 8.22 on adverse human induced impacts on cetaceans and Resolution 9.18 on by-catch, adopted within the framework of the Convention on the Conservation of Migratory Species of Wild Animals,

Recalling also that the Agreement requires that Parties collect and analyze data on direct and indirect interactions between humans and cetaceans in relation to fishing and take appropriate remedial measures, applying, when necessary, the precautionary principle,

Taking in consideration the “Guidelines for technical measures to minimize cetacean-fishery conflicts in the Mediterranean and Black Seas” adopted in the Resolution 2.12,

1. *Encourages* Parties with respect to by-catches and depredation:

(a) To improve reporting by:

- establishing regular, representative onboard monitoring programmes related to the ByCBAMS project (Project for assessing and mitigating the adverse impacts of interactions between cetaceans and fishing activities in the ACCOBAMS area - (give some reference as to where this is specified)) to quantify cetacean by-catch and reporting on the methods used to the ACCOBAMS Scientific Committee;
- reporting cetacean by-catch for different types of fisheries and ghost nets in order to provide the GFCM Task 1 (give some reference as to where this is specified) with the required information concerning cetacean by-catch;
- obtaining and reporting on local information on the nature of the depredation and its effects on fisheries.

- (b) To make every effort to reduce cetacean by-catch levels and/or incidences of depredation, in co-operation with affected fishing communities by:
- raising the awareness of fishermen about the need to mitigate the impact of fishing on cetacean populations;
 - effectively enforcing existing bans on relevant fishing gear in the ACCOBAMS area and report measures to the Secretariat through the appropriate online system;
 - developing and implementing specific national programmes, taking into consideration advice from the ACCOBAMS Scientific Committee, with (1) defined management objectives for reducing cetacean by-catches and/or alleviating conflicts between cetaceans and fisheries or mariculture operations, (2) methods for monitoring and evaluating the success of the measures implemented in national programmes and (3) mechanisms for modifying national programmes if necessary after evaluation;
 - recognising that if use of acoustic mitigation devices for by-catch reduction (AMDb) or for depredation reduction (AMDd) are to form part of a national programme, great care must be given to undertaking and evaluating them using limited controlled in situ tests of effectiveness, in conjunction with the ACCOBAMS Scientific Committee, before widespread implementation is approved;
 - enhancing the capacity of fishermen to properly handle and release live cetaceans caught incidentally in their fishing gear.
2. *Invites* the Parties to take into consideration with respect to the testing and use of acoustic mitigation measures the study on “Testing and use of AMD for depredation mitigation”, presented in document ACCOBAMS-MOP4/2010/Doc21 as well the study on “Guidelines for technical measures to minimise cetacean-fishery conflicts in the Mediterranean and Black Sea” presented in Document ACCOBAMS-MOP4/2010/Inf39 and the “Protocol for data collection on bycatch and depredation in the ACCOBAMS Region” as presented in document ACCOBAMS-MOP4/2010/Doc22;
 3. *Also invites* non-Parties States to join the effort of the ACCOBAMS Parties in reducing cetacean mortality induced by fisheries activities in the Agreement area;
 4. *Takes note* of the “Review on the effectiveness of acoustic devices and depredation mitigation measures”, presented in document ACCOBAMS-MOP4/2010/Doc23;
 5. *Invites* the Agreement Secretariat and the Scientific Committee to pursue the collaboration with relevant Organizations and Bodies to consider further the relations between prey depletion and increasing interactions between cetaceans and fishing activities, proposing remedial solutions where possible;
 6. *Takes note of* the “Technical specifications and conditions of use of acoustic deterrent devices” appearing in Annex to this Resolution;
 7. *Decides* that the present Resolution replaces Resolution 3.12.

ANNEX

Technical specifications and conditions of use of acoustic deterrent devices

Only acoustic deterrent devices that conform one of the following sets of signal and implementation characteristics, could be authorised by the Parties to ACCOBAMS²¹

	Set 1	Set 2
Signal characteristics		
Signal synthesis	Digital	Analogue
Tonal/wide band	Wide band/tonal	Tonal
Source levels (max - min) re 1 mPa@1m	145 dB	130 -150 dB
Fundamental frequency	(a) 20 - 160 KHz wide band sweeps (b) 10 kHz tonal	10 kHz
High-frequency harmonics	Yes	Yes
Pulse duration (nominal)	300 ms	300 ms
Interpulse interval	(a) 4 - 30 seconds randomised; (b) 4 seconds	4 seconds
Implementation characteristics		
Maximum spacing between two Acoustic deterrent devices along nets	200 m, with one acoustic device fixed at each end of the net (or combination of nets attached together)	100 m, with one acoustic device fixed at each end of the net (or combination of nets attached together)

Table taken from the Annex II of the EU regulation No. 812/2004

²¹ Parties may authorise the use of acoustic deterrent devices which do not conform these technical specifications only if their effect on the reduction of incidental catches of cetaceans has been sufficiently documented and evaluated positively by the Scientific Committee of ACCOBAMS.

RESOLUTION 4.10

SHIP STRIKES ON LARGE CETACEANS IN THE MEDITERRANEAN SEA

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee,

Recalling the Resolution 8.22 of the Meeting of the Parties of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) on Human-Induced Impacts on Cetaceans, which also addresses ship strikes, and under which a CMS Programme of Work for Cetaceans is under development,

Conscious that ship strikes are a concern for many populations of cetaceans listed on the Appendix of CMS and that the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) is also concerned with this issue,

Taking note of the “Guidance document for minimizing the risk of ship strikes with cetaceans²²” (ACCOBAMS-MOP4/2010/Inf41) of the International Maritime Organization (IMO),

Aware that cetaceans, in particular large species such as fin and sperm whales, are threatened by impacts with ships,

Also aware that the speed, rather than the shape or displacement, of vessels is the most significant factor in ship strikes,

Recognizing that the number of vessels will increase substantially in the near future,

Welcoming the collaboration with the International Maritime Organization (IMO),

Stressing that the broadest application of REPCET is of particular importance in this context,

1. *Urges* Parties

- to enhance involvement of the competent authorities in facilitating exchange of information between scientists and shipping companies;
- to support the ACCOBAMS Survey Initiative²³, since such effort will provide detailed information on large cetaceans’ abundance and distribution throughout the Mediterranean, identifying high risk areas for cetaceans and ship strikes;
- to allow access to ship traffic data to relate traffic information to cetacean presence thus allowing identification of high risk areas for ship strike;
- to extend to the Agreement area the REPCET programme tested in the PELAGOS area with some shipping companies;
- to take note of the recommendations and the work plan from the joint IWC/ACCOBAMS Workshop on reducing the risk of collisions between vessels and cetaceans the Mediterranean area being a key case study region discussed during the workshop, as annexed to the present Resolution;

2. *Encourages* Parties to continue to collect information on non-lethal ship strikes through photo-identification studies;

3. *Recommends* Parties to support studies that elucidate migration/movement patterns of sperm and fin whales throughout the ACCOBAMS area and report the results to the ACCOBAMS and IWC

²² Original reference : Ref. T5/1.01 MEPC.1/Circ.674

²³ Comprehensive cetacean population estimates and distribution in ACCOBAMS area

Scientific Committees. This can be achieved through photo-identification studies along with telemetry and genetic studies;

4. *Invites* Parties, with the advice of the Scientific Committee,
 - to follow and support Recommendations adopted by international bodies, such as IMO or the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC);
 - to prepare and present joint documents to IMO–MEPC;
 - to consider adapting systems, such as the Mandatory Ship Reporting System or the establishment of Particularly Sensitive Sea Areas (PSSAs), under the IMO framework;
 - to make the reporting of ship strikes mandatory and to fill the relevant databases that have been developed regionally and within the International Whaling Commission and transmit the report to the relevant authorities;
5. *Requests* Parties, ,
 - to consider ship strikes with cetaceans as a complementary topic for training watchmen and crew on deck;
 - to provide for detailed necropsies following dedicated protocols to assess the cause of death for stranded large cetaceans;
 - to ask the Secretariat to assist them in performing these tasks;
6. *Instructs* the Agreement Secretariat to investigate the most appropriate ways of:
 - raising cetacean issues with the International Maritime Organization (IMO) and the Regional Marine Pollution Emergency Response Centre (REMPEC) and obtaining relevant information from them
 - liaising with the Ship Strike Working Group of the International Whaling Commission (IWC);
 - liaising with the Secretariat of IWC, and associated scientific bodies, to provide a complementary ACCOBAMS database of ship collisions, that is directly linked with and in accord with the global IWC database;
 - liaising with the Pelagos Secretariat to prepare joint actions and pilot measures for using the Pelagos Sanctuary as a model and testing ground for mitigation measures;
 - collaborating closely with the joint CMS/ASCOBANS Secretariat as well as the scientific bodies of the two Agreements to facilitate full exchange of information and, where appropriate, joint projects/initiatives;
 - encouraging collaboration with States non-Parties;
 - facilitating collaborations among Countries for specific issues, such as exchange of information on traffic and ship strike issues, in targeted areas, such as between Spain and Morocco;
 - enhancing cooperation with companies in ship strikes mitigation;
 - taking into consideration activities developed by other relevant organisations.
7. *Mandates* the Scientific Committee:
 - to use the Strait of Gibraltar and the Pelagos Sanctuary as a model and testing ground for effectiveness of applied mitigation measures;
 - to identify areas with high shipping density and assess for these areas the potential risks of collision with cetaceans;
8. *Decides* that the present Resolution replaces Resolution 3.14.

Excerpt of the “Report of the Joint IWC-ACCOBAMS Workshop on Reducing Risk of Collisions between Vessels and Cetaceans”²⁴, September 2010, Beaulieu (France)

(...)

8. RECOMMENDATIONS

All of the recommendations in the report are important. However, here a number are highlighted.

8.1 Priority species/populations/areas

Several species of whales are at risk of ship strikes within the geographical area examined by the Workshop including fin, sperm and other deep diving species. The Workshop recognised that gaps in data exist for both whale distribution and abundance, and also for shipping data. This lack of data prevented a full assessment of the conservation implications of ship strikes for both species. Nonetheless the Workshop **recommended** three areas as priorities for collecting data to allow improved risk assessments of ship strikes:

(1) **The Strait of Gibraltar.** The Straits carry some of the highest traffic densities in the world and are a region of known importance for concentrations of whales with a number of demonstrated cases of ship strikes.

(2) **The Pelagos Sanctuary.** Fin and sperm whale strikes have regularly been reported from the areas within and around the Sanctuary and the commitment of the range states provides a platform for the introduction of mitigation measures.

(3) **The area south west of the island of Crete.** Localised studies of sperm whales in the Mediterranean suggest that distribution is highly concentrated within limited areas with low densities elsewhere. Long-term studies to the SW of Crete have suggested that this is a consistent area of high concentrations of sperm whales where ship strike mortalities are known to have occurred. The density of shipping also suggests this may be a high risk area. This area is suggested as a focus for further investigation to ensure sufficient data are gathered to determine whether minor routing changes to shipping could achieve a significant risk reduction. Although the conservation implications from ship strikes at a population level cannot be determined without further abundance data, studies to determine effective mitigation strategies could allow these to be implemented rapidly if new data on abundance indicated a serious conservation problem.

(4) **The area around the Balearic Islands** and the main shipping routes radiating from Ibiza, Mallorca and Menorca towards the Gulf of Lyons, Valencia and Alicante constitute one of the top high risk areas for interactions between shipping, and especially fast ferry lines and whales. Studies conducted by Alnitak (e.g. (Cañadas *et al.*, 2000; Cañadas *et al.*, 2005; Canadas *et al.*, 1999) highlight the relevance of the waters around these islands for cetaceans and particularly sperm whales and fin whales. Reports of collisions in all three islands and the intensity of ferry traffic clearly highlight the need for an intensified monitoring effort. In the context of the LIFE project INDEMARES, Spain has been conducting pilot monitoring studies using AIS data.

(5) **The area between Almeria and Nador at the eastern side of the Alborán Sea** constitutes one the main cetacean hotspots in Europe and the Mediterranean, both in terms of diversity of species as for the abundance of priority species currently more vulnerable (Cañadas *et al.*, 2005). Maritime traffic in this region is also extraordinarily complex and new ferry and fast ferry lines have raised concern over the increased risk of collision with whales. For experimenting new technological measures to mitigate risk this site is of special interest given the positive momentum of cooperation between researchers, relevant authorities and the shipping sector as a result of the reconfiguration of

²⁴ Complete report available at : <http://iwcoffice.org/meetings/shipstrikes10.htm>

the Traffic Separation Scheme of Cabo de Gata and the Notices to Mariners in the Strait of Gibraltar (Tejedor *et al.*, 2008). This task is currently being initiated in the context of the EC LIFE+ Nature project INDEMARES, coordinated by Spanish Ministry of the Environment, Rural and maritime Affairs (Fundación Biodiversidad).

(6) **The Canary Islands**, the Workshop reviewed data (see IWC/S10/SSW5.3) which indicated that deep diving species including sperm whales, pygmy sperm whales, pilot whales and beaked whales are the principal species affected by ship strikes (Carrillo and Ritter, 2008; Ritter, 2007). The Workshop further **recommended** that these populations should be considered as candidates for the development of a conservation management plan or plans to address the risk of ship strike, following the guidance provided in Donovan *et al.* (2008) and IWC/62/Rep. 4. The Workshop reviewed the limited current survey data and **recommended** that obtaining accurate estimates of abundance and distribution for these populations was a priority. Specific priority areas with respect to ship strikes were recognised as being the channel between Tenerife and La Gomera, the channel between Tenerife and Gran Canaria, the strait between Lanzarote and Fuerteventura (see Ritter, 2007, for details).

8.1.1 Recommendations at scientific level

The Workshop recognised the need to obtain data on distribution, abundance and population structure of cetaceans in the Mediterranean Sea and Canary Islands in order to be able to evaluate the conservation implications of ship strikes on mortality²⁵. Accordingly the Workshop re-iterated its earlier **recommendation** (Item 5.4) that a consolidated and concerted effort be made, especially by Parties to ACCOBAMS, to obtain the necessary resources to ensure that the previously endorsed basin wide survey in ACCOBAMS waters is undertaken by the summer of 2012.

The Workshop **recommended** that additional data collection and risk assessments be conducted for the six priority areas named above (Item 8.1). It recognised that it may be more difficult to obtain the necessary abundance estimates around the Canary Islands as the population structure and geographical extent of these populations are poorly known. However, localised ship strikes may be of conservation significance to local populations, and surveys are needed to fill in current data gaps in the priority areas identified above (Item 5.4).

8.1.2 Conservation measures

As noted above, the lack of the necessary data on cetaceans and vessels along with the lack of agreed conservation objectives, means that it is not possible in most cases to carry out a full risk assessment, especially within the ACCOBAMS region. That being said, the available data do suggest certain priority areas where it may be prudent to instigate mitigation measures and a monitoring programme. For the Strait of Gibraltar, the Workshop reviewed the range of mitigation measures available and concluded that the most efficient option would be to reduce speed given the limited options for re-routing shipping traffic. However the Workshop also noted the practical difficulties that some vessels will encounter in transiting the straits at reduced speeds.

For the Pelagos Sanctuary, the Workshop noted that preparations are being made to submit the designation of the Sanctuary as a Particularly Sensitive Sea Area (PSSA) under the IMO. The Workshop **endorsed** this process and recognised that this would need to be accompanied by specific measures to reduce ship strikes. The Workshop noted that several measures, including re-routing and speed reductions measures may be beneficial once a thorough analysis of the newly available data had been completed (e.g. the Italian aerial survey programme), **stressing** the need for a carefully specified monitoring programme.

For the area southwest of Crete it was noted that this is a turning point for long distance traffic transiting the Mediterranean. The Workshop **recommended** that a full analysis of the available shipping and cetacean data is undertaken (and additional monitoring carried out including the basin wide survey) to confirm whether a small change in routing to avoid an apparent hotspot for sperm whales would be beneficial; this would add only a minor additional distance to the overall transit journey.

²⁵ Several documents have been submitted to the IWC, including IWC/61/CC16, Carrillo and Ritter (2008) and Ritter (2007).

For the Canary Islands, the Workshop **recommended** the establishment of dedicated observers on fast and high speed ferries as well as according training and education efforts for observers and vessel crews (see Item 7.4). The need for speed reduction was discussed, and speed restrictions (e.g. to ≤ 10 knots) within existing SACs (Special Areas of Conservation) or identified small scale high risk areas (see map in Ritter, 2007) were **recommended** (see Item 7.2).

Furthermore, although re-routing might not be feasible in certain areas, it was **recommended** that approaches like route switching from different ports or other forms of experimental re-routing away from areas with high cetacean concentration should be conducted. Examples would be the current ferry transects from Tenerife to La Palma, La Gomera and Gran Canaria, respectively.

In light of the fact that new inter-island ferry connections are planned, the Workshop suggested that the adoption of the mitigation measures mentioned above, should be preconditions for operation.

The Workshop recognised that increased training measures for mariners, including expansion of the maritime training academy ship strike reduction training module²⁶ whilst not being a mitigation measure in its own right, nonetheless provided valuable opportunities to assist in the implementation of mitigation measures in the future.

8.1.3 Reporting

The Workshop discussed methods to improve reporting of ship strikes. These were: (1) strengthening of existing strandings networks and (2) encouraging reporting of strikes to the IWC database. The Workshop **reiterated** that to obtain the most extensive datasets, measures should be taken to make reporting of ship strikes mandatory and that contracting parties to IWC and ACCOBAMS establish mechanisms to improve and give priority to the reporting of ship strikes, ultimately to the IWC database.

In particular, the Workshop **recommended** that mandatory reporting (especially for ferries) in the Canary Islands should be established as soon as possible; the Spanish and Canary Islands Governments are competent authorities for maritime traffic and conservation measures respectively.

Additionally, the Workshop **recommended** that training schemes for mariners be expanded to include awareness of the need to report ship strikes, and that this be facilitated by making a link from the IMO environmental reporting section of its website direct to the IWC database.

In relation to strengthening of existing stranding networks, the Workshop proposed a series of actions in the two year work plan (Item 9) to increase their capacity and to introduce new necropsy techniques.

8.2 Other

The Workshop discussed methods to enhance action on the part of states to both improve reporting of strikes and adopt appropriate mitigation measures. There was a brief discussion on the relevance of various national and international laws to assist in this regard, and the Workshop **recommended** that the ACCOBAMS and IWC Secretariats request contracting parties to provide information on national legal statutes that may require Governments to take measures to reduce the risk of ships striking cetaceans.

9. PROPOSAL FOR A JOINT TWO-YEAR WORK PLAN TO ADDRESS SHIP STRIKE ISSUES

As decided by the IWC and ACCOBAMS, a two-year work plan needs to be developed to reduce collision risks in the ACCOBAMS area. Both organisations have been working for several years on the issue of ship strikes. The following four actions are proposed, subject to endorsement by ACCOBAMS and IWC Parties at their forthcoming meetings of contracting Parties.

²⁶ <http://www.ncro.noaa.gov/shipstrike/doc/mtr.html>

9.1 Development of a protocol for investigating and documenting ship strike injuries and mortalities in cetaceans

Recognizing the benefits of collaboration across national boundaries and the need for consistent documentation of human interactions with cetaceans, the Workshop **recommended** that the IWC and ACCOBAMS Scientific Committees establish a Joint Stranding investigation Working Group to carry out the actions listed below.

- (1) Review existing protocols (such as those used in the USA or UK) and tools for determining the presence or role of human interactions in the stranding of cetaceans, with particular emphasis on ship strikes, developing consistent terminology, diagnoses, reporting, and evidence collection.
- (2) Identify, develop, review, and validate tools, techniques and/or methods to address key issues relative to stranding investigations such as: (i) time from death; (ii) role of injury in the death; and (iii) time of injury related to death and to promote the use of such validated tools to give a systematic diagnostic approach to the problem of mortalities due to human interaction, with particular emphasis on ship strikes.
- (3) Develop a tiered approach that addresses the various experience levels of network participants and the multidisciplinary approach required for a definitive diagnosis. The developed methodology will be addressed to participants at different levels in the stranding networks (volunteers, biologists, veterinarians, pathologists).
- (4) Develop and implement training using these agreed approaches and/or protocols (initial emphasis should be given to specific priority ACCOBAMS areas).
- (5) Build capacity in range states with no strandings programmes to include human interaction detection, documentation and reporting.
- (6) Plan and hold a range-wide stranding coordination meeting for ACCOBAMS members. This type of regional cooperation should become a model for other agreements between IWC and regional conservation bodies that require evaluation of human impacts on cetaceans.

9.2 Mediterranean basin wide survey in the summer of 2012

Given the essential need for baseline data to assess potential effects of ship strikes and other anthropogenic threats to cetaceans, a consolidated and concerted effort must be made, especially by Parties to ACCOBAMS, to obtain the necessary resources to ensure that the previously endorsed basin wide survey in ACCOBAMS waters is undertaken by the summer of 2012. The IWC Scientific Committee will continue to supply scientific support.

9.3 Improved reporting to the IWC global ship strike database

Given the identified need for ship strike data worldwide to be able to assess potential conservation problems, a strong commitment should be given by IWC and ACCOBAMS Parties to actively encourage reporting of ship strikes to the IWC global database. In this regard, the Workshop also **recommended** that efforts be made to encourage IMO member states to make it mandatory to report ship strikes of cetaceans by vessels in their waters or under their flags. In addition, the Workshop **recommended** that governments should facilitate and develop mechanisms to ensure reporting of ship strikes by non-merchant vessels to the IWC database. It was noted that the IMO has sections on its website related to databases on environmental issues. A link to the IWC database on the IMO site would facilitate reporting. The Workshop **recommended** that IWC Secretary approach the IMO to discuss links between the web sites for both reporting and information dissemination.

9.4 Development of appropriate modelling techniques to identify high priority areas

The IWC and ACCOBAMS should obtain funding and organise a workshop of experts in cetacean and shipping distribution to agree on appropriate analytical and modelling techniques to facilitate the identification of potential ‘hotspots’ for more detailed future consideration.

9.5 Review of progress

The Workshop commends its recommendations to the IWC and ACCOBAMS for endorsement. Those organisations should develop a reporting mechanism to review progress on the implementation of the endorsed recommendations in a timely fashion.

(...)

RESOLUTION 4.11

POPULATION STRUCTURE STUDIES

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee, as well as the Work Programme 2011-2013, as adopted by Resolution 4.5,

Recalling that Article II, paragraph 3 (e), of the Agreement invites Parties to reinforce the collection and dissemination of information,

Recognising the importance of information on population structure highlighted by the project “ACCOBAMS Survey Initiative²⁷”,

Acknowledging that genetic methods represent an important tool among the techniques that are of value in determining units-to-serve, also considering that other methods, such as photo identification and satellite telemetry, provide valuable information on stock structure,

Stressing the relevance of genetic research to elaborate specific conservation measures, as confirmed by the decisions taken by the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as regards the Black Sea bottlenose dolphin (*Tursiops truncatus*),

1. *Urges* Parties to support projects and activities giving information on population structure to help in the definition of specific conservation measures;
2. *Request* the Scientific Committee:
 - to provide a comprehensive and detailed summary of information available for each species in the ACCOBAMS area in terms of material relevant for genetic analyses;
 - to develop a communications network involving the Tissues Banks and the National stranding networks of the ACCOBAMS Area, to facilitate the collection of new samples and to create a public database that is accessible on the ACCOBAMS website;
 - to collaborate with the ASCOBANS and IWC in order to coordinate efforts and to avoid duplication;
3. *Request* the Secretariat to report on this subject to the Fifth Meeting of the Parties.

²⁷ Comprehensive cetacean population estimates and distribution in ACCOBAMS area

RESOLUTION 4.12

COMPREHENSIVE CETACEAN POPULATION ESTIMATES AND DISTRIBUTION IN THE ACCOBAMS AREA

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee,

Acknowledging the fundamental importance of obtaining baseline population estimates and distributional information of cetaceans within the ACCOBAMS area as soon as possible,

Stressing that, without such information and a suitable monitoring programme, it will be impossible to *inter alia* determine whether ACCOBAMS is meeting its conservation objectives,

Recalling that such work represents the highest priority for conservation research within the ACCOBAMS area,

Aware that it is now essential that a comprehensive cetacean population estimates and distribution in ACCOBAMS area programme (so-called “ACCOBAMS Survey Initiative”) is rapidly implemented and in particular that the synoptic survey section of the initiative takes place within the triennium 2011-2013,

Thanking the French *Agence des Aires Marines Protégées* for its interest in taking a major coordinating and logistical role,

Expressing also its gratitude to the Italian and Spanish Governments for their financial support and counting also on other Parties that have accepted to provide in kind support,

Recalling that identification of the components of biological diversity is a fundamental priority, expressed *inter alia* in the Convention on Biological Diversity and that the Habitat Directive require to monitor the conservation status and the impact of human-induced mortality on populations of all cetacean species,

Recognizing also the importance given by the Marine Strategy Framework Directive (2008/56/EU) to qualitative descriptors for determining good environment status, including the maintenance of biological biodiversity,

Recalling Article II, paragraph 3, of the Agreement and its Conservation Plan, paragraph 2,

1. *Reaffirms* the commitment of the Parties to the “ACCOBAMS Survey Initiative” and to promoting it at the national and international levels;
2. *Encourages* other competent international Organisations to participate to the programme;
3. *Invites* Parties and Range States to ensure that any proposed national programmes on the study of abundance and distribution of cetaceans take account of, and ensure coherence with, the context of the ACCOBAMS Survey Initiative;
4. *Requests* Parties and invites Range States to:
 - (a) give priority to finding financial or in-kind support for the survey;
 - (b) appoint a national contact person, whose tasks will be to:
 - facilitate the process of obtaining permits for vessels and aircraft to operate in the waters under their jurisdiction;

- co-ordinate the acquisition of financial and/or in-kind support for the survey;
 - co-ordinate ongoing monitoring projects, and where appropriate, facilitate the development of new projects;
5. *Invites* the Scientific Committee to use the available information from recent aerial surveys to consider whether in the aerial component of the overall survey is warranted;
 6. *Decides* to ask the Scientific Committee for advice on the development and coordination of international and national research and monitoring programmes on cetacean population abundance and distribution in the ACCOBAMS area, in compliance with Article VII, paragraph 3, d), of the Agreement;
 7. *Entrusts* the Secretariat to work with the Scientific Committee and national contact persons to obtain the necessary funding for the “ACCOBAMS Survey Initiative”;
 8. *Decides* that the present Resolution replaces Resolutions 2.19 and 3.15.

RESOLUTION 4.13

CONSERVATION OF THE MEDITERRANEAN SHORT-BEAKED COMMON DOLPHIN

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee that has repeatedly drawn attention to the issue of conservation of the Mediterranean short-beaked common dolphin (*Delphinus delphis*),

Recalling that the Second Meeting of the Parties strongly welcomed the Conservation Plan for short-beaked common dolphins in the Mediterranean Sea²⁸ through Resolution 2.20 and that the Third Meeting of the Parties urged Parties to implement it through Resolution 3.17,

Convinced that the conservation of the Mediterranean short-beaked common dolphin continues to be a matter of grave concern,

Conscious that prey depletion is a factor in short-beaked common dolphin decline, as witnessed in the waters of Kalamos, Western Greece, and as suspected on the basis of research in the Gulf of Vera, Spain,

Recalling that the Mediterranean population of the short-beaked common dolphin is listed on Appendix I of CMS, thus requiring strict protection under the Convention,

Taking into account the International Union for the Conservation of Nature (IUCN) Red List of Threatened Animals, which in 2003 listed the Mediterranean short-beaked common dolphin population as endangered,

Taking also into account the 2006 ACCOBAMS-IUCN Workshop for the Establishment of a Red List of Cetaceans in ACCOBAMS area, that gave an endangered status to the Mediterranean short-beaked common dolphin,

1. *Recalls* to Parties that the implementation of the Conservation Plan for short-beaked common dolphins in the Mediterranean Sea is a high priority in the region;
2. *Thanks* the ACCOBAMS Partners, in particular Ocean Care and the Whale and Dolphin Conservation Society (WDCS), for the development of the “Urgent Call” submitted to the Greek Government and various other stakeholders, highlighting the urgent need to take immediate conservation action to prevent the further decline and local disappearance of short-beaked common dolphins;
3. *Urges* Parties and *invites* Range States, taking into account, in particular, the need for international coordination and adequate funding:
 - to give all the necessary importance to implementing existing laws for the sustainable management of fisheries resources as well as the existing regulations on by-catch, including, in the case of European Union Member States, Council Regulation 1967/2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea;
 - to sanction illegal fishing with appropriate penalties;
 - to implement the Conservation Plan for short-beaked common dolphins in the Mediterranean Sea, without prejudice to other international obligations;

²⁸ ACCOBAMS.MOP2/2004/Doc49

Available for download at: http://www.accobams.org/index.php?option=com_docman&task=cat_view&gid=36&Itemid=50

- to cooperate, with the support of the Secretariat, to ensure that the international concerns for short-beaked common dolphin be conveyed to the relevant European Union authorities, and appropriate strategies and funding opportunities be identified within the Marine Strategy Framework (European Union Directive 2008/56);
4. *Asks* the Agreement Secretariat to address States where there are critical habitats for Mediterranean short-beaked common dolphin to take immediate measures to ban fishing gear that cause decline and local disappearance of the species;
 5. *Asks* the Scientific Committee to create a small Steering Committee, in collaboration with the ACCOBAMS Partners:
 - to facilitate the implementation of the priority actions of the Conservation Plan for short-beaked common dolphins in the Mediterranean Sea and to coordinate with the relevant authorities;
 - to obtain information on distribution and abundance of the species, particularly in the southern and eastern portions of the Mediterranean basin;
 6. *Requests* the Agreement Secretariat:
 - to draw the attention of Parties to the problems posed by fishing activities;
 - to continue to participate at meetings relating to fisheries, such as those convened by the General Fisheries Commission for the Mediterranean (GFCM) or the International Commission for the Conservation of Atlantic Tunas (ICCAT), in order to provide information on the impact of fishing activities on Mediterranean short-beaked common dolphins and encourage collaborative efforts;
 - to organise a workshop for the collaboration between ACCOBAMS and GFCM, with possible collaborations with FAO regional projects, focusing on both ecological and operational interactions;
 - to encourage the Parties, as appropriate in collaboration with the CMS Secretariat, to implement conservation action, consistent with the decisions taken so far and the listing of Mediterranean short-beaked common dolphins in Appendix I of the CMS;
 - to promote appropriate collaboration with the Barcelona Convention and its Protocols work programmes in order to identify support and implement activities and projects of common interest for the protection of the Mediterranean short-beaked common dolphin;
 - in cooperation with the Scientific Committee and GFCM, to identify appropriate measures to be applied to ensure the conservation of Mediterranean short-beaked common dolphins in critical areas;
 7. *Decides* that the present Resolution replaces Resolutions 2.20 and 3.17.

RESOLUTION 4.14

CLIMATE CHANGE

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee,

Aware that global climate change is occurring and that some scenarios envisage rapid environmental changes to take place in particular in the marine ecosystems of the ACCOBAMS area,

Recalling the Decision IX/16 of the ninth Conference of the Parties to the Convention on Biological Diversity (CBD), the Resolution 9.7 of the Parties to the Convention on Migratory Species of Wild Animals (CMS) and the Resolution by the International Whaling Commission (IWC) on climate and other environmental changes and cetaceans (IWC/61/16),

Acknowledging the recent scientific data showing the impact of climate change on cetacean population in the Agreement area,

1. *Encourages* Parties to support the Scientific Committee activities and to take necessary actions to reduce anthropogenic contributions to climate change and marine acidification and to assist in the work described above;
2. *Requests* the Scientific Committee to continue to monitor the activities on this topic and to liaise with other Organisations, in particular the IWC and CMS;
3. *Charges* the Scientific Committee:
 - to progress on a targeted region-specific workshop on this issue within the next triennium, in cooperation with ACCOBAMS Partners, and other relevant Organisations;
 - to continue its works on studies of climate change and the impacts of other environmental changes on cetaceans as appropriate;
4. *Requests* the Scientific Committee to make contact with the intergovernmental panel on climate change in order to broaden its knowledge on this subject and also contribute with its experience and knowledge about this topic;
5. *Requests* the Agreement Secretariat to make contact with the Secretariat of the United Nations Framework Convention on climate change in order to improve the coordination between both Agreements;
6. *Mandates* the Agreement Secretariat to forward this Resolution and the works of the Scientific Committee and of the ACCOBAMS Partners to the relevant bodies and meetings.

RESOLUTION 4.15

MARINE PROTECTED AREAS OF IMPORTANCE FOR CETACEANS CONSERVATION²⁹

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee,

Aware that habitat degradation is one of the main causes of population decline for many cetacean species,

Concerned that, although some protected areas devoted to cetacean conservation have already been established in the ACCOBAMS area, many of the sites known to be particularly important for cetaceans still remain unprotected,

Recalling:

- Article II.1, in which Parties, in order to achieve and maintain a favourable conservation status for cetaceans shall co-operate to create and maintain a network of specially protected areas to conserve cetaceans,
- Article V.2 in which each Sub-regional Coordination Unit, in consultation with the Scientific Committee and the Agreement Secretariat, shall facilitate the preparation of a sub-regional directory of important areas for cetaceans,
- Article XI.1, according to which the provisions of ACCOBAMS shall not affect the right of any Party to maintain or adopt more stringent measures for the conservation of cetaceans and their habitats,
- The Conservation Plan (Annex 2 to the Agreement), which forms an integral part of the Agreement and requires the Parties to endeavour to establish and manage specially protected areas for cetaceans corresponding to the areas which serve as habitats of cetaceans and/or which provide important food resources for them. Such specially protected areas should be established within the framework of the appropriate international instruments,

Taking into account:

- the Decision of the CBD COP10 which encourages Parties and other relevant partner to cooperate, as appropriate, collectively or on a regional or subregional basis, to identify and adopt, according to their competence, appropriate measures for conservation and sustainable use in relation to ecologically or biologically significant areas, and in accordance with international law, including the United Nations Convention on the Law of the Sea, including by establishing representative networks of marine protected areas in accordance with international law and based on best scientific information available;
- the Decision of the CBD COP10 which emphasises the need to enhance efforts towards achieving the 2012 target of establishment of the representative network of marine protected areas in accordance with international law, including the United Nation Convention on the Law of the Sea;

Considering that ACCOBAMS is an appropriate tool for achieving an updated and revised strategic plan and targets for biodiversity for the period 2011- 2020 within the framework of the Convention on Biological Diversity,

²⁹ Secretariat's Note:

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the ACCOBAMS Secretariat concerning the extension or delimitation of maritime areas subject to the sovereignty or jurisdiction of any State.

Conscious that establishing a network of marine protected areas:

- constitutes an important element of maritime spatial planning and will help achieve and maintain a favourable conservation status for cetaceans,
- requires comprehensive inventories of sites that contain critical and/or important habitats for cetaceans,

Convinced that, particularly as regards highly migratory species, to be efficient these protected area must be of a sufficient extent and, as such, they require frequently transboundary cooperation,

Noting that inventories of sites of conservation interest have been initiated in other pertinent multilateral Instruments and Treaties, such as the standard data entry form system adopted in the context of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, the Emerald network instituted in the context of the European Council and the Natura 2000 network instituted by the European Union Habitats Directive,

Noting with satisfaction that some protected areas specially devoted to cetacean conservation in the ACCOBAMS area have already been established, such as the International Pelagos Sanctuary, the marine part of Kolkheti National Park in Georgia, and several coastal and marine sites proposed by European Union Countries to be included in the Natura 2000 network for the protection of *Tursiops truncatus* and *Phocoena phocoena* and that also others are in progress, such as the Cres-Lošinj marine protected area in Croatia,

Taking into account, the "Guidelines for the establishment and management of marine protected areas for cetaceans and the Criteria for the selection and format of proposals for marine protected areas for cetaceans" adopted by the Third Meeting of the Parties,

Congratulating Countries for their effort in establishing marine protected areas or developing inventories to identify sites of special importance for cetaceans,

1. *Confirms its encouragement* to the Parties to attain a significant reduction in the current rate of biodiversity loss and to establish a representative network of marine protected areas by 2012;
2. *Urges* Parties, in collaboration with the Sub-regional Coordination Units and involving their own scientific community, to share with the Secretariat and the Scientific Committee their draft plans for marine protected areas networks that include cetacean habitat as well as additional proposals for marine protected areas with cetacean habitat, in order to allow the Scientific Committee to give advice on the proposals across the entire region and to facilitate assessment of regional coverage and conservation needs;
3. *Invites* Parties to inventory habitats in the existing marine protected areas in the ACCOBAMS region for the presence of cetacean habitat;
4. *Urges* the States concerned, with the assistance of the Scientific Committee and the Secretariat to implement the development of high seas Specially Protected Areas of Mediterranean Importance as part of a regional network, working in conjunction with UNEP- MAP RAC/SPA;
5. *Encourages* the States concerned to promote the institution of the areas of special importance for cetaceans in the ACCOBAMS area, as listed in the Annex to this Resolution and to ensure their effective management;
6. *Urges* the Black Sea Parties to explore transboundary cooperation through the Black Sea Biodiversity and Landscape Conservation Protocol to the Bucharest Convention in order to establish protected areas devoted to cetaceans conservation;

7. *Renews* its recommendation that Parties:
 - give full consideration and, where appropriate, cooperate to the creation of marine protected areas for cetaceans in zones of special importance for cetaceans in the ACCOBAMS area, as presented in the Annex to this Resolution, within the framework of the relevant Organizations, inviting non-Parties to take a similar action, recalling that these areas have been recommended by the Scientific Committee;
 - also give full consideration to the criteria for the selection and format of proposal for marine protected areas for cetacean and the guidelines for the establishment and management of marine protected areas for cetaceans as adopted by the Third Meeting of the Parties;
8. *Charges* the Scientific Committee to further work on this matter and in particular to:
 - gather knowledge of the existence and location of sites containing important cetacean habitat in the Agreement area, in cooperation with the Sub-regional Coordination Units. Such sites may be located either within territorial waters or beyond them, or in both spaces, as appropriate; detailed investigations in such sites should be performed, to assess whether they fulfil the criteria mentioned above. In particular, such investigations should aim to:
 - describe cetacean presence and assess the existence of cetacean critical habitat;
 - detect the existence of threats to continued use of such habitat by the cetacean populations involved;
 - provide arguments in favour of the establishment of specially protected areas as relevant tools to counteract and minimise such threats and contribute effectively to the favourable conservation status of cetaceans in the region;
 - collaborate, with the concerned Riparian State(s) to prepare the scientific and socio-economic bases for formal proposals if the above investigations provide convincing arguments in favour of the establishment of a marine protected area in particular sites, and the criteria are fulfilled;
 - use, if appropriate, the Supplementary Conservation Grant Fund to facilitate these task;.
9. *Charges* the Secretariat to liaise with the "Pelagos" Agreement management body any other similar Organisations in the ACCOBAMS region in order to facilitate networking and synergies between them in particular at the scientific level;
10. *Invites* Parties to report to the Fifth Meeting of the Parties about progress made on implementing this Resolution;
11. *Decides* that the present Resolution replaces Resolution 2.14.

Areas of special importance for cetaceans in the ACCOBAMS area

Areas of special importance for the common dolphin and other cetaceans

- (1) Kalamos (Greece);
- (2) The Alborán Sea;
- (3) Waters surrounding the island of Ischia (south-eastern Tyrrhenian Sea, Italy);
- (4) Waters surrounding the island of Malta and south-eastern Sicily, Italy;
- (5) The eastern Ionian Sea and the Gulf of Corinth (Greece);
- (6) The Sazani Island – Karaburun Peninsula (Adriatic and Ionian Sea, Albania);
- (7) The Gulf of Saronikos and adjacent waters (Argo-Saronikos and southern Evvoikos Gulf, Greece);
- (8) Waters surrounding the northern Sporades (Greece);
- (9) The northern Aegean Sea (Greece); and
- (10) Waters surrounding the Dodecanese (Greece).

Areas of special importance for Black Sea cetaceans

- (11) The Kerch Strait for the bottlenose dolphin and the harbour porpoise (Russian Federation, Ukraine);
- (12) Cape Sarych to Cape Khersones for bottlenose and common dolphins and the harbour porpoise (Ukraine); and
- (13) Cape Anaklia to Sarp for the common dolphin and the harbour porpoise (Georgia).

Areas of special importance for the bottlenose dolphin

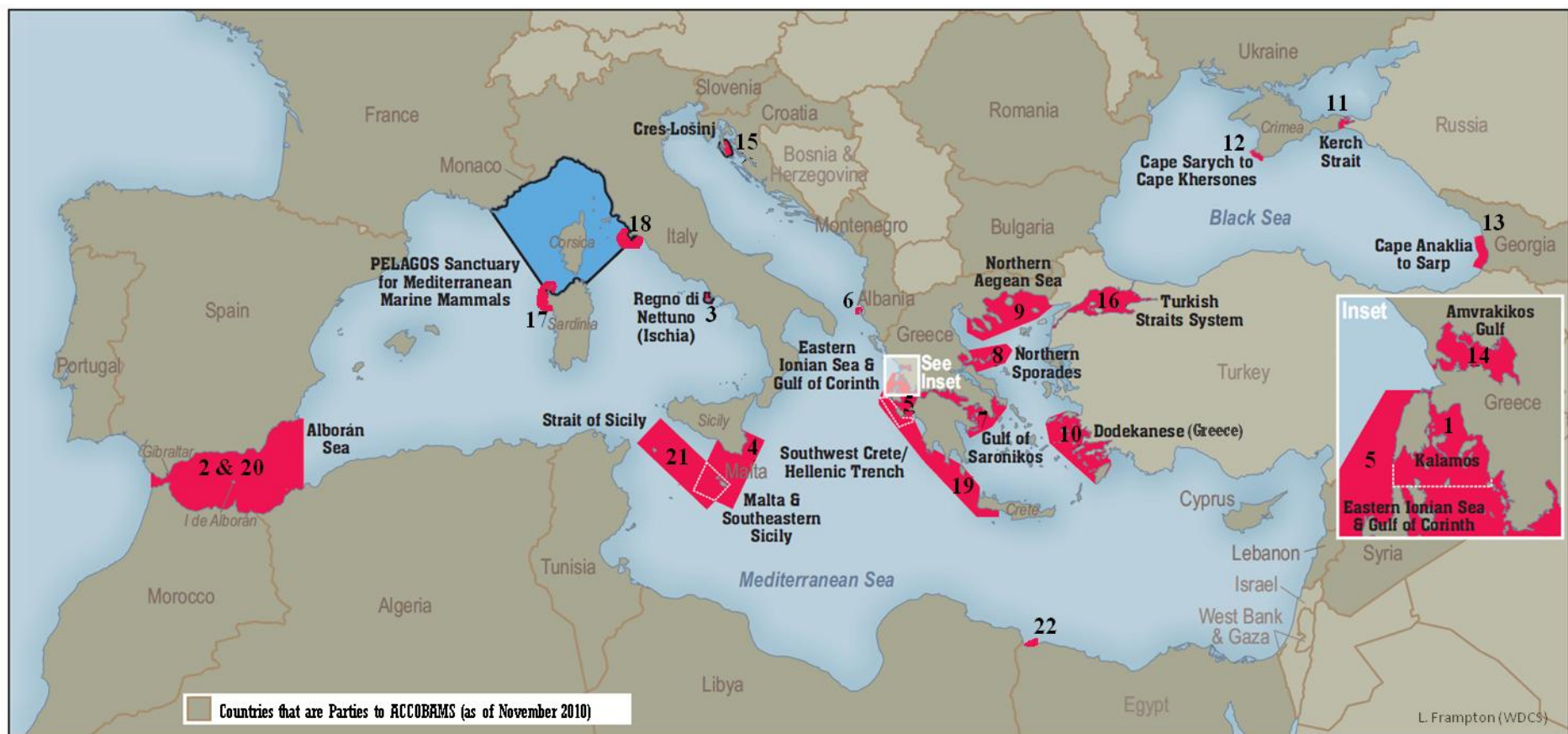
- (14) The Amvrakikos Gulf (northwestern Greece);
- (15) Waters along east coast of the Cres-Lošinj archipelago (designated as part of Croatian ecological network, proposed for protection as regional park, and recognized as a potential NATURA 2000 site) ;
- (16) The Turkish Straits system (also used by all Black Sea cetacean species);
- (17) North western area of Sardinia (Italy); and
- (18) Tuscany archipelago (Italy).

Area of special importance for the sperm whale

- (19) Southwest Crete and the Hellenic Trench (Greece).

Areas of special importance and diversity for various cetacean species

- (20) The Alborán Sea and the Strait of Gibraltar, critical habitat and migration corridor for large numbers of ten of the region's cetacean species, being the most diverse cetacean habitat in the ACCOBAMS region;
- (21) The Strait of Sicily for fin whales and common, bottlenose and striped dolphins; and
- (22) Sallum marine protected area (Egypt), sensitive marine ecosystems, including seagrass meadows, shallow and intermediate depth marine habitats.



Map of proposed Marine Protected Areas

RESOLUTION 4.16

GUIDELINES FOR A COORDINATED CETACEAN STRANDING RESPONSE

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the Recommendation of the Scientific Committee,

Recalling that the First Meeting of the Parties adopted the establishment of an “emergency task force for special mortality events” as a priority,

Recalling also Resolution 3.10 on “Guidelines to address the impact of anthropogenic noise”, Resolution 3.25 on “Cetacean live stranding” and Resolution 3.29 on “Guidelines for a coordinated cetacean stranding response”,

Recognizing that in recent years the ACCOBAMS area has been the scene of major cetacean mortality events, involving mass strandings over wide geographical areas, which have evoked great concern and have attracted considerable attention from the scientific community,

Convinced that in order to address new outbreaks of mortality events related to chemical, acoustic and biological pollution, as well as related to infectious agents and harmful algal blooms, affecting cetacean populations or their critical habitats, a task force should be constituted for marine mammal mortality and special events, made up of international experts,

1. *Encourages* Parties to take advantage of the two studies on “Guidelines concerning best practice and procedure for addressing cetacean mortality events related to chemical acoustic and biological pollution” and on “Guidelines for a coordinated cetacean stranding response during mortality events caused by infectious agents and harmful algal blooms”, presented in Annexes 1 and 2 to the present Resolution;
2. *Urges* the Scientific Committee, in collaboration with the Secretariat and the Sub-Regional Coordination Units:
 - to update the roster of contact persons and experts from the scientific and conservation communities and from governmental environment and natural resource agencies who could contribute in appropriate fields of expertise, such as pathology, epidemiology, toxicology, biology, ecology, acoustics, and to strengthen the two emergency task forces on:
 - (i) “mass mortality”, to address unusual mortality events, including epizootics and atypical mass strandings; and
 - (ii) “maritime disaster”, to address oil or chemical spills affecting critical habitats of cetaceans;
 - to use existing experience to prepare contingency plans for each task force, including descriptions of administrative procedures and modalities for interventions, the decision-making processes and the management of information, communication and relations with the media;
 - to update the studies and the contingency plans periodically on the basis of past experience and new techniques and technologies;
3. *Recommends* to the Parties and invites non-Party riparian States:
 - to inform the Secretariat as rapidly as possible about unusual mortality events affecting cetacean populations or their critical habitats, so that the emergency contingency plan can be initiated; and
 - to facilitate the organization of training programmes to enhance the effectiveness of the emergency task forces;

4. *Instructs* the Secretariat:
 - in consultation with the Scientific Committee and in collaboration with States and Sub-Regional Coordination Units, to contact the relevant experts in order to initiate the emergency contingency plan; and
 - to contact REMPEC and its homologous Black Sea organization under the Bucharest Convention framework in order to define a collaborative effort, as appropriate;
5. *Decides* that the present Resolution replaces Resolution 3.29.

Guidelines concerning best practice and procedure for addressing cetacean mortality events related to chemical, acoustic and biological pollution³⁰

1. GUIDELINES CONCERNING BEST PRACTICES AND PROCEDURES FOR ADDRESSING CETACEAN MORTALITY EVENTS RELATED TO CHEMICAL, ACOUSTIC AND BIOLOGICAL POLLUTION

1.1 Role of chemical, biological and acoustic pollution in cetacean mortalities and diseases

1.1.1 Introduction

1.1.2 Chemical pollution

- 1.1.2.1 Polychlorinated biphenyls
- 1.1.2.2 Brominated flame retardants
- 1.1.2.3 Polycyclic aromatic hydrocarbons
- 1.1.2.4 Perfluorinated compounds
- 1.1.2.5 Heavy metals

1.1.3 Biological pollution

1.1.4 Acoustic pollution

- 1.1.4.1 Anthropogenic sonar signals
- 1.1.4.2 Seismic surveys

1.2 Things to do in preparation for non-infectious unusual mortality events

1.2.1 Technical and administrative infrastructure needed in each Member State to best address emergencies caused by cetacean die-offs

1.2.2 Equipment list

- 1.2.2.1 Recording material
- 1.2.2.2 Necropsy
- 1.2.2.3 Specific sampling
- 1.2.2.4 Minimal equipment

1.3 Actions to take during non-infectious unusual mortality events

1.3.1 Protocols for collection, transportation and storage of specimens and samples

- 1.3.1.1 Protocols for sample collection
 - 1.3.1.1.1 Basic data protocol
 - 1.3.1.1.2 Specific sample collection
 - 1.3.1.1.2.1 Reproductive tract
 - 1.3.1.1.2.2 Biological pollution
 - 1.3.1.1.2.3 Chemical pollution
 - 1.3.1.1.2.4 Acoustic pollution

1.3.2 Protocols for transportation and storage

1.4 Activities to implement after stranding

1.4.1 Debriefing meeting

1.4.2 Communication

- 1.4.2.1 Local government, Armed Forces, Ministry of External Affairs, Ministry of Environment, Ministry of Health
- 1.4.2.2 Scientists
- 1.4.2.3 Press

1.4.3 Preliminary report

1.4.4 Follow-up

³⁰ Document prepared by: Dr Marie-Françoise Van Bresse, Cetacean Conservation Medicine Group, CMED/CEPEC, Cra 74, 139-33, Bogota, Colombia
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2. CONTINGENCY PLAN DRAFT

2.1 OSCB

2.1.1 Administrative support team

2.1.2 Scientists

2.1.3 Volunteers

2.2 Memoranda of understanding with collaborators

3. OUTLINE OF A PROGRAMME TO BUILD CAPACITY

4. ACKNOWLEDGMENTS

5. LITERATURE CITED

1. GUIDELINES CONCERNING BEST PRACTICES AND PROCEDURES FOR ADDRESSING CETACEAN MORTALITY EVENTS RELATED TO CHEMICAL, ACOUSTIC AND BIOLOGICAL POLLUTION

1.1 Role of chemical, biological and acoustic pollution in cetacean mortalities and diseases

1.1.1 Introduction

Since the detection of massive mortalities in seals (Osterhaus and Vedder, 1988) and dolphins (Domingo *et al.*, 1990) in the last twenty years, diseases of marine mammals have gained growing attention. Several micro- and macro-parasites that may negatively influence population growth have been identified (Van Bressem *et al.*, 2009) and the role of chemical pollutants in facilitating the emergence of morbillivirus epidemics has been thoroughly investigated (Aguilar and Borrel, 1994; Ross, 2002). Evidence suggests that polychlorinated biphenyls (PCBs) and related compounds might have contributed to the severity of morbillivirus outbreaks in seals and dolphins through toxicity at the level of the immune system (Aguilar and Borrel, 1994; Ross, 2002). More recently mid-frequency sonar operations induced cetacean mass-strandings in Europe, the US and Asia following decompression and gas and fat embolic syndrome (Jepson *et al.*, 2003; Fernandez *et al.*, 2005; Yang *et al.*, 2008). Biological pollution is also of increased concern because of the findings of terrestrial pathogens in marine mammals, of a significant increased fecal coliform count in harbour seals (*Phoca vitulina*) living near urban developments and of cutaneous disorders of miscellaneous aetiology in coastal odontocetes (Mos *et al.*, 2006; Van Bressem *et al.*, 2007; Miller *et al.*, 2008). Chemical and biological pollution will likely increase as a result of climate change (Boxall *et al.*, 2009).

Below are summarized information on chemical, biological and acoustic pollution in cetaceans and their role in cetacean diseases and mortalities. A special insight is given into the effects of pollution in marine mammals from European waters, especially the Mediterranean Sea that receives persistent, organic contaminants from the most contaminated regions of the world (Lelieveld *et al.*, 2002).

1.1.2. Chemical pollution

During the 20th century, the global environment became contaminated with several persistent, organic contaminants, commonly referred to as 'POPs'. Contamination has resulted from deliberate discharges and applications, as well as from the inadvertent formation of byproducts of incomplete combustion or industrial processes. Classes of these POPs include the organochlorine pesticides (*e.g.*, DDT, chlordane, toxaphene), the polyhalogenated-biphenyls (PHBs; including polychlorinated biphenyls PCBs), -dibenzo-*p*-dioxins (PHDDs; including polychlorinated dibenzo-*p*-dioxins PCDDs), -dibenzofurans (PHDFs; including polychlorinated dibenzofurans PCDFs), the polychlorinated naphthalenes (PCNs), carcinogenic polycyclic aromatic hydrocarbons (PAHs) and certain brominated flame-retardants. Several POPs have 'dioxin-like' properties, *i.e.* they bind to the Aryl hydrocarbon receptor (*AhR*) and initiate toxic responses. POPs are fat-soluble chemicals and are resistant to metabolic breakdown, factors that result in their bioaccumulation in aquatic food chains and persistence in the environment (see Ross, 2002; Tabuchi *et al.*, 2006).

Prey items from the freshwater and marine environment, and the terrestrial food chain are the main sources of these contaminants for marine mammals. POPs may accumulate in high concentrations, affect the reproductive, immune and endocrine systems and cause cancers (Reijnders, 1986; De Swart *et al.*, 1994; Ross *et al.*, 1996). High trophic level organisms are vulnerable to accumulating high concentrations of POPs, but considerable variation exists among species. For example, cetaceans appear to be able to metabolically eliminate many dioxin-like PCBs, PCDDs and PCDFs, but are prone to accumulating the nondioxin-like (or "globular") PCBs (Tanabe *et al.*, 1988; Kannan *et al.*, 1989).

Other problematic persistent chemical contaminants not included in the POP group include the organo-metallic compounds (chemical compounds that are used in anti-foulant paints) and methyl mercury (an organic form of mercury that is highly toxic) (reviewed in Ross and Birnbaum, 2003).

Mediterranean cetaceans are exposed to a cocktail of toxic compounds, some time at very high concentrations, as indicated by the data compiled here below.

1.1.2.1 Polychlorinated biphenyls

PCBs are widespread in the environment. They bio-accumulate in wildlife occupying high trophic levels as a consequence of their chemical characteristics and persistence. Pinnipeds and cetaceans accumulate high levels of PCBs in their blubber because they are at the top of the food chain, have large lipid stores, have a long life span and a limited capacity for metabolism and excretion of compounds such as *p,p* –DDT and PCBs (Aguilar *et al.*, 1999,2002; Ross *et al.*, 2000). PCBs are immunotoxic causing thymus atrophy and reduced T-cell function through a common mechanism of action mediated by the cytoplasmic *AhR* (Silkworth and Antrim, 1985; Kerkvliet *et al.*, 1990) that has been found in all mammals studied, including several marine mammal species (Hahn, 1998).

Studies carried out in seals that died during the 1988 seal epidemic and in the laboratory showed that: (1) ambient levels of environmental contaminants in the Baltic Sea herring were immunotoxic to harbor seals; (2) the pattern of effects implicated “dioxin-like” contaminants; (3) PCBs represented the major “dioxin-like” contaminant class; (4) many populations of free-ranging pinnipeds had PCB levels which exceeded those found to be immunotoxic in the captive study; and (5) environmental contaminants likely contributed to the severity of the 1988 PDV-associated mass mortality of harbor seals in northern Europe (Ross, 2002). Similarly, the striped dolphins (*Stenella coeruleoalba*) that died during the 1990-1992 epidemic had significantly higher loads of PCBs than the individuals that survived it. Given their well-known immunosuppressive effects, it was suggested that PCBs may have compromised the dolphin’s immune response and increased the severity of the outbreak (Aguilar and Borrell, 1994). Though the role of environmental contaminants in the 2007 morbillivirus epidemic in the Mediterranean remains inconclusive, recent pollutant data obtained through analyses of biopsies from apparently healthy striped dolphins in 1987-2002 suggested that PCB and DDT concentrations have gradually decreased (Aguilar and Borrell, 2005). Recent studies have demonstrated a significant association between chronic PCB exposure and infectious diseases in harbour porpoises (*Phocoena phocoena*) from the British Isles. Individuals that died in poor health had a significantly higher sum of the concentrations of 25 individual chlorobiphenyl congeners ($\Sigma 25\text{CBs}$) than those that perished by traumatic death (Jepson *et al.*, 2005a, Hall *et al.*, 2006).

Altogether these data suggest that contaminant-related immunosuppression likely contributed to the severity of the 1988 phocine distemper virus outbreak in harbour seals and of the 1990-1992 dolphin morbillivirus epidemic and that they may increase susceptibility of porpoises to infectious diseases.

1.1.2.2. Brominated flame retardants

Brominated flame retardants (BFRs) are a diverse group of compounds that have been extensively applied to combustible materials, such as plastics, wood, paper, and textiles to meet fire safety regulations (Alaee *et al.*, 2003; de Wit, 2002). Additive flame retardants, such as polybrominated diphenyl ethers (PBDEs) and hexabromocyclododecane (HBCD), are blended with the polymers and may leach out of the products (Alaee *et al.*, 2003). Being environmentally persistent compounds resistant to physical and biochemical degradation and with high production volumes, PBDEs and HBCD are among the most abundant BFRs detected in the environment (Alaee *et al.*, 2003). Initially the major commercial products, the penta- and octabromodiphenylether formulations were prohibited in all applications for the European Union Market in August 2004 (European Union 2003). The deca-mix product was also banned in Europe following a ruling by the European Court of Justice in 2008. HBCD and tetrabromobisphenol-A (TBBP-A) are however still widely used. PBDEs are similar in structure to thyroxine (T4) and triiodothyronine (T3) (Hamers *et al.*, 2006). Biologic effects of PBDEs in rodents are similar to those of PCBs, with increased risks for reproductive and endocrine disruption and neurodevelopmental problems (Zhou *et al.*, 2002; Siddiqi *et al.*, 2006; Stoker *et al.*, 2004; Kuriyama *et al.*, 2005; Ellis-Hutchings *et al.*, 2006; Lilienthal *et al.*, 2006; Talsness, 2008). BFRs negatively affect the reproductive health, immune system and development in exposed mammals

including pinnipeds and cetaceans (Law *et al.*, 2002, 2003, 2006a; Ross, 2005). They have been detected in cetaceans from Europe, the United States and Asia (Isobe *et al.*, 2007; Law *et al.*, 2008, Johnston-Restrepo *et al.*, 2008). Rising trends in the concentrations of HBCD in the blubber have been observed in harbour porpoises stranded or dying due to physical trauma along the coasts of British Isles in 1994–2003 (Law *et al.*, 2008). PBDEs have also been detected in Mediterranean Sea striped dolphins, bottlenose dolphins, Risso's dolphins, a long-finned pilot whale and a fin whale (Pettersson *et al.*, 2004). The impact of these contaminants on Mediterranean cetaceans is poorly known and should be further investigated (Fossi *et al.*, 2006).

1.1.2.3. Polycyclic aromatic hydrocarbons

Polycyclic aromatic hydrocarbons (PAHs) are a large class of molecules with condensed benzene rings. They are genotoxic and may induce cancers in humans and animals (Mastrangelo *et al.*, 1996; Hakami *et al.*, 2008; Topinka *et al.*, 2008). Their lipophilic nature allows them to cross biological membranes and accumulate in organisms (Marsili *et al.*, 2001). They are released in the environment by natural and man-made processes including combustion of wood and fossil fuels, oil plants and refineries and oil spills (Marsili *et al.*, 2001). It has been estimated that an input of 635.000 tonnes of petroleum derived-hydrocarbons contaminates the Mediterranean each year (UNEP, 1988). Low molecular weight PAHs tend to remain in solution and are available to marine organisms through ingestion and respiration. Their solubility augments as temperature increases. These fat-soluble contaminants build up in fat and are mobilized with fat reserves during illnesses, reproduction and lactation and food scarcity (Marsili *et al.*, 2001).

The contamination of the Saguenay River and immediate St. Lawrence estuary area by highly toxic PAHs such as the potent carcinogen benzo(a)pyrene (BaP) released massively by the local aluminum smelters over half a century and the exposure of belugas (*Delphinapterus leucas*) to these compounds were suggested as the most likely aetiology for a high prevalence of malignant tumours in belugas from the estuary (Ray *et al.*, 1991; Martineau *et al.*, 2002b). Total and carcinogenic PAHs were also detected in the subcutaneous blubber of fin whales (*Balaenoptera physalus*) and striped dolphins collected along the Italian coast of the Mediterranean Sea in 1993 and 1996, with naphthalene being the most ubiquitous compound (Marsili *et al.*, 2001).

1.1.2.4. Perfluorinated compounds

Perfluorinated compounds (PFCs) refers to a group of man-made chemicals and their precursors, manufactured for their properties of providing resistance to heat, oil, and stains to products. Belonging to this group are subgroups of PFCs - perfluorinated carboxylic acids (PFCA) that includes perfluorooctanoic acid (PFOA) used as a polymerization aid in the manufacture of fluorinated polymers and elastomers; and perfluorinated alkyl sulfonates that includes perfluorooctane sulfonate (PFOS). Fluorotelomer alcohols are precursors to PFCAs. They are transformed in biota or in the atmosphere to produce PFCAs such as the extremely stable PFOA. They are persistent organic pollutants and are not known to degrade by any natural processes. PFCs and fluorotelomer alcohols are widely used in consumer product applications including lubricants, stain repellents (clothing and carpeting), food preparation (greaseproof packaging and non-stick cookware- Teflon), pharmaceuticals, insecticides and fire-fighting foams. They are ubiquitous and several of them have adverse effects on neuroendocrine and reproductive systems, reduce neonatal survival, are carcinogenic and immunotoxic (DeWitt *et al.*, 2008, 2009a,b).

General exposure to PFOS may occur through ingestion of contaminated fish and water, or with dermal contact with PFOS containing products and direct occupational exposure at workplaces where it is manufactured. PFOA is found in the blood of the general human population (Hansen *et al.*, 2001; Nakayama *et al.*, 2005). Concentrations of PFOS in animals from relatively more populated and industrialized regions, such as the North American Great Lakes, Baltic Sea, and Mediterranean Sea, were greater than those in animals from remote marine locations (Giesy and Kannan, 2001). PFOS and PFOSA were found in cetaceans from around the globe including Japan, China, Brazil, the US and the Mediterranean (Kannan *et al.*, 2001, 2002; Hart *et al.*, 2008; Yeung *et al.*, 2009). Transplacental

transfer occurred at very high levels in at least two species (Dorneles *et al.*, 2008; Hart *et al.*, 2008). PFOS was the most predominant fluorochemical detected in the tissues of free-ranging Mediterranean odontocetes (short-beaked common dolphins *Delphinus delphis*, common bottlenose dolphins *Tursiops truncatus*, striped dolphins and long-finned pilot whales *Globicephala melas*) analyzed and in the blood of captive bottlenose dolphins fed mackerel and herrings caught in the Mediterranean and capelin from the North Sea. The greatest PFOS concentration was observed in the liver of a common dolphin (940 ng/g, wet wt) similar to those reported for dolphins from the Florida coast (Kannan *et al.*, 2002).

A recent study in bottlenose dolphin epidermal cell cultures suggests that exposure to PFOS significantly alters normal gene expression patterns and causes a cellular stress response, a decreased cell cycle progression and cellular proliferation and reduced protein translation (Mollenhauer *et al.*, 2009). Though no direct mortalities due to these compounds were reported their ubiquitous presence, high concentration in several species, maternal transfer and toxicity are cause for concern.

1.1.2.5. Heavy metals

Marine mammals accumulate high levels of mercury (Hg) and cadmium (Cd) (Wagemann and Muir, 1984; Aguilar *et al.*, 1999). The natural occurrence of these elements in seawater has involved detoxification capacities to support elevated exposure to toxic metals in their environment (reviewed in Das *et al.*, 2000). Cd can be stored over long periods in the kidneys of marine mammals (Lahaye *et al.*, 2006). In odontocetes the demethylation of organic Hg occurs in the liver and leads to the production of non-toxic granules of tiemannite that are not excreted (Martoja and Berry, 1980). Since these granules are not excreted, inorganic Hg would be stored in the liver for the whole life resulting in elevated concentrations of Hg in this organ (Nigro and Leonzio, 1996; Lahaye *et al.*, 2006). The immune system is susceptible to long-term mercury exposure. A reduced viability, metabolic activity as well as DNA and RNA synthesis were observed *in vitro* in stimulated lymphocytes from harbour seals following exposition to more than 1µM concentration of methylmercury (Das *et al.*, 2008). In addition to immunosuppression, metal pollutants may induce immunoenhancement leading to hypersensitivity and autoimmunity (Kakuschke and Prange, 2007).

High Hg concentrations in harbour porpoises from the German Waters of the North and Baltic Seas were significantly associated with prevalence of parasitic infections and pneumonia (Siebert *et al.*, 1999). The mean liver concentrations of Hg, Se, the Hg:Se molar ratio and Zn in harbor porpoises found dead along the coasts of the British Isles were significantly higher in those that died of infectious diseases than in those that died of a physical trauma (Bennett *et al.*, 2001). Hg and Cd were also detected in the liver and kidneys of Mediterranean bottlenose dolphins and striped dolphins, respectively, at high concentrations in some individuals (Lahaye *et al.*, 2006).

1.1.3. Biological pollution

Coastal ecosystems are continuously invaded by microorganisms from ballast waters, aquaculture waste and untreated run-off waters (Weber *et al.*, 1994; Rhodes *et al.*, 2000; Cabello, 2004, 2006; Drake *et al.*, 2007). The discharge of water, sediments and biofilms from ships' ballast water tanks is a prominent vector of aquatic invasive species (Ruiz *et al.*, 2000; Drake *et al.*, 2007). The use in aquaculture of a wide variety of antibiotics in large amounts, including non-biodegradable antibiotics useful in human medicine, ensures that these remain in the aquatic environment, exerting their selective pressure for long periods of time. This has resulted in the emergence of antibiotic-resistant bacteria in aquaculture environments (including the Mediterranean Sea), in the increase of antibiotic resistance in fish pathogens and in alterations of the bacterial flora both in sediments and in the water column (Rigos *et al.*, 2004; Cabello, 2006). Increasing water temperatures, a consequence of global warming, likely enhance the survival of some marine bacterial pathogens such as *Vibrio* spp. and increase exposure (Pascual *et al.*, 2002). An increased pathogen exposure due to biological pollution has been detected in harbour seals inhabiting urban sites along the coast of Washington State and British Columbia (Mos *et al.*, 2006). Biological contamination is also thought to have played a role in

the emergence of miscellaneous skin diseases observed in cetaceans from the Americas and the Indian Ocean (Van Bresse *et al.*, 2007; Flach *et al.*, 2008; Kiszka *et al.*, 2009).

1.1.4. Acoustic pollution

Cetaceans depend on sound to find food, communicate, detect predators and navigate. Escalating mechanized use of the sea, such as for shipping, military activities, oil and gas exploration and recreation, is increasing the amount of noise that humans introduce into the oceans, sometimes over very large distances. Anthropogenic underwater noise is a relatively novel environmental element for cetaceans and they may not be able to cope with it (Simmonds *et al.*, 2004; Wright *et al.*, 2007).

Powerful underwater sounds cause damage to the hearing systems, which can result in: (1) disorientation, (2) disconnection from school, pod or community, (3) internal bleeding; ruptured tissues, deafness and strandings as well as physiological harm. For example, exposure to an unexpected and unnatural loud noise could startle a deep-diving whale, causing it to bolt for the surface in a panic – such a rapid ascent could lead to bubbles forming in the tissues (a condition known in human divers as “the bends”) and then to a stranding (Weilgart, 2007).

Anthropogenic sound sources vary in space and time but may be grouped into general categories: (1) explosions, (2) large commercial ships, (3) airguns and other seismic exploration devices, (4) military sonars, (5) navigation and depth-finding sonars, (6) research sound sources, (7) acoustic harassment devices (AHDs) and pingers, (8) polar icebreakers, (9) offshore drilling and other industrial activity, and (10) small ships, boats, and personal watercraft (Hildbrand, 2005). The following paragraphs summarize data on military sonars and seismic explorations.

1.1.4.1. Anthropogenic sonar signals

Sonar is an acronym for Sound Navigation and Ranging. A wide range of sonar systems is in use for both civilian and military applications. They intentionally create acoustic energy to probe the ocean. They can be categorized as low-frequency (<1 kHz), mid-frequency (1–20 kHz), and high-frequency (> 20 kHz). Low-frequency active (LFA) sonars are used for broadscale surveillance. Mid-frequency tactical antisubmarine warfare (ASW) sonars are designed to detect submarines over several tens of kilometers. They are incorporated into the hulls of submarine-hunting surface vessels (Hildbrand, 2005). All active sonars emit a noise pulse or “ping”. These sound pulses bounce off a target (such as a submarine) and return as echoes that are detected by hydrophones.

Multiple mass strandings of beaked whales have been documented over the last decade following acoustic exposure to anthropogenic sounds, especially mid-frequency sonars, in Europe, the US and Asia (see Cox *et al.*, 2006 for a review). These strandings affected Cuvier’s beaked whale (*Ziphius cavirostris*), Blainville’s beaked whale (*Mesoplodon densirostris*), northern bottlenose whale *Hyperoodon ampullatus* and Gervais’ beaked whale *Mesoplodon europaeus* (see Cox *et al.*, 2006 and Simmonds *et al.*, 2004 for reviews). Affected whales had a condition called gas and fat embolic syndrome (GFES) characterized by extensive fat and gas bubble emboli, an ensemble of lesions most similar to decompression sickness (DCS) in human divers (Jepson *et al.*, 2003, 2005b; Fernandez *et al.*, 2005). The prevalent hypothesis is that GFES is induced through a precondition of tissue N₂ supersaturation coupled with a behavioural response (increased or decreased surface interval, ascent rate, or dive duration, leading to increased supersaturation, thereby increasing DCS risk) to acoustic exposure (Jepson *et al.*, 2003; Cox *et al.*, 2006). Other suggestions include an acoustic signal that could (1) activate existing stabilized bubble nuclei allowing them to grow by passive diffusion, and/or (2) drive activated bubbles to expand through rectified diffusion (Cox *et al.*, 2006). Each of these hypotheses assumed that these beaked whales live with significantly elevated blood and tissue tension N₂ levels, a fact supported by a recent mathematical model (Hooker *et al.*, 2009). In the Mediterranean strandings related to acoustic testing occurred in Greece in May 1996 (Frantzis, 1998).

1.1.4.2. Seismic surveys

Seismic airguns, used by the petroleum industry to detect pockets of oil or natural gas within the ocean floor and by researchers to locate sub-surface geological features, sound like underwater gun blasts and at times can be heard throughout entire ocean basins. Such impulsive sounds can be acutely harmful to nearby animals, but may also disturb (repeatedly startle) marine mammals to the point where they abandon important habitat (Nieukirk *et al.*, 2004; Simmonds *et al.*, 2004). The possibility that seismic noise can lead to strandings and/or death in marine mammals exists. Indeed, two Cuvier's beaked whales stranded in the Gulf of California in September 2002 coincidentally with seismic reflections (Hildebrand, 2005). During the 2002 breeding season, three seismic surveys conducted in the Southern portion of Abrolhos Bank, Bahia and Espírito Santo States, Brazil may have been responsible for an increase in the strandings rate of adult humpback whales (*Megaptera novaeangliae*) (Engel *et al.*, 2004). Hearing damage may also have indirectly killed humpback whales by compromising their navigation or sensory system (Todd *et al.*, 1996).

1.2 Things to do in preparation for non-infectious unusual mortality events

Marine mammal strandings attract a lot of public attention. Several dolphins may beach over weeks along thousands of kilometres. The degree of response of each country will depend on the existence of active stranding networks and marine mammal research groups as well as on its economic and logistic possibilities. Some countries may be able to provide most of the scientific, technical and administrative infrastructure needed to face a massive stranding while others may only offer a more reduced support or none at all. Collaboration between Member States will be a plus to effectively attend these events. The foundation of an expert Sub-Committee on Cetacean Unusual Mortalities (CEUM) within the ACCOBAMS Scientific Committee would optimise the answer to die-offs in the Agreement Zone. The CEUM Sub-Committee should ideally have the equipment described in 1.2.2.1-1.2.2.3. Nevertheless, much can be done with a more reduced infrastructure and equipment (1.2.2.4).

1.2.1. Technical and administrative infrastructure needed in each Member State to best address emergencies caused by cetacean die-offs

All Member States should at least have an on-scene coordinator body (OSCB) that would contact the CEUM Sub-Committee and any other relevant institution in the case of a suspected mass-mortality, send data to the Mediterranean Database of Cetacean Strandings (MEDACES-http://medaces.uv.es/home_eng.htm), deal with the public and media, ensure that the proper samples are taken, be responsible to obtain all necessary permits and deal with the carcasses. The OSCB should ideally depend on an existing stranding network, a natural science museum, a university or a ministry (Agriculture, Environment, Fisheries). It should collaborate with existing national entities related to marine mammal stranding such as active stranding networks and marine mammal research groups, wildlife conservation and rescue centres, aquaria and oceanaria, coastguards, park officials and local authorities. It should also establish Memoranda of Agreement (MOA) with the Navy that could be directly involved in sonar activities as well as with Oil and Gas Companies involved in seismic surveys. Ideally, the Navy MOA should permit collaboration between the Naval Forces and the OSCB during stranding events possibly related to sonar activities by allowing the use of their planes, helicopters, boats and/or, trucks for transport of stranding responders or animals or assistance with aerial surveys to discern the extent of such an event. The MOA with the Oil and Gas Companies should facilitate access to OSCB marine mammal observers to their boats. The OSCB should also launch an agreement with universities or medical institutions willing to offer free tomographic examination of the cetacean's head stranded during acoustic operations and with universities or research institutes interested to collaborate on chemical and biological contamination. The OSCB should have all necessary addresses and phone numbers in the case of an emergency as well as a precise protocol to collect samples for research.

The OSCB basic technical and administrative infrastructure should include:

- A stranding hotline telephone, dedicated to record any stranding occurring along the coast and operating 24 hours, seven days a week;
- A computer with permanent internet access;
- A printer;
- Portable telephones;
- A GPS to register stranding locations;
- Digital cameras;
- DVD reader;
- Educative material;
- A specialized marine mammal library;
- A website describing the activities of the OSCB as well as the names of the persons in charge and to be contacted in the event of a die-off;
- A database on cetacean mortality events
- A centrifuge to spin blood samples;
- A large fridge to keep samples at 4°C;
- A -80°C freezer to store samples for longer periods of time.

1.2.2. Equipment list

The optimal and complete equipment list to face stranding of live and dead animals has been presented in another ACCOBAMS document (Van Bressem, 2009). A checklist for recording material, necropsy and sampling for chemical, acoustic and biological pollution is provided here below.

1.2.2.1. Recording material

- Waterproof pencils;
- Metal clipboards, waterproof labels;
- Data forms, necropsy and collection protocol forms;
- Camera and film, extra batteries, video camera with additional memory cards;
- Tape measure (metric), at least 20 meters long (plastic and metallic);
- Hoist/crane, scales to record organ weights (0,1-10kg);

1.2.2.2. Necropsy

- Rope, at least 20 meters, blankets, stretchers to move carcasses, if necessary;
- Gloves (non-powdered, vinyl)
- Necropsy instruments: multiple stainless steel scalpel handles, stainless steel scalpel blades, stainless steel scissors, stainless steel forceps forceps and knives;
- Stainless steel surgical scissors;
- Knife sharpener, if possible in secure pack;
- Stainless steel flensing knives and hooks with appropriate sharpening tools, chain saw, axe, or reciprocating saw to cut through the cranium, chest or vertebrae;
- Hammers, chisels and handsaws;
- Retractors of various sizes and shapes. Self-retaining retractors with one or two movable arms mounted on a slide bar are most useful;
- Sterile instruments for culture collection;
- Whirlpacks;
- Jars, vials;
- Buckets;
- Flashlights with extra batteries and light bulbs;
- Containers (from vials to garbage cans) for sample collection, including ice chest, dry ice and, if possible, liquid nitrogen;
- Gas generator and flood lights with extra bulbs and gasoline;
- Lights;
- Portable or electric circular saw;
- Accessible water supply with hose;
- Buckets;
- Garbage bags, dish soap, paper towels for clean-up.

1.2.2.3. Specific sampling (chemical, biologic and acoustic pollution)

- 10% neutral buffered formalin;
- 2.5% buffered glutaraldehyde and/or 4% paraformaldehyde (for transmission and scanning electron microscopy);
- Dimethyl sulfoxide (DMSO)
- methylene chloride or methanol
- Isopropanol alcohol for contaminant sampling;
- clean and sealed glass containers for contaminant sampling
- Teflon bags for contaminant sampling (precleaned)
- Needles and syringes;
- Heparinized syringes;
- ethylenediaminetetraacetic acid- and heparin-containing tubes
- Culture vials for microbiology;
- Transport medium for microbiology and cell culture;
- Sterile swabs;
- Sterile urine cups;
- Glass slides;
- Serum tubes for blood and urine collection and gas burner to sear organ surfaces and sterilize scalpel blades;
- Coolers for samples refrigeration;
- Liquid nitrogen (if possible)

1.2.2.4. Minimal equipment

The following minimal equipment also permits to document the event and take valuable samples from freshly dead dolphins. In this case, all samples for toxicology should be large to allow further processing with stainless steel instruments.

- Recording material (waterproof pencils, metal clipboards, waterproof labels, data forms, necropsy and collection protocol forms);
- Camera;
- Mobile phone;
- Buckets;
- Water sprayer;
- Gloves, plastic boots and masks;
- Wide plastic sheets;
- Butcher knives;
- Butcher saws;
- Scalpel and scalpel blades;
- Vials and jars;
- Plastic bags (whirlpacks);
- Aluminium foils;
- Ropes.

1.3 Actions to take during non-infectious unusual mortality events

Several situations may occur during non-infectious unusual mortality events:

- Single stranded dolphins found dead or agonizing on different beaches;
- Several dead dolphins stranded together on the shore;
- Dead and live cetaceans stranded simultaneously on a beach.

In all cases, excellent coordination between the OSCB staff, the proposed CEUM Sub-Committee, other organizations specialised in these events and military institutions will be the key for a successful answer. The protocols given below are broadly based on Geraci and Lounsbury (2005). The second edition of '*Marine Mammal Ashore: A Field Guide for Strandings*' provides extensive information on how to deal with stranded, live or dead dolphins and whales and one or more copies should be in the library of all bodies involved with cetacean strandings. It would be wise to carry one copy to the field. Several papers cited in the present document are available online or upon request to the authors and would be worth to have in the library for more in-depth information.

1.3.1. Protocols for collection, transportation and storage of specimens and samples

1.3.1.1. Protocols for sample collection

Prior to sample collection, basic data should be collected in order to get crucial biological parameters. Recording the whale/dolphin condition is important to determine which samples should be given priority. Only the animals considered fresh or slightly decomposed are worth sampling for microbiology, toxicology and histopathology. All samples collected for microbiology and toxicology should be taken as aseptically as possible. The necropsy should be carried out by an experienced scientist. Notes should be taken by an assistant.

After collection of the basic data, the body should be opened, preferably on a wide plastic sheet or on a necropsy table. All instruments necessary for collecting biological samples such as bags, jars and vials with or without liquids should be clean, sterile and at hand before making the first incision. An assistant should label the containers and take notes and pictures.

Glass containers and Teflon bags are recommended for both organic compound and heavy metal analysis. Although glass containers should have a teflon-lined cap, foil-lined caps are acceptable for organic compound analysis. Sample jars should be cleaned with detergent, rinsed with tap water, soaked in 1:1 acid, rinsed with metal-free water, and rinsed again with high purity methylene chloride or methanol (PSEP 1989a,b). Containers should be kept capped and sealed after cleaning and prior to sample collection. Handling of containers should be kept to a minimum and the inside of the container should not be touched by anything other than the sample. Cross-contamination between tissues should be avoided. The scalpel and forceps should be cleaned after taking each sample. All tissue surfaces that come into contact with implements that were not cleaned (e.g., blubber when the body was opened) should be cut away with clean implements. The sample should not come into contact with the outside of the sampling container or the ground. When conditions are not ideal and sterility is not guaranteed, remove a large slice (300-400 grs of the required tissue as hygienically as possible. Record whether the knife is ferrous or stainless or metal steel. The large samples may be collected in aluminium foil, plastic bags or buckets. They should be sealed, labelled with a waterproof pen, placed in a cooler with ice and transported to the laboratory quickly.

Skin samples for cell culture should be collected in culture medium with antibiotic and anti-fungi and kept on ice. They should be processed within 24h. These skin samples should be collected only in the case of an existing agreement with a university or research institute.

Small (1 cm³) and representative samples of all organs and tissues from fresh cetaceans should be promptly fixed in 10% neutral buffered formalin solution for histopathology. The pancreas should be fixed as soon as possible, given the enhanced susceptibility of this organ to *post mortem* autolysis. The fixative containing the above tissue samples should be replaced with fresh formalin solution after 24 hours.

If there is suspicion of sonar-related stranding, if there is possibility to carry out tomography and if the specimens are fresh enough, the whole head should be collected and kept at on ice or in a 4°C till examination is carried out.

Samples for microbiology (skin lesions, blood, etc...) should be only taken from freshly dead cetaceans, collected in a sealed container previously cleaned and sterilized containing transport medium, identified and kept on ice or at 4°C. If laboratory tests are not planned within the next days, then freeze at -80°C.

1.3.1.1.1. Basic Data Protocol

- Investigator
 - Name:
 - telephone:
 - e-mail:
- Date:
- Location of stranding:
- Presence of other dead aquatic animals:
 - Species:
 - Number (estimation):
- Field number:
- Species³¹:
- Sex³²:
- Standard body length³³:
- Condition:
 - alive
 - fresh
 - early decomposition
 - advanced decomposition
 - mummified
- Fatness stage: fat, normal, thin, emaciated
- Indications for acoustic testing manoeuvres³⁴:
 - presence of naval exercises YES/NO
 - number of boats:
 - distance from coast:
 - extension of the area:
 - frequency used, date and time of the exercises:
 - characteristic of the vessel (vessel length, speed and heading):
 - identify key characteristics of sound (e.g. frequency, amplitude, energy, directional transmission pattern, use of arrays vs. single sources, etc.)
 - characteristics of environmental parameters that may influence sound propagation
 - behaviour of cetaceans before stranding:
 - * *continually circling or moving haphazardly in a tightly packed group – with or without a member occasionally breaking away and swimming towards the beach: YES/NO.*
 - * *abnormal respiration including increased or decreased rate or volume of breathing, abnormal content or odour: YES/NO*
 - * *presence of an individual or group of a species that has not historically been seen in a particular habitat, for example a pelagic species in a shallow bay when historic records indicate that it is a rare event: YES/NO.*
 - * *abnormal behaviour for that species, such as abnormal surfacing or swimming pattern, listing, and abnormal appearance: YES/NO*
 - presence of external abnormalities (especially bleeding from the eyes and ears): YES/NO
 - Description - pictures
- Indication for an algal bloom: YES/NO
- Evidence for human interactions: YES/NO
 - Net marks
 - Knife cuts

³¹ Species identification should be done by qualified persons. Ideally a picture of each specimen with its field number should be taken.

³² A picture of the genital region with field number will help to confirm the sex.

³³ Precise how it was taken (measurements should be parallel to the dolphin body, e.g. total length from snout to fluke notch).

³⁴ This checklist should be filled by an assistant or an experienced volunteer while the principal researcher carries on with the rest of the protocol.

- Wounds caused by vessel strikes
- Description-pictures

- Presence of skin lesions and wounds: YES/NO.
 - Description – pictures

- Collect samples in 10% neutral buffered formalin solution, DMSO and, if possible, keep some unfixed samples at –80°C
- Lactating: YES/NO

1.3.1.1.2 Specific sample collection³⁵

1.3.1.1.2.1. Reproductive tract

Ovaries and testes should always be examined, weighed, photographed and collected in 10% formalin (4% end concentration) to assess sexual maturity. The presence/absence of corpora albicantia and a corpus luteum should be recorded. Uterus should be opened to check for a foetus. The latter should be measured, weighed and sexed and, if small, conserved in formalin. Presence of sperm in the epididymis should be evaluated. A piece of at least 1 cm³ of both testes should be collected in formalin. The following questions may be answered in the field if time permits otherwise in the lab after addressing the mortality event.

- Ovaries:
 - presence of corpus albicans: NO, YES
 - presence of corpus luteum: YES, NO
- Foetus in uterus: YES, NO
 - sex
 - length
 - weight
- Testes: YES/NO
 - Right:
 - presence of seminal fluid
 - length
 - weight

³⁵ Basic and advanced data protocols are also available at the Medaces website: http://medaces.uv.es/home_eng.htm

- Left:
presence of seminal fluid
length
weight

1.3.1.1.2.2. Biological pollution

- Document, describe and take pictures of any change in organ gross morphology.

- Collect cutaneous lesions and subcutaneous abscesses in 10% formalin (histology) and in containers with cell culture medium (microbiology);
- Collect 5-10grs samples from the kidneys, testes, uterus, placenta and foetus (if available), mammary glands and spleen, keep on ice and refrigerate at 4°C or freeze at –80°C if long delays are unavoidable (> 24h) before further analysis. When no freezing facilities are available, smaller samples should be kept in DMSO. Preserve 1 cm³ samples of the same organs in formalin.
- Collect pleural and peritoneal fluids, urine and pus from abscesses and store half in aerobic containers and half in anaerobic containers. Keep on ice and then freeze at –80°C if a laboratory is not at hand.
- Extract 5-10 ml blood directly from the heart or major blood vessels after disinfecting the surface with alcohol and put on ice. You may attempt to centrifuge the blood and take the supernatant before freezing to avoid further hemolysis;
- Collect water around the site of stranding (preferably before massive arrival of people) in a sterile container, seal and put on ice before freezing;

1.3.1.1.2.3. Chemical pollution

The following organs are useful to evaluate the burden of contaminants in cetaceans.

- Blubber: take a large sample (300-400 grs minimum) of blubber about 10 cm caudal to the blowhole or directly below the dorsal fin on the mid-lateral line, place in an aluminium foil, then in an sealed plastic bag with field number and store on ice;
- Skin: take a 10 cm² sample of clean skin, preserve in a container with culture medium containing antibiotics and anti-fungi, seal, identify and keep on ice;
- Liver: slice 300-400 grs from the caudal end of the liver, place in an aluminium foil, then in an sealed plastic bag with field number and place on ice;
- Kidney: take 500 grs of from the caudal end of the left kidney, place in an aluminium foil, then in an sealed plastic bag with field number and place on ice;
- Blood: collect 50 ml blood in a tube, seal, identify and keep on ice;

1.3.1.1.2.4. Acoustic pollution

With suspect sonar-related strandings, arrangements should be made for computerized tomography (CT) of the entire head or ears and close evaluation of the larynx should be undertaken for evidence of submucosal hemorrhage. Samples of peribullar adipose tissue should also be collected for histopathology. Tissues from all organs should be collected, if feasible.

- Live animal
 - blood
 - diagnostics such as auditory evoked potential (AEP) computerized tomography (CT) or ultrasound
 - rehabilitation

- Dead animal
 - When possible collect head for diagnostic imaging including CT/MRI scans or ultrasound of entire head;
 - Collect tissues (1 cm³) from all organs and preserve in formalin 10%, with emphasis on the brain, peribullar adipose tissue, hypophysis, choroid plexus, cervical spinal cord, liver, lung, kidney, heart, lymph nodes, digestive tracts, reproductive tracts, and perilaryngeal tissues, including the trachea and thyroid and eyes. All sampled should be collected in separate bags (whirlpacks) and clearly identified.

1.3.2 Protocols for transportation and storage

Contact the local CITES Management Authority (http://www.cites.org/common/directy/e_directy.html) to know the requirements to obtain permits to export cetacean samples. Contact the laboratories that will analyse the samples and coordinate for sample dispatch according to the airline procedures. Make sure that somebody will collect the samples at their arrival and that the person in charge is not on holidays at the time you send the samples. Keep telephone and e-mail contact until you are assured that the samples arrived and were properly stored.

Microbiology: All fresh samples should be kept on ice or cold packs, away from the sun while waiting for further processing. Upon arrival in the laboratory, they should be kept at 4°C and immediately dispatched to the laboratory, if possible. If long delays are expected they should be frozen at –20°C or –80° C. Storage should be organized in a way that samples are easily found when the freezer is full. Records should be kept of any sample location.

Toxicology

Chemical analysis: samples en route to the analytical laboratory should be packed in dry ice. However, if delivery time is short (less than 6 hours, depending on ambient temperatures), then samples could be delivered in coolers filled with ice. All samples for toxicology should be stored in a freezer at –20°C or below until analysis. Storage time and temperature records should be recorded. The maximum holding times for tissues recommended by PSEP guidelines are 1 year for organics (with the exception of volatile organic compounds, which have a maximum holding time of 14 days), 28 days for mercury, and 2 years for all other metals. Samples held for longer periods may be suitable for analysis of some contaminants, but suitability should be evaluated based on the contaminants being tested and then described in a report presenting results for these samples.

Skin culture: skin samples to be used for cell culture should be maintained on cool packs and send as soon as possible to the laboratory. They should never be frozen nor left without ice.

Acoustic pollution

With suspect sonar related strandings, arrangements should be made for CT of the entire head or ears and close evaluation of the larynx should be undertaken for evidence of submucosal haemorrhage. Samples of peribullar adipose tissue should be collected for histopathology.

1.4 Activities to implement after stranding

1.4.1. Debriefing meeting

Organize a debriefing meeting with all the people involved in the stranding and ask them their opinion on the event, the number of cetaceans they counted and attended, the presence of other dead aquatic animals on the beach, if live dolphins and whales were observed in waters close to the beach where the event happened, if the response to the stranding was adequate in their opinion, what material was missing. Thank all volunteers for their help and distribute any new information material and stickers. Speak with fishermen, members of the military and local people and ask if they have observed the

occurrence of unusual species during the days preceding the stranding, if free-ranging cetaceans known to occur in the region exhibited an unusual behaviour, if military operations had taken place during the last days, or if there were reports of seismic surveys in neighbour waters.

1.4.2. Communication

1.4.2.1. Local government, Armed Forces, Ministry of External Affairs, Ministry of Environment and Ministry of Health

Call or write the local government, the Ministries of Health and Environment as well as the Navy and the Oil and Gas Companies if there are strong indications for strandings related to acoustic pollution.

1.4.2.2. Scientists

E-mail or call scientists that have signed a MOA. Ask for their comments and help. Send data to the Mediterranean Database of Cetacean Strandings.

(MEDACES- http://medaces.uv.es/home_eng.htm).

1.4.2.3. Press

Write a brief note on the event for the media. Alert the media and public for the possibility of more cetacean strandings on every beach and encourage them to report.

1.4.3. Preliminary report

Write an initial report as soon as possible. Points to summarize in the report should include the following (Geraci and Lounsbury, 2005):

- Date and location of the stranding
- Type of beach;
- Nature, timing, effectiveness of the initial response;
- Account of the scene as described by the team:
 - species involved and number of specimens per species,
 - pattern of stranding,
 - presence of other dead or sick aquatic animals,
 - presence of live cetaceans exhibiting an unusual behaviour in adjacent waters,
 - evidence for the use of mid-frequency sonar,
 - cetacean condition,
 - indication for an epidemic,
 - environmental conditions.
- Necropsy findings;
- Specimens collected, place where they are stored, condition for storage;
- Actions taken and reason for decisions:
 - intended response plan,
 - impediments to implementation,
 - eventual action.
- Additional information:
 - photographs, maps, drawings,
 - reports from independent groups (police, coastguards, stranding networks, rehabilitation facility, Navy, fishermen),
 - Things to be improved.

1.4.4. Follow-up

Ask for a follow-up of the analysis and prepare a manuscript on the findings together with all involved institutions.

2. CONTINGENCY PLAN DRAFT

Cetaceans from the Mediterranean harbour a cocktail of chemical, toxic pollutants, some likely to have increased the severity of disease epidemics. Mid-frequency sonar operations have caused the stranding of beaked whales in Greece (Frantzis, 1998). Biological contamination is of concern because of the release of untreated freshwater run-off, aquaculture, maritime traffic and discharge of ballast waters in Mediterranean waters. Thus, Member States should be ready for the eventuality of cetacean strandings, diseases and mortalities related to these agents. The development and strengthening of existing national and regional stranding networks will be key to properly address these events. Importantly, data on strandings along the coasts of the Black and Mediterranean Sea as well as the contiguous Atlantic waters should be sent to MEDACES (http://medaces.uv.es/home_eng.htm) set-up in 2001 to co-ordinate all national and regional efforts for riparian countries. The establishment of a CEUM Sub-Committee within the ACCOBAMS Scientific Committee would further improve answer to strandings by facilitating coordination between Member States and helping with infrastructure and capacity building. The foundation of CEUM Working Group that would communicate by e-mail would facilitate information diffusion. Memoranda of Agreement with the Naval Forces as well as with Oil and Gas Companies would improve answer to cetacean die-offs related to acoustic pollution.

2.1. OSCB

An efficient contingency plan will be based on the foundation of a national OSCB that will be responsible for the activities and decisions related to unusual mortality events as well as on timely relaying information on their occurrence to the Member States and to the suggested CEUM Sub-Committee. The easy and open communication between OSCBs will help determine when a die-off is underway, ensure a timely and adequate intervention and, ultimately, uncover the cause of the die-off and explore environmental factors that may have enhanced its severity. Minimal personal of an OSCB should be one scientist, preferably a marine mammal research veterinarian with good knowledge in the biology of cetaceans and of the different factors involved in cetacean strandings.

2.1.1. Administrative support team

At least one person should be in charge of the administration of the OSCB. His/her responsibilities should include:

- Coordination with local authorities;
- Coordination with the Naval Forces and Oil and Gas Companies;
- Contact with the authorities that will deliver CITES permits;
- Contact with the airlines that will transport the samples: ask for their specific requirements for the packaging and dispatch of biological materials;
- Communication with media and public;
- Development of education activities and material;
- Management of volunteers;
- Building of a website;
- Finance management.

2.1.2. Scientists

A biologist and a veterinarian, both ideally with experience with cetaceans, should be appointed by the OSCB. Their responsibility should include the following items:

- Develop a stranding network that can react quickly to cetacean mortality events;
- Develop protocols for attending strandings and for the collection of tissues for chemical, acoustic and biological pollution;

- Prepare the material necessary for attending a die-off (everything should be ready and at hand for instant leave);
- Provide field staff and build capacity;
- Recruit and manage volunteers;
- Timely intervention and incident control coordination: an educated decision on response level (equipment and personnel);
- Coordination with other similar networks within and outside the Member States;
- Adequate decision regarding the fate of live-stranded cetaceans (release, rehabilitation, euthanasia);
- Collection of biological data and pictures;
- Necropsy of dead cetaceans;
- Collection of samples;
- Contact with laboratories that will process the samples;
- Contact with research centres that could provide free CT examination;
- Prepare a protocol for packing and dispatching biological material;
- Send the samples;
- Carcass disposal in agreement with national regulation.

2.1.3. Volunteers

Volunteers should be recruited to help with strandings. They may have distinct backgrounds and personalities and should be given tasks according to their respective skills.

2.2. Memoranda of understanding with collaborators

Memoranda of understanding should be established with the Naval Forces, Oil and Gas companies as well as with universities, research/medical institutes and laboratories willing to help at the occasion of an outbreak of mortality. Laboratories (toxicology, microbiology and acoustic research) should be asked to send specific protocols for sampling, preserving and sending the samples. Ideally they should provide the vials, fluids and other material required for sampling. Otherwise they should specify the material needed for sampling and the firm where to buy it.

3. OUTLINE OF A PROGRAMME TO BUILD CAPACITY

Capacity building is a prerequisite to explore factors involved in a die-off. It should concern the staff of the OSCB, volunteers, coastguards and navy officials, fishermen and the general public (please see § 1.2.3.). The following programme outlines the steps that may be taken to realize this target.

- Organization of annual, national workshops on cetacean outbreaks of mortality for the staff of the OSCBs. National and international experts in the fields of toxicology, acoustic contamination and microbiology should ideally be invited to participate;
- Organization of training courses on cetacean strandings, on acoustic, chemical and biological contamination and sample collection for the staff of the nascent OSCBs. These training courses may take place at the OSCB, CEUM facilities or at the laboratory of a national stranding network;
- Organization of national meetings with other relevant bodies related to strandings (universities, coastguards, oceanaria, naval forces, fishermen, etc) and presentation of documents on cetacean mortality events;
- Acquire capacity building material (books, papers, reports, CDs, DVDs, protocols) from other stranding networks, universities, research groups, NGOs and scientists;
- Development of a library dedicated to marine mammal strandings, acoustic, biological and chemical contamination and epidemics;
- Communication with other OSCBs;
- Preparation of leaflets on the biology of cetaceans and the reasons of cetacean mortality events targeting the general public;

- Preparation of children booklets and posters on whales and dolphins and stranding events.

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5. LITERATURE CITED

- Aguilar A, Borrell A (1994) Abnormally high polychlorinated biphenyl levels in striped dolphins (*Stenella coeruleoalba*) affected by the 1990-1992 Mediterranean epizootic. *Sc Tot Environm* 154: 237-247.
- Aguilar A, Borrell A (2005) DDT and PCB reduction in the western Mediterranean in 1987–2002, as shown by levels in dolphins. *Mar Environ Res* 59:391–340.
- Aguilar A, Borrell A, Pastor T (1999). Biological factors affecting variability of persistent pollutant levels in cetaceans. In: Reijnders P, Aguilar A, Donovan GP (eds.), *Chemical Pollutants and Cetaceans*, J Cet Res Manag, special issue 1, pp 82-116.
- Aguilar A, Borrell A, Reijnders PJ (2002) Geographical and temporal variation in levels of organochlorine contaminants in marine mammals. *Mar Environ Res* 53:425-452.
- Alaee M, Arias P, Sjodin A, Bergman A (2003) An overview of commercially used brominated flame retardants, their applications, their use patterns in different countries/regions and possible modes of release. *Environ Internat* 29:683–689.
- Boxall AB, Hardy A, Beulke S, Boucard T, Burgin L, Falloon PD, Haygarth PM, Hutchinson T, Kovats RS, Leonardi G, Levy LS, Nichols G, Parsons SA, Potts L, Stone D, Topp E, Turley DB, Walsh K, Wellington EM, Williams RJ (2009) Impacts of climate change on indirect human exposure to pathogens and chemicals from agriculture. *Environ Health Perspect* 117: 508-514.
- Cabello FC (2004) Antibioticos y acuicultura en Chile: consecuencias para la salud humana y animal. *Rev Med Chile* 132: 1001-1006.
- Cabello FC (2006) Heavy use of prophylactic antibiotics in aquaculture: a growing problem for human and animal health and for the environment. *Environm Microb* 8: 1137-1144.
- Cox TM, Ragen TJ, Read AJ, Vos E, Baird RW, Balcomb K, Barlow J, Caldwell J, Cranford T, Crum L, D'Amico A, D'Spain GL, Fernandez A, Finneran J, Gentry RL, Gerth W, Gulland, F, Hildebrand J, Houser D, Hullar T, Jepson PD, Ketten DR, MacLeod CD, Miller P, Moore S, Mountain DC, Palka D, Ponganis P, Rommel S, Rowles T, Taylor B, Tyack P, Wartzok D, Gisiner R, Mead J, Benner L (2006) Understanding the impacts of anthropogenic sound on beaked whales. *J Cet Res Manag* 7: 177-187.
- Das K, Debacker V, Bouqueneau JM (2000) Metallothioneins in marine mammals *Cell Mol Biol* 46: 283-294.
- Das K, Siebert U, Gillet A, Dupont A, Di-Poi C, Fonfara S, Mazzucchelli G, De Pauw E, De Pauw-Gillet MC (2008) Mercury immune toxicity in harbour seals: links to in vitro toxicity. *Environ Health* 7:52.
- De Swart RL, Ross PS, Vedder LJ, Timmerman HH, Heisterkamp SH, Van Loveren H, Vos JG, Reijnders PJH, Osterhaus ADME (1994) Impairment of immune function in harbor seals (*Phoca vitulina*) feeding on fish from polluted waters. *Ambio*. 23:155-159.
- de Wit CA (2002) An overview of brominated flame retardants in the environment. *Chemosphere* 46: 583–623.
- DeWitt JC, Copeland CB, Strynar MJ, Luebke RW (2008) Perfluorooctanoic acid-induced immunomodulation in adult C57BL/6J or C57BL/6N female mice. *Environ Health Perspect* 116:644-650.
- DeWitt JC, Shnyra A, Badr MZ, Loveless SE, Hoban D, Frame SR, Cunard R, Anderson SE, Meade BJ, Peden-Adams MM, Luebke RW, Luster MI (2009a) Immunotoxicity of perfluorooctanoic

- acid and perfluorooctane sulfonate and the role of peroxisome proliferator-activated receptor alpha. *Crit Rev Toxicol* 39:76-94.
- DeWitt JC, Copeland CB, Luebke RW (2009b) Suppression of humoral immunity by perfluorooctanoic acid is independent of elevated serum corticosterone concentration in mice. *Toxicol Sci* 109:106-112.
- Domingo M, Ferrer L, Pumarola M, Marco A, Plana J, Kennedy S, McAlisky M, Rima BK (1990) Morbillivirus in dolphins. *Nature* 348: 21-21
- Dorneles PR, Lailson-Brito J, Azevedo AF, Meyer J, Vidal LG, Fragoso AB, Torres JP, Malm O, Blust R, Das K (2008) High accumulation of perfluorooctane sulfonate (PFOS) in marine tucuxi dolphins (*Sotalia guianensis*) from the Brazilian coast. *Environ Sci Technol* 42: 5368-5373.
- Drake L, Doblin MA, Dobbs FC (2007) Potential microbial bioinvasions via ships' ballast water, sediment, and biofilm. *Mar Poll Bull* 55: 333-341
- Ellis-Hutchings RG, Cherr GN, Hanna LA, Keen CL (2006) Polybrominated diphenyl ether (PBDE)-induced alterations in vitamin A and thyroid hormone concentrations in the rat during lactation and early postnatal development. *Toxicol Appl Pharmacol* 215: 135-145.
- Engel MH, Marcondes MCC, Martins CCA, Luna FO, Lima RP, Campos A (2004) Are seismic surveys responsible for cetacean strandings? An unusual mortality of adult humpback whales in Abrolhos Bank, northeastern coast of Brazil. Document SC/56/E28 presented to International Whaling Commission Scientific Committee Sorrento, Italy (unpublished). [Available from the Office of the Journal of Cetacean Research and Management.]
- European Union (2003) Directive 2003/11/EC of the European Parliament and of the Council of 6 February 2003. *Off J Eur Union* L42/45-46.
- Fernández A, Edwards JF, Rodriguez F, Espinosa de los Monteros A, Herraiz P, Castro P, Jaber JR, Martin V, Arbelo M (2005) 'Gas and fat embolic syndrome' involving a mass stranding of beaked whales (family Ziphiidae) exposed to anthropogenic sonar signals. *Vet Pathol* 42: 446-457.
- Flach L, Van Bressem M-F, Reyes JC, Echegaray M, Siciliano S, Santos M, Viddi F, Crespo E, Klaich J, Moreno I, Tavares M, Felix F, Van Waerebeek K (2008) Miscellaneous skin lesions of unknown aetiology in small cetaceans from South America. Paper SC/60/DW4 presented to the IWC Scientific Committee, May 2008 (unpublished) [Available from the Office of this Journal].
- Fossi MC, Marsili L, Casini S, Bucalossi D (2006) Development of new-tools to investigate toxicological hazard due to endocrine disruptor organochlorines and emerging contaminants in Mediterranean cetaceans. *Mar Environ Res* 62 Suppl:S200-204.
- Frantz A (1998) Does acoustic testing strand whales? *Nature* 392(6671):29.
- Geraci JR, Lounsbury VJ (1993) Marine Mammals Ashore – A Field Guide For Strandings. Texas A&M Sea Grant Publication, Galveston, Texas, USA. i-xi+305pp.
- Giesy JP, Kannan K (2001) Global distribution of perfluorooctane sulfonate in wildlife. *Environ Sci Technol* 35: 1339-1342.
- Hakami R, Mohtadinia J, Etemadi A, Kamangar F, Nemati M, Pourshams A, Islami F, Nasrollahzadeh D, Saberi-Firooz M, Birkett N, Boffetta P, Malekzadeh R (2008) Dietary intake of benzo(a)pyrene and risk of esophageal cancer in north of Iran. *Nutr Cancer* 60:216-221.
- Hahn ME (1998) The Aryl hydrocarbon receptor: A comparative perspective. *Comp Biochem Physiol C* 121:23-53
- Hall A, Hugunin K, Deaville R, Law RJ, Allchin CR, Jepson P (2006) The risk of infection from polychlorinated biphenyl exposure in the harbor porpoise (*Phocoena phocoena*): a case-control approach. *Environ Health Perspect* 114: 704-711
- Hamers T, Kamstra JH, Sonneveld E, Murk AJ, Kester MH, Andersson PL, Legler J, Brouwer A. (2006) In vitro profiling of the endocrine-disrupting potency of brominated flame retardants. *Toxicol Sci* 92: 157-173.
- Hansen KJ, Clemen LA, Ellefson ME, Johnson HO (2001) Compound-specific, quantitative characterization of organic fluorochemicals in biological matrices. *Environ Sci Technol* 35:766- 770.

- Hart K, Kannan K, Isobe T, Takahashi S, Yamada TK, Miyazaki N, Tanabe S (2008) Time trends and transplacental transfer of perfluorinated compounds in melon-headed whales stranded along the Japanese coast in 1982, 2001/2002, and 2006. *Environ Sci Technol* 42(19):7132-7137.
- Hildebrand JA (2005) Impacts of anthropogenic sound. In: Reynolds JE III, Perrin WF, Reeves RR, Montgomery S, Ragen TJ (eds.), *Marine Mammal Research: Conservation Beyond Crisis*, pp. 101-124, Baltimore, Johns Hopkins University Press.
- Hooker SK, Baird RW, Fahlman A (2009) Could beaked whales get the bends? Effect of diving behaviour and physiology on modelled gas exchange for three species: *Ziphius cavirostris*, *Mesoplodon densirostris* and *Hyperoodon ampullatus*. *Resp Phys Neurobiol* 167: 235–246.
- Isobe T, Ramu K, Kajiwaru N, Takahashi S, Lam PK, Jefferson TA, Zhou K, Tanabe S (2007) Isomer specific determination of hexabromocyclododecanes (HBCDs) in small cetaceans from the South China Sea--Levels and temporal variation. *Mar Pollut Bull* 54: 1139-1145.
- Jepson PD, Arbelo M, Deaville R, Patterson IA, Castro P, Baker JR, Degollada E, Ross HM, Herráez P, Pocknell AM, Rodríguez F, Howie FE, Espinosa A, Reid RJ, Jaber JR, Martin V, Cunningham AA, Fernández A (2003) Gas-bubble lesions in stranded cetaceans. *Nature* 435: 575–576.
- Jepson PD, Bennett PM, Deaville R, Allchin CR, Baker JR, Law RJ (2005a) Relationships between polychlorinated biphenyls and health status in harbor porpoises (*Phocoena phocoena*) stranded in the United Kingdom. *Environ Toxicol Chem* 24:238–248
- Jepson PD, Deaville R, Patterson IAP, Pocknell AM, Ross HM, Baker JR, Howie FE, Reid RJ, Cunningham AA (2005b) Acute and chronic gas bubble lesions in cetaceans stranded in the United Kingdom. *Vet Pathol* 42: 291-305.
- Johnson-Restrepo B, Adams DH, Kannan K (2008) Tetrabromobisphenol A (TBBPA) and hexabromocyclododecanes (HBCDs) in tissues of humans, dolphins, and sharks from the United States. *Chemosphere* 70: 1935-1944.
- Kakuschke A, Prange A (2007) The influence of metal pollution on the immune system - a potential stressor for marine mammals in the North Sea. *Int J Comp Psychol* 20: 179-193.
- Kannan N, Tanabe S, Ono M, Tatsukawa R (1989) Critical evaluation of polychlorinated biphenyl toxicity in terrestrial and marine mammals: increasing impact of non-ortho and mono-ortho coplanar polychlorinated biphenyls from land to ocean. *Arch Environ Contam Toxicol* 18: 850-857.
- Kannan K, Koistinen J, Beckmen K, Evans T, Gorzelany JF, Hansen KJ, Jones PD, Helle E, Nyman M, Giesy JP (2001) Accumulation of perfluorooctane sulfonate in marine mammals. *Environ Sci Technol* 35: 1593-1598
- Kannan K, Corsolini S, Falandysz J, Oehme G, Focardi S, Giesy JP (2002) Perfluorooctanesulfonate and related fluorinated hydrocarbons in marine mammals, fishes, and birds from coasts of the Baltic and the Mediterranean Seas. *Environ Sci Technol* 36: 3210-3216.
- Kerkvliet NI, Baecher-Steppan L, Smith BB, Youngberg JA, Henderson MC, Buhler DR (1990) Role of the Ah locus in suppression of cytotoxic T lymphocyte activity by halogenated aromatic hydrocarbons (PCBs and TCDD): Structure-activity relationships and effects in C57Bl/6 mice congenic at the Ah locus. *Fundam Appl Toxicol* 14: 532-541.
- Kiszka J, Van Bressem M-F, Pusineri C (2009) Lobomycosis-like disease and other skin conditions in Indo-Pacific bottlenose dolphins *Tursiops aduncus* from the Indian Ocean. *Dis Aquat Org* 84: 151–157.
- Kuriyama SN, Talsness CE, Grote K, Chahoud I (2005) Developmental exposure to low dose PBDE 99: effects on male fertility and neurobehavior in rat offspring. *Environ Health Perspect* 113: 149-154.
- Lahaye V, Bustamante P, Dabin W, Van Canneyt O, Dhermain F, Cesarini C, Pierce GJ, Caurant F (2006) New insights from age determination on toxic element accumulation in striped and bottlenose dolphins from Atlantic and Mediterranean waters. *Mar Pollut Bull* 52: 1219-1230.
- Law RJ, Allchin CR, Bennett ME, Morris S, Rogan E (2002) Polybrominated diphenyl ethers in two species of marine top predators from England and Wales. *Chemosphere* 46: 673–681.

- Law RJ, Alaee M, Allchin CR, Boon JP, Lebeuf M, Lepom P, Stern GA (2003) Levels and trends of polybrominated diphenylethers and other brominated flame retardants in wildlife. *Environ Int* 29: 757–770.
- Law RJ, Allchin CR, de Boer J, Covaci A, Herzke D, Lepom P, Morris S, Tronczynski J, de Wit CA (2006a). Levels and trends of brominated flame retardants in the European environment. *Chemosphere* 64: 187–208.
- Law RJ, Bersuder P, Allchin CR, Barry J (2006b) Levels of the flame retardants hexabromocyclododecane and tetrabromobisphenol A in the blubber of harbour porpoises (*Phocoena phocoena*) stranded or bycaught in the U.K., with evidence for an increase in HBCD concentrations in recent years. *Environ Sci Technol* 40: 2177–2183.
- Law RJ, Herzke D, Harrad S, Morris S, Bersuder P, Allchin CR (2008) Levels and trends of HBCD and BDEs in the European and Asian environments, with some information for other BFRs. *Chemosphere* 73: 223–241.
- Lelieveld J, Berresheim H, Borrmann S, Crutzen PJ, Dentener FJ, Fischer H, Feichter J, Flatau PJ, Heland J, Holzinger R, Kormann R, Lawrence MG, Levin Z, Markowicz KM, Mihalopoulos N, Minikin A, Ramanathan V, De Reus M, Roelofs GJ, Scheeren HA, Sciare J, Schlager H, Schultz M, Siegmund P, Steil B, Stephanou EG, Stier P, Traub M, Warneke C, Williams J, Ziereis H (2002) Global Air Pollution Crossroads over the Mediterranean. *Science* 298: 794–798.
- Lilienthal H, Hack A, Roth-Härer A, Grande SW, Talsness CE (2006) Effects of developmental exposure to 2,2',4,4',5-pentabromodiphenyl ether (PBDE-99) on sex steroids, sexual development, and sexually dimorphic behavior in rats. *Environ Health Perspect* 114: 194–201.
- Marsili L, Caruso A, Fossi MC, Zanardelli M, Politi E, Focardi S (2001) Polycyclic aromatic hydrocarbons (PAHs) in subcutaneous biopsies of Mediterranean cetaceans. *Chemosphere*. 44: 147–154.
- Martineau D, Lemberger K, Dallaire A, Labelle Ph, Lipscomb TP, Michel P, Mikaelian D (2002) Cancer in wildlife, a case study: beluga from the St. Lawrence Estuary, Québec, Canada. *Environ Health Perspect* 110: 285–292.
- Martoja R, Berry JP (1980) Identification of tiemannite as a probable product of demethylation of mercury by selenium in cetaceans. *Vie Milieu* 30, 7–10.
- Mastrangelo G, Fadda E, Marzial V (1996) Polycyclic aromatic hydrocarbons and cancer in man. *Environ Health Perspect* 104: 1166–1170.
- Miller MA, Miller WA, Conrad PA, James ER, Melli AC, Leutenegger CM, Dabritz HA, Packham AE, Paradies D, Harris M, Ames J, Jessup DA, Worcester K, Grigg ME (2008) Type X *Toxoplasma gondii* in a wild mussel and terrestrial carnivores from coastal California: new linkages between terrestrial mammals, runoff and toxoplasmosis of sea otters. *Int J Parasitol*. 38: 1319–1328.
- Mollenhauer MA, Carter BJ, Peden-Adams MM, Bossart GD, Fair PA (2009) Gene expression changes in bottlenose dolphin, *Tursiops truncatus*, skin cells following exposure to methylmercury (MeHg) or perfluorooctane sulfonate (PFOS). *Aquat Toxicol* 91:10–18.
- Mos L, Morsey B, Jeffries SJ, Yunker MB, Raverty S, De Guise S, Ross PSR (2006) Chemical and biological pollution contribute to the immunological profiles of free-ranging harbour seals. *Environm Toxicol Chemist* 25: 310–317.
- Nakayama S, Harada K, Inoue K, Sasaki K, Seery B, Saito N, Koizumi A (2005) Distributions of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) in Japan and their toxicities. *Environ Sci* 12:293–313.
- Nieukirk SL, Stafford KM, Mellinger DK, Dziak RP, Fox CG (2004) Low-frequency whale and seismic airgun sounds recorded in the mid-Atlantic Ocean. *J Acoust Soc Am* 115: 1832–1843.
- Nigro M, Leonzio C (1996) Intracellular storage of mercury and selenium in different marine vertebrates. *Mar Ecol Prog Ser* 135: 137–143.
- Osterhaus AD, Vedder EJ (1988) Identification of virus causing recent seal deaths. *Nature* 335: 20.
- Pascual M, Bouma MJ, Dobson AP (2002) Cholera and climate: revisiting the quantitative evidence. *Microbes Infect* 4: 237–245.

- Pettersson A, van Bavel B, Engwall M, Jimenez B (2004) Polybrominated diphenylethers and methoxylated tetrabromodiphenylethers in cetaceans from the Mediterranean Sea. *Arch Environ Contam Toxicol* 47: 542-550.
- PSEP (1989a) Recommended guidelines for measuring organic compounds in Puget Sound sediment and tissue samples. Prepared for the Puget Sound Estuary Program for the U.S. Environmental Protection Agency, Region 10, Office of Puget Sound. PTI Environmental Services, Bellevue, WA.
- PSEP (1989b) Recommended protocols for measuring metals in Puget Sound water, sediment, and tissue samples. Prepared for the Puget Sound Estuary Program for the U.S. Environmental Protection Agency, Region 10, Office of Puget Sound. PTI Environmental Services, Bellevue, WA.
- Ray S, Dunn BP, Payne JF, Fancey L, Helbig R, Beland P (1991) Aromatic DNA-carcinogen adducts in beluga whales (*Delphinapterus leucas*) from the Canadian arctic and the Gulf of St. Lawrence. *Mar Pollut Bull* 22: 392-396.
- Reijnders PJH (1986) Reproductive failure in common seals feeding on fish from polluted coastal waters. *Nature* 324: 456-457.
- Rhodes G, Huys G, Swings J, McGann P, Hiney M, Smith P, Pickup RW (2000) Distribution of oxytetracycline resistance plasmids between aeromonads in hospital and aquaculture environments: implication of Tn1721 in dissemination of the tetracycline resistance determinant tet A. *Appl Environ Microbiol* 66: 3883-3890.
- Rigos G, Nengas I, Alexis M, Troisi GM (2004) Potential drug (oxytetracycline and oxolinic acid) pollution from Mediterranean sparid fish farms. *Aquat Toxicol* 69: 281-288.
- Ross PSR (2002) The role of immunotoxic environmental contaminants in facilitating the emergence of infectious diseases in marine mammals. *Hum Ecol Risk Assess* 8: 277-292.
- Ross PSR (2005) Fireproof killer whales: flame retardant chemicals and the conservation imperative in the charismatic icon of British Columbia. *Can J Fish Aquat Sci* 63: 224-234.
- Ross PSR, Birnbaum LS (2003) Integrated human and ecological risk assessment: a case study of persistent organic pollutants (POPs) in humans and wildlife. *Hum Ecol Risk Assess*. 9: 303 – 324.
- Ross PSR, De Swart RL, Van Loveren H, Osterhaus ADME, Vos JG (1996). The immunotoxicity of environmental contaminants to marine wildlife: a review. *Ann Rev Fish Dis* 6: 151–165.
- Ruiz GM, Rawlings TK, Dobbs FC, Drake LA, Mullady T, Huq A, Colwell RR (2000) Global spread of microorganisms by ships. *Nature* 408: 49–50.
- Siddiqi MA, Laessig RH, Reed KD (2003) Polybrominated diphenyl ethers (PBDEs): new pollutants-old diseases. *Clin Med Res* 1: 281-290.
- Siebert U, Joiris C, Holsbeek L, Benke H, Failing K, Frese K, Petzinger E (1999) Potential relation between mercury concentrations and necropsy findings in cetaceans from German waters of the North and Baltic Seas. *Mar Poll Bull* 38: 285-295.
- Silkworth JB, Antrim L (1985) Relationship between Ah receptor-mediated polychlorinated biphenyl (PCB)-induced humoral immunosuppression and thymic atrophy. *J Pharmacol Exp Ther* 235: 606-611.
- Simmonds M, Dolman S, Weilgart L (eds) (2003) *Oceans of Noise* Whale and Dolphin Conservation Society, Chippenham. 165 pp.
- Stoker TE, Laws SC, Crofton KM, Hedge JM, Ferrell JM, Cooper RL (2004) Assessment of DE-71, a commercial polybrominated diphenyl ether (PBDE) mixture, in the EDSP male and female pubertal protocols. *Toxicol Sci* 78:144-155.
- Tabuchi M, Veldhoen N, Dangerfield N, Jeffries S, Helbing CC, Ross PS (2006) PCB-related alteration of thyroid hormones and thyroid hormone receptor gene expression in free-ranging harbor seals (*Phoca vitulina*). *Environ Health Perspect* 114:1024-1031.
- Talsness CE 2008. Overview of toxicological aspects of polybrominated diphenyl ethers: a flame-retardant additive in several consumer products. *Environ Res* 108:158-167.
- Tanabe S, Watanabe S, Kan H, Tatsukawa R (1988) Capacity and mode of PCB metabolism in small cetaceans. *Mar Mamm Sci* 4: 103–124.
- Todd S, Stevick P, Lien J, Marques F, Ketten DR (1996) Behavioral effects of exposure to underwater explosions in humpback whales (*Megaptera novaeangliae*). *Can J Zool* 74: 1661-1672.

- Topinka J, Marvanová S, Vondráček J, Sevastyanova O, Nováková Z, Krcmár P, Pencíková K, Machala M. 2008. DNA adducts formation and induction of apoptosis in rat liver epithelial 'stem-like' cells exposed to carcinogenic polycyclic aromatic hydrocarbons. *Mutat Res* 638: 122-132.
- UNEP (1988) Assessment of the State of Pollution of the Mediterranean Sea by Petroleum Hydrocarbons. MAP Technical Report Series 19.
- Van Bressem M-F (2009) Emergency task force: guidelines for a coordinated cetacean stranding response. Document prepared for the Permanent Secretariat of the 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)-ACCOBAMS-MOP3/2009/Doc21.
- Van Bressem M-F, Van Waerebeek K, Reyes JC, Félix F, Echegaray M, Siciliano S, Di Benedetto AP, Flach L, Viddi F, Avila IC, Herrera JC, Tobón IC, Bolaños J, Moreno, IB, Ott PH, Sanino GP, Castineira E, Montes D, Crespo E, Flores PAC, Haase B, Mendonça de Souza SMF, Laeta M, Fragoso AB (2007) A preliminary overview of skin and skeletal diseases and traumata in small cetaceans from South American waters. *Lat Am J Aquat Mamm* 6: 7-42.
- Van Bressem M-F, Raga JA, Di Guardo G, Jepson PD, Duignan P, Siebert U, Barrett T, Santos MCO, Moreno IB, Siciliano S, Aguilar A and Van Waerebeek K (2009) Emerging infectious diseases in cetaceans worldwide and the role of environmental stressors. *Dis Aquat Org* (in press).
- Wagemann R, Muir DCG (1984) Concentrations of heavy metals in marine mammals of northern waters: overview and evaluation. *Can Tech Rpt Fish & Aquat Sci* 1279
- Weber JT, Mintz ED, Canizares R, Semiglia A, Gomez I, Sempertegui R, *et al.* (1994) Epidemic cholera in Ecuador: multidrug-resistance and transmission by water and seafood. *Epidemiol Infect* 112: 1-11.
- Weilgart L (2007) A brief review of known effects of noise on marine mammals. *Int J Comp Psychol*, 20: 159-168.
- Wright AJ, Aguilar Soto N, Baldwin AL, Bateson M, Beale C, Clark C, Deak T, Edwards EF, Fernández A, Godinho A, Hatch L, Kakuschke A, Lusseau D, Martineau D, Romero LM, Weilgart L, Wintle B, Notarbartolo di Sciara G, Martin V (2007) Do marine mammals experience stress related to anthropogenic noise? *Int J Comp Psych* 20: 274-316.
- Yang WC, Chou LS, Jepson PD, Brownell RL Jr, Cowan D, Chang PH, Chiou HI, Yao CJ, Yamada TK, Chiu JT, Wang PJ, Fernández A (2008) Unusual cetacean mortality event in Taiwan, possibly linked to naval activities. *Vet Rec* 162: 184-186.
- Yeung LW, Yamashita N, Taniyasu S, Lam PK, Sinha RK, Borole DV, Kannan K (2009) A survey of perfluorinated compounds in surface water and biota including dolphins from the Ganges River and in other waterbodies in India. *Chemosphere* 76: 55-62.
- Zhou T, Taylor MM DeVito MJ, Crofton KM (2002) Developmental exposure to brominated diphenyl ethers results in thyroid hormone disruption. *Toxicol Sci* 66: 105-116.

**Emergency task force:
Guidelines for a coordinated cetacean stranding response during mortality events caused by
infectious agents and harmful algal blooms³⁶**

**1. GUIDELINES CONCERNING BEST PRACTICES AND PROCEDURES FOR
ADDRESSING CETACEAN STRANDING DURING EPIDEMICS CAUSED BY
INFECTIOUS AGENTS AND HARMFUL ALGAL BLOOMS**

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1.1.1.1 Morbillivirus epidemics in pinnipeds

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1.3.2 Protocols for collection, transportation and storage of specimens and sample

- 1.3.2.1 Protocols for sample collection
 - 1.3.2.1.1 Basic Data Protocol
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 - 1.3.2.1.2.1 High priority samples
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5. LITERATURE CITED

1. GUIDELINES CONCERNING BEST PRACTICE AND PROCEDURES FOR ADDRESSING CETACEAN MORTALITY EVENTS CAUSED BY EPIDEMICS

1.1. Introduction on main marine mammal die-offs

Marine mammal epidemics have occurred in pinnipeds and cetaceans worldwide and are the subject of continued scientific research. Repeated outbreaks may have long-term effects on the affected populations (Van Bressem *et al.*, 1999, 2009; Lonergan and Harwood, 2003; Härkönen *et al.*, 2006). Among the micro-parasites causing marine mammal mass-mortalities, morbilliviruses appear by far to be the more lethal and widely distributed of all (e.g. Kennedy, 1998; Duignan *et al.*, 1995a,b; Van Bressem *et al.*, 2001a, 2009). Herpesviruses, the bacteria *Brucella* spp. and *Lepstospira* spp. as well as the protozoan *Toxoplasma gondii* have also triggered severe diseases and mortalities in a number of cetacean and pinniped species (Gulland *et al.*, 1996; Foster *et al.*, 2002; Dubey *et al.*, 2003; Smolarek Benson *et al.*, 2006). Harmful algal blooms (HBAs) are increasingly recognized as a cause of die-offs in marine animals (Flewelling *et al.*, 2005). Below I summarize information on these infectious diseases and intoxications.

1.1.1. Morbilliviruses

The genus *Morbillivirus* belongs to the Family *Paramyxoviridae* and includes measles virus (MV) in humans and other primates, canine and phocine distemper viruses (CDV and PDV) in carnivores, cetacean morbillivirus (including the strains porpoise, dolphin and pilot whale morbilliviruses) in cetaceans, rinderpest (RPV) and peste des petits ruminants (PPRV) viruses in artiodactyls. Morbilliviruses are pleiomorphic, enveloped virions about 150 nm in diameter with a single-stranded RNA of negative sense polarity (Fenner *et al.*, 1993). They require large populations of individuals (e.g. 300,000 for measles virus in humans) to be maintained endemically and induce serious, often lethal, systemic diseases in their hosts (Black, 1991). Transmission probably occurs through the inhalation of aerosolised virus, shed by infected individuals.

Since the late 1980s, at least three different morbillivirus species have caused outbreaks of lethal disease in pinnipeds and cetaceans. The existence of immunologically-naïve marine mammal communities and the introduction of morbilliviruses from other aquatic or terrestrial mammals where these viruses are endemic may be the decisive factors involved in triggering an epidemic. Factors influencing contact rates between individuals are very important in determining the spread of the disease (Harris *et al.*, 2008). Biological and environmental factors such as inbreeding, high contaminant loads and limited prey availability may synergistically interact to increase the severity of the disease (Van Bressem *et al.*, 2009).

1.1.1.1 Morbillivirus epidemics in pinnipeds

Phocine distemper virus (PDV) caused mass mortalities in harbour seals (*Phoca vitulina*) from Northern Europe in 1988 and 2002 (Osterhaus and Vedder, 1988; Jensen *et al.*, 2002). On both occasions the epidemics started in central Kattegat (Denmark) and subsequently spread to other colonies around the northern European coast. More than 23,000 seals (an estimated 60% of the population) died in 1988 and 30,000 (approximately 47% of the population) in 2002 (Hammond *et al.*, 2005; Härkönen *et al.*, 2006). Clinical signs observed in seals were those typical of canine distemper and included respiratory, digestive and nervous problems and abortions. Histological findings included interstitial and purulent pneumonia and generalised lympho-depletion (Kennedy *et al.*, 1989). Arctic seals may be the reservoir of the virus. Harp (*Phoca groenlandica*) and grey (*Halichoerus grypus*) seals may be the vectors (Härkönen *et al.*, 2006).

An outbreak of CDV caused the death of 5,000-10,000 Baikal seals (*Phoca sibirica*) in 1987-1988 (Grachev *et al.*, 1989; Mamaev *et al.*, 1996). Clinical signs were similar to those of canine distemper in dogs (Grachev *et al.*, 1989). It is likely that this epizootic resulted from contact with CDV infected terrestrial carnivores (Mamaev *et al.*, 1996).

Several thousands of Caspian seals (*Phoca caspica*) died in Azerbaijan on the western shore of the Caspian Sea in 1997. A strain of CDV, distinct from the one found in Baikal seals and other field CDVs, was detected by polymerase chain reaction (PCR) in the brain of an adult female suggesting that this virus could have caused the epidemic (Forsyth *et al.*, 1998). A confirmed CDV outbreak occurred in this species in the spring of 2000, killing more than 10,000 animals. Broncho-interstitial pneumonia and lymphocytic necrosis and depletion were common findings. Terrestrial, sympatric carnivores may be a reservoir for CDV (Kuiken *et al.*, 2006).

Morbilliviruses were isolated from Mediterranean monk seals (*Monachus monachus*) during an outbreak of mortality in 1997 (Osterhaus *et al.*, 1997) thought to have primarily been caused by HABs (Hernandez *et al.*, 1998; Harwood, 1998).

1.1.1.2. Morbillivirus epidemics in cetaceans

Concurrently with the first PDV outbreak in harbour seals, porpoise morbillivirus (PMV) caused mortalities in harbour porpoises (*Phocoena phocoena*) from European waters in 1988-1990 (Kennedy *et al.*, 1988, 1992a; Visser *et al.*, 1993). A dolphin morbillivirus (DMV) ravaged the Mediterranean striped dolphin population (*Stenella coeruleoalba*) in 1990-1992 and again in 2007-2008 (Domingo *et al.*, 1990; Van Bressem *et al.*, 1993; Fernandez *et al.*, 2008; Raga *et al.*, 2008). DMV-affected dolphins were first detected in the vicinity of Valencia, Spain, at the beginning of July 1990. The epidemic subsequently expanded to the western and eastern Mediterranean and vanished in the spring of 1992 after reaching the coasts of Greece (Bompar *et al.*, 1991; Bortolotto *et al.*, 1992; Aguilar and Raga, 1993; Van Bressem *et al.*, 1993; Cebrian, 1995). Although no precise mortality rates could be estimated for this die-off, it is likely that thousands of animals perished (Aguilar and Raga, 1993). As a relative measure of the impact, the mean school size in the epidemic core regions significantly decreased to less than 30% of the pre-outbreak number (Forcada *et al.*, 1994). Serological data indicated that the virus did not persist endemically in striped dolphins and that this population was losing its immunity to DMV and was at risk from new virus introductions (Van Bressem *et al.*, 2001a). Pilot whales (*Globicephala* sp.) as well as other gregarious cetacean species were suggested as reservoir and vector of the virus (Duignan *et al.*, 1995b; Van Bressem *et al.*, 1998, 2001a). Between October 2006 and April 2007, at least 27 long-finned pilot whales (*Globicephala melas*) stranded along the southern Spanish Mediterranean coast and the Balearic Islands (Fernández *et al.*, 2008). In early July 2007 dead or moribund *S. coeruleoalba* and *G. melas* were found in the Gulf of Valencia (Raga *et al.*, 2008). Morbillivirus lesions and antigen were observed in stranded pilot whales and striped dolphins. A DMV strain closely related to the virus isolated during the 1990-1992 epidemic was detected in several stranded odontocetes by PCR (Fernández *et al.*, 2008, Raga *et al.*, 2008). In summer-autumn 2007, over 200 *S. coeruleoalba* were found dead along the coasts of Spain. Juveniles were more frequently affected than adults, likely because older dolphins were still protected by the immunity developed during the 1990-1992 epidemic (Raga *et al.*, 2008). The virus apparently reached the French Mediterranean coast in August 2007 and Italy's Ligurian Sea coast in August-November 2007 (Garibaldi *et al.*, 2008). It could still be detected by PCR in dolphins stranded along the Mediterranean coast of France in May 2008 (Dhermain *et al.*, unpublished observations). As both DMV epidemics started close to, or in the Gibraltar Strait and, as DMV was circulating in the North Sea in January 2007 (Wohlsein *et al.*, 2007), it was suggested that DMV-infected pilot whales entered the Strait of Gibraltar and transmitted the infection to striped dolphins (Van Bressem *et al.*, 2009).

In the Northwest Atlantic, PMV and DMV infections killed about 27% of the inshore population of common bottlenose dolphins (*Tursiops truncatus*) along the Atlantic coast of the US, from New Jersey to Florida in 1987-1988 (Krafft *et al.*, 1995, Taubenberger *et al.*, 1996, McLellan *et al.*, 2002). In 1993-1994, PMV hit coastal bottlenose dolphins along the Gulf of Mexico coasts of Florida, Alabama, Mississippi and Texas (Lipscomb *et al.*, 1996). Pilot whales (*Globicephala* sp.) and offshore bottlenose dolphins may have been a source of infection for the coastal dolphins (Duignan *et al.*, 1996). Broncho-interstitial pneumonia, non-suppurative encephalitis and lymphoid depletion were commonly seen in the affected porpoises and dolphins (Kennedy *et al.*, 1991, 1992a; Domingo *et al.*, 1992; Lipscomb *et al.*, 1994).

Finally, an uncharacterised morbillivirus was implicated in the die-off of short-beaked common dolphins (*Delphinus delphis ponticus*) in the Black Sea in 1994 (Birkun *et al.*, 1999). Morbillivirus neutralizing antibodies were also detected in the sera of 53% of 73 harbour porpoises collected along the coast of the Black Sea in 1997-1999 (Müller *et al.*, 2002).

1.1.2. Herpesviruses

Herpesviruses antigenically and genetically related to members of the Alphaherpesvirinae subfamily (Family Herpesviridae, order Herpesvirales) were detected in a harbour porpoise stranded along the west coast of Sweden in 1988, in two bottlenose dolphins beached in South Carolina and Delaware (US) in 1995-1999 and in one bottlenose dolphin stranded in Tenerife, Canary Islands, in 2001 (Kennedy *et al.*, 1992b; Blanchard *et al.*, 2001; Esperon *et al.*, 2008). Gross and histological findings included encephalitis and necrotizing lesions in multiple organ systems as well as skin lesions (Kennedy *et al.*, 1992b; Blanchard *et al.*, 2001; Esperon *et al.*, 2008). Sequencing data suggest that these viruses are cetacean-specific and have coevolved with their cetacean hosts (Smolarek-Benson *et al.*, 2006). The virus detected in the dolphin stranded in South Carolina had nucleotide and amino acid identities of 98.9% and 96.9%, respectively, with herpesviruses identified in skin lesions from two other Atlantic bottlenose dolphins, suggesting that similar viruses may be responsible for both cutaneous and systemic infections in this species (Smolarek-Benson *et al.*, 2006). Herpesviruses have regularly been detected in skin lesions from porpoises, dolphins and belugas (Martineau *et al.*, 1988; Barr *et al.*, 1989; Van Bresseem *et al.*, 1994; Smolarek-Benson *et al.*, 2006). They are possibly endemic in several cetacean species and populations (Mikaelian *et al.*, 1999). After infection herpesviruses become latent and are excreted periodically or continuously during the host's entire lifetime (Roizman *et al.*, 1995).

1.1.3. *Brucella* spp.

Brucellosis is a globally distributed, zoonotic, bacterial disease of mammals that is pathogenic for the reticulo-endothelial, reproductive, musculoskeletal and cutaneous systems and which may cause generalized infection with septicaemia in humans (Corbel, 1997). The causative agents are Gram-negative bacteria of the genus *Brucella* including *B. abortus* in cattle, sheep, goats and pigs, *B. melitensis* in goats, sheep and cattle, *B. canis* in dogs, *B. suis* in pigs, *B. ovis* in sheep and *B. neotomae* in the desert wood rat (*Neotoma lepida*). In the 1990s, previously unknown strains of *Brucella* were detected by serology, histology and direct isolation in free-ranging pinnipeds and cetaceans from the Americas, Europe, the Antarctic and western North Pacific as well as in captive bottlenose dolphins (Ewalt *et al.*, 1994; Tryland *et al.*, 1999; Van Bresseem *et al.*, 2001b; Foster *et al.*, 2002; Ohishi *et al.*, 2004). Disorders associated with brucellosis in cetaceans include placentitis, abortion, lung infection, orchitis and non-suppurative meningoencephalitis (Miller *et al.*, 1999; Gonzalez *et al.*, 2002; Ohishi *et al.*, 2004). To date there are four known cases of humans infected with *Brucella* spp. from marine mammals, three naturally acquired and one of laboratory origin (Brew *et al.*, 1999; Sohn *et al.*, 2003; McDonald *et al.*, 2006) indicating the zoonotic potential of marine brucellae.

On the basis of biological and molecular characteristics, Foster *et al.* (2007) proposed two *Brucella* species in marine mammals, *Brucella ceti* and *B. pinnipedialis* with, respectively, cetaceans and seals as preferred hosts. Groussaud *et al.* (2007) further suggested that brucellae isolated from cetaceans constitute two species with different preferred hosts, i.e. *B. phocoenae* in porpoises and *B. delphini* in dolphins.

1.1.4. Leptospirosis

Leptospirosis is a zoonotic bacterial disease of global distribution that affects many species of domestic and wild animals including pinnipeds and is considered as a re-emerging disease. It is caused by *Leptospira* spp. a flexible, spiral-shaped, Gram-negative spirochete (Family Leptospiraceae) with internal flagella. *Leptospira interrogans* is found in California sea lions (*Zalophus californianus*)

while *Leptospira kirschneri* is specific of elephant seals (*Mirounga angustirostris*) (Cameron *et al.*, 2008). Leptospirosis in pinnipeds typically presents as an interstitial nephritis with clinical signs of impaired renal function, including dehydration, vomiting and depression (Cameron *et al.*, 2008). Infective leptospires are shed in urine. *L. interrogans*, serovar Pomona caused several severe outbreaks of renal disease in sea lions resulting in the stranding and subsequent death of hundreds of individuals along the coast of California (Vedros *et al.*, 1971; Dierauf *et al.*, 1985; Gulland *et al.*, 1996). The epidemic occurrences are cyclical in nature, with a distinct 3- to 4-year periodicity separated by endemic maintenance of the disease (Lloyd-Smith *et al.*, 2007). Close proximity to dog parks and high dog park density are significantly associated with leptospirosis in sea lions (Norman *et al.*, 2008). So far reports of this disease in free-ranging marine mammals have been limited to North America but similar outbreaks could theoretically occur in marine mammals anywhere in the world where leptospirosis is present in sympatric domestic and wild mammals. An outbreak has occurred among pinnipeds kept in captivity in the Netherlands (Kik *et al.*, 2006).

1.1.5. Toxoplasmosis

Toxoplasmosis is caused by *Toxoplasma gondii*, an obligate intracellular protozoan parasite, and occurs worldwide in human and other warm-blooded animals including cetaceans (Dubey *et al.*, 2003). Wild and domestic felids are the only animals known to serve as definitive hosts but many mammals can be intermediate hosts (Miller *et al.*, 2008). Infection occurs through the ingestion of contaminated food or water, or transplacentally. Free-ranging dolphins with toxoplasmosis have been reported in Europe (including the Mediterranean Sea), the Americas and the Caribbean. They presented lymphadenitis, necrotizing adenitis, myocarditis, acute interstitial pneumonia, non-suppurative encephalitis and systemic disease (Dubey *et al.*, 2003; Di Guardo *et al.*, 2009). Transplacental foetal infection was reported in two dolphins (reviewed in Dubey *et al.*, 2003). Toxoplasmosis in cetaceans was often, though not always, associated with immunosuppression following a morbillivirus infection and/or high concentrations of environmental contaminants including PCBs (Di Guardo *et al.*, 1995, 2009; Mikaelian *et al.*, 2000). Feline faecal contamination flowing from land to sea through surface run-off is a likely source of infection (Conrad *et al.*, 2005, Miller *et al.*, 2008). The possible reactivation of latent *T. gondii* infection during morbillivirus outbreaks may synergistically increase the severity and death rate of this viral disease (Van Bresse *et al.*, 2009).

1.1.6. Harmful algal blooms

HBAs are proliferations of microscopic algae that harm the environment by producing toxins that accumulate in shellfish or fish, or through the accumulation of biomass that in turn affects co-occurring organisms and alters food webs in negative ways (HARRNESS, 2005). They occur worldwide and have apparently increased in global distribution, intensity and occurrence over the past few decades (Fire *et al.*, 2008). Approximately 20 of the more than 1,000 known dinoflagellate species produce toxins that may cause mortality in fish, birds and mammals (Steidinger and Baden, 1984). Domoic acid (DA) is a potent marine neurotoxin produced by diatom species of the genus *Pseudo-nitzschia*. Brevetoxins are powerful natural neurotoxins emitted by *Karenia brevis* and related species of dinoflagellates. Saxitoxin is generated by the dinoflagellates *Alexandrium tamarense* and *A. catenella*. Human intoxication is characterized by acute gastrointestinal illness with neurological symptoms that, in some cases, may lead to death. Brevetoxins, DA and saxitoxins have been implicated in the die-offs of birds and marine mammals, worldwide (Gilmartin *et al.*, 1980; Geraci *et al.*, 1989; Bossart *et al.*, 1998). Paralytic phycotoxins may have played a role in the mortalities observed in 1997 in the Western Sahara population of Mediterranean monk seal (*Monachus monachus*) (Hernandez *et al.*, 1998; Harwood, 1998). DA caused the deaths of hundreds of California sea lions along the central coast of California in 1998 (Scholin *et al.*, 2000) and was associated with an unusual marine mammal mortality event along the southern California coastline in 2002 (Torres de la Riva *et al.*, 2009). Brevetoxins caused the death of more than 100 coastal bottlenose dolphins along the coast of Florida in March –April 2004 (Flewelling *et al.*, 2005). Primary prey items of Sarasota

Bay bottlenose dolphins with elevated levels of brevetoxins are vectors for their predators during the *K. brevis* blooms (Fire *et al.*, 2008).

1.2. Things to do in preparation for an epidemic

Marine mammal strandings attract a lot of public attention. Epidemics may cause the beaching of several dolphins over weeks along thousands of kilometres across borders. The degree of response of each country will depend on the existence of active stranding networks and marine mammal research groups as well as on its economic and logistic possibilities. Some countries may be able to provide most of the scientific, technical and administrative infrastructure needed to face a massive stranding while others may only offer a more reduced support or none at all. Collaboration between Member States will be a plus to effectively attend these events. The foundation of an expert Sub-Committee on Cetacean Unusual Mortalities (CEUM) within the ACCOBAMS Scientific Committee would optimise the answer to die-offs in the Agreement Zone. The CEUM Sub-Committee should ideally have the equipment described in 1.2.2.

The following guidelines are designed for an optimal response to an epidemic. Nevertheless, much can be done with a more reduced infrastructure and equipment (please see 1.2.2.11).

1.2.1. Technical and administrative infrastructure needed in each Member State to best address emergencies caused by cetacean epidemics

All Member States should at least have an on-scene coordinator body (OSCB) that would contact the CEUM Sub-Committee and any other relevant institution in the case of a suspected mass-mortality, send data to the Mediterranean Database of Cetacean Strandings (MEDACES-http://medaces.uv.es/home_eng.htm), deal with the public and media, ensure that the proper samples are taken, be responsible to obtain all necessary permits and deal with the carcasses. The OSCB should ideally depend on an existing stranding network, a natural science museum, a university or a ministry (Agriculture, Environment, Fisheries). It should collaborate with existing national entities related to marine mammal stranding such as active stranding networks and marine mammal research groups, wildlife conservation and rescue centres, aquaria and oceanaria, coastguards, park officials, navy and local authorities.

The OSCB basic technical and administrative infrastructure should include:

- A stranding hotline telephone, dedicated to record any stranding occurring along the coast and operating 24 hours, seven days a week;
- A computer with internet access;
- A printer;
- Portable telephones;
- A GPS to register stranding locations;
- Digital cameras;
- DVD reader;
- A specialized marine mammal library;
- A website describing the activities of the OSCB as well as the names of the persons in charge and to be contacted in the event of an epidemic;
- A database on cetacean mortality events
- Educative material;
- A centrifuge to spin blood samples;
- A large fridge to keep samples at 4°C;
- A -80°C freezer to store samples for longer periods of time.

1.2.2. Equipment list

The following is an optimal equipment checklist to face stranding of live and dead animals (Geraci and Lounsbury 2005; Raverty and Gaydos, 2007). However, much can still be done with less material and infrastructure (§ 1.2.2.11.).

1.2.2.1. Crowd control, public relations

- Plastic tape and pylons to cordon off necropsy site;
- Signs: WARNING—PUBLIC HEALTH HAZARD—DO NOT ENTER;
- Educative material on stranding and epidemics as well as on the stranding network;

1.2.2.2. Recording material

- Waterproof pencils;
- Metal clipboards, waterproof labels;
- Data forms, necropsy and collection protocol forms;
- Camera and film, extra batteries, video camera with additional memory cards;
- Tape measure (metric), at least 20 meters long (plastic and metallic);
- Hoist/crane, scales to record organ weights (0,1-10kg);

1.2.2.3. Animal relief

- Zinc oxide;
- Blankets and towels;
- Shovel (to dig pits for fins and tail);
- Ice packs (to keep the extremities cool);
- Tarpaulins;
- Foam mattresses;
- Water sprayers
- Inflatable rescue pontoon system
<http://www.jwautomarine.co.uk/images/SlideSh/show024/default.htm>
http://www.jwautomarine.co.uk/pr_sb.htm;
- Thermal space blankets (for warming or cooling);

1.2.2.4. Emergency medical supplies

- I.V. Fluids and infusion sets (droppers, 10& 60 drops/min.);
- Basic diagnostic set (stethoscope, thermometers);
- Stimulants;
- Tranquillizers;
- Adrenalin;
- Steroids.

1.2.2.5. Euthanasia³⁷

- Needles for large animals;
- Sedative: midazolam (0.02 mg/kg);
- Barbiturate: Large Animal Immobilon (Etorphine) administered intramuscularly is recommended (see footnote 1);

1.2.2.6. Necropsy

- Rope, at least 20 meters, blankets, stretchers to move carcasses, if necessary;
- Standard necropsy instruments. Multiple scalpel handles, scalpel blades, scissors, forceps and knives;
- Knife sharpener, if possible in secure pack;

³⁷ Legislation regarding euthanasia and the use of euthanizing agents may vary between countries. Local laws should be checked before deciding which agent is to be used. The OSCB should obtain an authorization from the local authorities to perform euthanasia on cetaceans before life-strandings occur.

- Flensing knives and hooks with appropriate sharpening tools, chain saw, axe, or reciprocating saw to cut through the cranium, chest or vertebrae;
- Hammers, chisels and handsaws;
- Retractors of various sizes and shapes. Self-retaining retractors with one or two movable arms mounted on a slide bar are most useful;
- Sterile instruments for culture collection;
- Whirlpacks;
- Jars, vials;
- Buckets;
- Flashlights with extra batteries and light bulbs;
- Containers (from vials to garbage cans) for sample collection, including ice chest, dry ice and if possible liquid nitrogen;
- Gas generator and flood lights with extra bulbs and gasoline;
- Lights;
- Portable or electric circular saw;
- Accessible water supply with hose;
- Buckets;
- Garbage bags, dish soap, paper towels for clean-up.

1.2.2.7. Specific sampling (histology, microbiology, HBAs)

- 10% neutral buffered formalin;
- 4% buffered glutaraldehyde;
- 20% diethyl sulfoxide (DMSO) saturated saline solution for genetic analysis, in vials;
- Isopropanol alcohol, for contaminant sampling;
- Needles and syringes;
- Heparinized syringes;
- Culture vials for virology and bacteriology;
- Transport medium for bacteriology and virology;
- RNA later (Ambion; <http://www.ambion.com/techlib/resources/RNALater/index.html>)
- Sterile swabs;
- Sterile urine cups;
- Glass slides;
- Serum tubes for blood and urine collection and gas burner to sear organ surfaces and sterilize scalpel blades;
- Culture vials for bacteriological and virological analysis;
- Aluminum foil and plastic bags for freezing tissues;
- Coolers for samples refrigeration;
- Plankton net.

1.2.2.8. Personal

- Protective clothing for staff and volunteers (hats, boots, protective wear, wet and dry suits);
- Coveralls, aprons, gloves, caps, disposable masks, protective eye and head gear;
- Hand soap and towels;
- Disinfectant;
- First aid kit.

1.2.2.9. Large equipment

- All terrain vehicle with trailer;
- A boat to reach floating dead cetaceans;
- 30m² walk-in fridge;
- A wet laboratory to carry out the necropsies.

1.2.2.10. Dispatch

- CITES permits;
- Contact airlines that may dispatch the samples and ask where to buy IATA-approved containers. They will be required to send samples by airplanes.

1.2.2.11. Minimal equipment

The following minimal equipment also permits to alleviate the suffering of a stranded live dolphin and take valuable biological and microbiological samples from freshly dead dolphins:

- Recording material;
- Camera;
- Mobile phone;
- Buckets;
- Blankets;
- Water sprayer;
- Zinc oxide, shovels;
- Gloves, plastic boots and masks;
- Wide plastic sheets;
- Butcher knives;
- Butcher saws;
- Scalpel and scalpel blades;
- Vials and jars;
- Ropes.

1.2.3. Capacity building

Different levels should be considered for capacity building according to the persons concerned i.e. scientists of the OSCB, volunteers and public.

1.2.3.1 Scientists

Scientists of the OSCB with no previous knowledge of marine mammal die-offs should receive specific training to attend live animals, do necropsy, take samples, manage the public and dispose of the carcasses. It would be recommendable that the proposed CEUM Sub-Committee and/or Member States with a large experience in cetacean stranding arrange training courses for scientists of the nascent OSCBs with less practice. Training in rescue techniques and stranding are also offered by several NGOs and marine mammal centres in Spain, Italy, the UK and other European countries. Scientists may start to build a specialized marine mammal library including valuable books such as 'Marine Mammal Ashore, a Field Guide for Strandings' (Geraci and Lounsbury, 2005) and 'Stranded Cetaceans: Guidelines for Veterinary Surgeons', RSPCA (1997). Free scientific papers on infectious diseases and marine mammal mortalities available on the World Wide Web and specifically at pubmed (<http://www.ncbi.nlm.nih.gov/pubmed/>) should be downloaded and printed. International workshops on cetacean epidemics should be planned within the Member States.

1.2.3.2. Volunteers

Volunteers should be given a formation allowing them to efficiently help during outbreaks of mortality. Workshops on the general biology of dolphins and whales, the reasons why they strand and the pathogenic agents they may harbour, should be organized. Volunteers should in particular be informed of the potential health risks stranded marine mammals represent. Each volunteer should be given a role according to his/her personal skills. Stranding simulations with inflatable plastic whales may be a good idea to give participants a feel how a real event might evolve.

1.2.3.3. Local government officials

Leaflets describing the basic biology of cetaceans and explaining stranding events and epidemics, and how to react to them, should be written, printed and distributed to local government officials. These leaflets should provide the hotline for strandings as well as the names of the people in charge. Members of the OSCB may arrange talks on marine mammal epidemics for government officials and distribute educational material at this occasion.

1.2.3.4. Public

Booklets for children addressing the basic biology of cetaceans and the possible reasons for their die-offs should be written, printed and distributed to kindergartens and local schools. Posters on the same topics and including the health risk posed by marine mammal strandings should be designed and distributed in schools, libraries, museums, tourism information centres, national parks, universities, etc. National or local companies and businesses may be keen to offer support for printing this material. A website or a newsletter detailing the activities of the OCSB would be useful to help the general public to understand its activities.

1.3 Actions to take during an epidemic event

Several situations may occur during an epidemic:

- Single stranded dolphins may be found dead or agonizing on different beaches
- Several dead dolphins stranded on the shore
- Dead and live cetaceans stranded simultaneously on a beach

In all cases, excellent coordination between the OSCB staff, the proposed CEUM Sub-Committee and other organizations specialised in these events will be the key for a successful answer. The protocols given below are broadly based on Geraci and Lounsbury (2005) and the Irish Whale and Dolphin Group (2007) (<http://www.iwdg.ie/content.asp?id=31>). The second edition of 'Marine Mammal Ashore: A Field Guide for Strandings' provides extensive information on how to deal with stranded, live or dead dolphins and whales and one or more copies should be in the library of all bodies involved with cetacean strandings. It would be wise to carry one copy to the field.

1.3.1. Protocols for intervention on site

1.3.1.1. Live cetaceans stranded on the beach

The event should be evaluated and attempts made to determine the species and appraise the length of the specimens. The number of stranded dolphins of each species should be estimated. Live animals should be stabilized to ensure that they can breathe and will not overheat or become too stressed:

- Support the animal in an upright position if possible, digging trenches under the pectoral fins;
- Keep the animal moist by covering it with wet blankets or towels, sprayed or doused with a constant supply of water;
- Protect damaged skin with zinc oxide;
- Do not cover or obstruct the blowhole and make every effort to keep sand and water away from the blowhole;
- In sunny weather try to provide shade for the animal by erecting a tarpaulin above it;
- In very cold or windy weather, try to erect a windbreak around the animal;
- If the animals are in the surf zone, move them into deeper waters or shift them so they are perpendicular to the water's edge, with the head facing land;
- Caution: care should be taken around the tail fluke as a thrashing cetacean can maim or kill. Also minimize contact with the animal (use gloves and mask if contact is necessary) and avoid inhaling the animal expired air;

- All noise, contact and disturbance around the animal must be kept to a minimum. Erect a rope barrier to cordon off the area (apart from essential personnel caring for the animal) and ask the local authorities to assist with crowd control at the scene;
- When available, a coastguard or beach-master should be appointed to liaise with media and control onlookers, and to ensure that the veterinary and rescue teams can get on with the job, without unnecessary interference;
- Contact all people and organizations that have shown interest in helping rescue live stranded cetaceans;
- Evaluate the health of the animal according to the following parameters:
 - presence of obvious injuries;
 - entangled nets or ropes around flukes, fins and beak;
 - breathing pattern:
 - small cetaceans** (eg. porpoise or common dolphin): Normal breathing rate = 2-5 breaths/min;
 - medium-sized cetaceans** (eg. pilot whale): Normal breathing rate = 1 breath/min;
 - large Cetaceans** (eg. sperm whale): Normal breathing rate = up to 1 breath per 20mins;
 - skin integrity;
 - nutritional status;
 - heart rate (from 30 to 100 beats/ minute in bottlenose dolphin) using a stethoscope for small dolphins and a hand firmly placed under the axillary region for larger cetaceans;
 - behavioural criteria: alert (responsive to environment stimuli: palpebral reflex), weakly responsive (responsive only after much stimulation), non-responsive (not responsive to noise or touch);
 - presence of blood in the mouth or blowhole (critically poor health);
 - core body temperature: normal range 36.5 to 37°C. Critical hypothermia: below 35.6°C; critical hyperthermia above 40°C;
- When the animal seems healthy, attempts should be made to re-float it and guide it to deeper waters by lifting with a tarpaulin or a stretcher, by dragging with slings or using a rescue pontoon system. This should only be attempted when a sufficient number of experienced people are available (e.g. 6 for a medium-sized bottlenose dolphin). Re-floats should be attempted on rising tides. Once the animal is towed back to the sea, it should be supported, with its blowhole kept above the surface. Acclimation is complete when the whale is able to surface on its own to breathe. This may take several hours and, in cold water, a relief team should be available. A mother and calf should be acclimated together. If several cetaceans beached together they should be released together. All supporting devices should be easy to remove;
- Under no circumstances should attempts be made to re-float calves that are likely not weaned;
- When the animal is unfit for immediate release the other options should be considered i.e. rehabilitation or euthanasia. Rehabilitation will only be possible when a facility exists in the country and is reachable by road in no more than two hours;
- If the animal cannot be rescued, humane killing should be considered. Euthanasia is an option for odontocetes and small whales and should be done through the administration of 'Large Animal Imobilon' (see footnote 1), possibly after sedation. Larger whales should be allowed to die naturally.

1.3.1.2. Dead whales and dolphins

- Autopsy on the beach is a valid option when strandings occur in remote areas, away from public presence, do not threaten human health and weather conditions are favourable. It is recommendable for large dolphins and whales or when no transport is available. If feasible, the animals should be placed on a wide plastic sheet before the autopsy is undertaken. Freshly dead dolphins should be given priority. When the day is hot, attempt to collect the basic information and then quickly open the specimen and collect samples for virology, bacteriology, parasitology and HBA research.

- When feasible, dolphins and porpoises should be transported to an appropriate facility for complete necropsy. All endeavours should be made to retrieve the animal in as short a time as possible to avoid deterioration of the body before analysis. While awaiting necropsy, specimens should be kept in a cold room.
- In all cases, photographic documentation is strongly recommended.

1.3.2. Protocols for collection, transportation and storage of specimens and samples

1.3.2.1. Protocols for sample collection

Prior to sample collection, some basic data should be collected in order to be able to know indispensable biological parameters. Recording the whale/dolphin condition is important to determine which samples should be given priority. Only the animals considered fresh or slightly decomposed are worth sampling for microbiology. All samples collected for microbiology should be taken as aseptically as possible. Ideally, the necropsy should be carried out by an experience scientist. Notes should be taken by an assistant.

After collection of the basic data, the body may be opened, preferably on a wide plastic sheet or on a necropsy table. All instruments necessary, collecting, bags, jars and vials with or without liquids should be at hand before making the first incision. An assistant should label the containers and take notes and pictures.

The protocols provided here below and the sample priority and field tissue checklist provided in the Annex will be useful to make sure that all the necessary samples are collected and preserved adequately.

1.3.2.1.1. Basic Data Protocol

- Investigator (name, telephone, affiliation, address, e-mail):
- Date:
- Location of stranding:
- Presence of other dead aquatic animals:
 - Species:
 - Number (estimation):
- Indication for an algal bloom: YES/NO
- Field number:
- Species³⁸:
- Sex³⁹:
- Standard body length⁴⁰:
- Condition:

³⁸ Species identification should be done by qualified persons. Ideally a picture of each specimen with its field number should be taken.

³⁹ A picture of the genital region with field number will help to confirm the sex.

⁴⁰ Precise how it was taken (measurements should be parallel to the dolphin body, e.g. total length from snout to fluke notch).

- alive
- fresh
- early decomposition
- advanced decomposition
- mummified
- Evidence for human interactions: YES/NO
 - Net marks
 - Knife cuts
 - Wounds caused by vessel strikes
 - Description-pictures
- Presence of skin lesions and wounds: YES/NO.
 - Description – pictures
 - Collect samples in formalin, DMSO and, if possible, freeze at –80°C
- Lactating: YES/NO

1.3.2.1.2. Specific sample collection ⁴¹

1.3.2.1.2.1. High priority samples

Reproductive tract

Ovaries and testes should always be examined, weighed, photographed and collected in 10% formalin (4% end concentration) to assess sexual maturity. The presence/absence of corpora albicantia and a corpus luteum should be recorded. Uterus should be opened to check for a foetus. The latter should be measured, weighed and sexed and, if small, conserved in formalin. Presence of sperm in the epididymis should be evaluated. A piece of at least 1x1x1 cm of both testes should be collected in formalin. The following questions may be answered in the field if time permits otherwise in the lab after addressing the mortality event.

- Ovaries:
 - presence of corpus albicans: NO, YES
 - presence of corpus luteum: YES, NO
- Foetus in uterus: YES, NO
 - sex
 - length
 - weight
- Testes: YES/NO
 - Right:
 - presence of seminal fluid
 - length
 - weight
 - Left:
 - presence of seminal fluid
 - length
 - weight

Virology and serology

⁴¹ Basic and advanced data protocols are also available at the Medaces website: http://medaces.uv.es/home_eng.htm

- The following organs are targeted by morbilliviruses and herpesviruses and should be carefully examined for any changes and lesions. Use gloves, wash them frequently and change them between each specimen:
 - Lungs
 - Spleen
 - Liver
 - Lymph nodes
 - Kidneys
 - Brain⁴²
 - Thymus
 - Heart
 - Skin
- Document, describe and take pictures⁴³ of any change in organ gross morphology. Take pictures of skin lesions.
- Ten grams or 2x2x2cm of each organ should be conserved on ice and then frozen at –80°C for virus isolation. Each sample should be carefully labelled. When no freezer or liquid nitrogen is available, cut tissue samples to ≤ 0.5 cm in any single dimension and preserve in ‘RNA later’ (Ambion) for PCR studies. Once submerged in ‘RNA later’ samples may stay at room temperature for a week. If a longer delay is expected then freeze them at –20°C or –80°C after a night at room temperature (no more than 25°C).
- Preserve small samples of the previously mentioned organs in 10% formalin and 20% DMSO for histo-pathological and molecular studies.
- Extract 5-10 ml blood directly from the heart or major blood vessels after disinfecting the surface with alcohol and put on ice. You may attempt to centrifuge the blood and take the supernatant before freezing to avoid further hemolysis.
- Take some pleural, peritoneal and pericardial fluids, urine, fluid from vesicles in sterile tubes, keep on ice and store at –80°C.

Bacteriology

- Document, describe and take pictures of any change in organ gross morphology.
- Collect 5-10grs samples from the kidneys, testes, uterus, placenta and foetus (if available), mammary glands, spleen, eventual subcutaneous abscesses, keep on ice and refrigerate at –4°C or freeze at –80°C if long delays are unavoidable (> 24h) before further analysis. When no freezing facilities are available, smaller samples should be kept in DMSO.
- Preserve 1x1x1 cm samples of the same organs in formalin and DMSO.
- Take a blood sample from the heart and process as described above.
- Collect pleural and peritoneal fluids, urine and pus from abscesses and store half in aerobic containers and half in anaerobic containers. Keep on ice and then freeze at –80°C if a laboratory is not at hand.

⁴² If the skull is to be preserved for a museum collection, separate the head from the body and introduce a small spoon into the foramen magnum to collect a piece of brain/cerebellum. An electric saw could be used to cut a sharp-edge window in the skull. The two pieces could be later glued together.

⁴³ Always place a piece of paper with specimen field number close to the lesion you wish to photograph, to be able to identify its origin when the event is over.

- If feasible (a laboratory is ready to receive and analyse the samples in a short time) take swabs from the eyes, blowhole and throat and place them in an appropriate bacterial medium transport and refrigerate.

Protozoans

- Document, describe and take pictures of any changes in organ gross morphology.
- Collect samples of the following organs, keep on ice, refrigerate at -4°C and send with cold pack to a specialized research institute if possible. Otherwise preserve small samples in 10% formalin and DMSO:
 - Brain
 - Heart
 - Skeletal muscles
 - Lymph nodes
 - Spleen
 - Thymus
 - Lungs
 - Foetus
 - Placenta
- Take a blood sample from the heart and process as described above.

Biotoxins

- Collect 5 to 10ml of blood in a heparinized syringe, separate the serum and freeze for shipment. If not possible, keep the sample on cold packs and ship to the lab. As several toxins may cause marine mammal mortalities and concentrate in different organs, it is recommended to take a wide range of samples including:
 - 50 grs of liver, kidney, lung (cranial pole), stomach contents, faeces, brain as well as bile and at least 3ml of urine. These samples should be kept on ice until frozen at -20°C .
 - Samples of brain, lungs and upper respiratory tract should also be preserved in 10% formalin.
- Collect water samples, keep on ice until frozen
- Collect fish and plankton with a plankton net, keep on ice until frozen
- Record any other aquatic animal mortality occurring concurrently with the cetacean outbreak of mortality

1.3.2.1.2.2. Intermediate priority samples

- When possible document and describe any change in the gross morphology of all organs not mentioned in 1.3.2.1.2.1. The following should always be examined:
 - Adrenals
 - Tonsils
 - Stomach
 - Intestine
 - Pancreas
 - Bladder
- Collect samples and store according to the procedures described in 1.3.2.1.2.1. for virology and bacteriology.

- Check the mouth, tongue, teeth and/or baleen plates, document and take pictures of any abnormalities and collect samples for virology and bacteriology as described in 1.3.2.1.2.1.
 - Description
- Examine the genital slit, penis (whole) and vagina (whole) for the presence of warts or vesicles, describe and take samples for virology as described in 1.3.2.1.2.1.
 - Warts: YES/NO
Describe and take pictures
 - Vesicles, ulcers: YES/NO
Describe and take pictures

1.3.2.2. Protocol for transportation and storage

All fresh samples should be kept on ice or cold packs, away from the sun while waiting for further processing. Upon arrival in the laboratory, they should be frozen at -20°C or -80°C according to the above mentioned protocols. Storage should be organized in a way that samples are easily found when the freezer is full which may be quite a task! Records should be kept of any sample location. Contact the local CITES Management Authority (http://www.cites.org/common/directy/e_directy.html) to know the requirements to obtain permits to export cetacean samples.

1.3.3. Carcass disposal

Carcass disposal may depend on the laws of each Member State. In some countries local authorities are responsible for the disposal of dead cetaceans. When it is not the case the OSCB should develop plans in advance in accordance with national authorities. Their feasibility should be discussed with the bodies that should intervene to help with carcass disposal (coastguards, navy, landfill site owners). The costs of each plan should be established. Here are some recommendations extracted from Geraci and Lounsbury (2005) and a background document from South African National Parks (online <http://www.sanparks.org/about/news/2006/july/whale.php>).

1.3.3.1. Let it lie

In uninhabited areas the carcass may be left on the beach. Weather, tide and scavengers will do the work. Before leaving the carcass baleen or teeth should be extracted. Open the abdomen and thorax to prevent any bloater decomposing in the sun. Care should be taken with large whales. Specimens that were euthanized represent a risk to scavengers and should be buried, taken to a sanitary landfill, composted or destroyed by incineration

1.3.3.2 Bury it

Burial of small cetaceans in a sandy beach may be relatively easy after cutting the carcasses. Burial of large cetaceans requires heavy equipment and experienced operators. Environmental damage and disturbance should be considered. The burial site should be above the water table to avoid contamination with body fluids. The hole should be deep so that the carcass is buried under at least one or two meters of earth.

1.3.3.3. Burn it

Burning the carcass reduces the mass and volume, allowing for whatever is left over to be cut up and removed either into the sea or to a landfill site. The burn will involve stacking a cremating pyre of wood around the whale and using solid accelerants in the slits of the blubber, burning it for a few days and then assessing the situation. Anti-oil pollution solvents may be used to mop up the resulting oil effluents.

1.3.3.4. Tow it out to sea

The carcass may be towed out to sea, providing it is released far enough offshore (about 80 km or more) so that currents and winds do not bring it back, it is clear of a shipping lane and has enough ballast to sink. The carcass should be cut open to avoid bloating and favour sinking. Collaboration with scientists studying 'whale falls' (Hagg, 2005) would be beneficial. Before considering this option, contact the relevant authorities (navy, coastguards) and ask their permission and requirements to minimize problems with boat traffic.

1.3.3.5. Compost it

Carcasses up to 640 kg may be placed in a composting bin and covered with a 'bulking agent' such as sawdust or straw, high in carbon. As anaerobic microorganisms break down the carcass, fluids and odorous gases diffuse into the bulking material where they degrade to carbon dioxide and water. A properly functioning composting unit requires minimal maintenance, emits little odour, has no effects on groundwater, reaches internal temperatures high enough to kill pathogens and break down chemical euthanasia agents. Please see the website of the Minnesota Department of Agriculture for more details www.mda.state.ms.us.

1.3.4. Communication management

At least one person of the OSCB should be in charge of communication management. His/her job would include calling the local authorities, giving the volunteers their tasks, write down the name, coordinates (telephone number, e-mail) and tasks of the participants, manage the public and contact other facilities that may help with the stranding event, animal rescue and carcass disposal.

1.4. Activities to implement after the epidemic is over

1.4.1. Debriefing meeting

Organize a debriefing meeting with all the people involved in the stranding and ask them their opinion on the event, the number of dolphins they counted and attended, the presence of other dead aquatic animals on the beach, if the response to the stranding was adequate in their opinion, what material was missing. Thank all volunteers for their help and distribute any new information material and stickers.

1.4.2. Preliminary report

Write an initial report as soon as possible. Points to summarize in the report should include the following (Geraci and Lounsbury, 2005):

- Date and location of the stranding, type of beach;
- Nature, timing, effectiveness of the initial response;
- Account of the scene as described by the team:
 - species involved and number of specimens per species,
 - pattern of stranding,
 - presence of other dead or sick aquatic animals,
 - cetacean condition,
 - indication for an epidemic,
 - environmental conditions.
- Necropsy findings;
- Specimens collected, place where they are stored, condition for storage;
- The actions taken and reason for decisions:
 - intended response plan,
 - impediments to implementation,
 - eventual action.
- Additional information:
 - photographs, maps, drawings,

- reports from independent groups (police, coastguards, stranding networks, rehabilitation facility),
- Things to be improved.

1.4.3. *Media communication and alert*

Write a brief note on the event for the media. Alert the media and public for the possibility of more cetacean strandings on every beach and encourage them to report.

1.4.4. *Contacts*

Contact the laboratories that will analyse the samples and coordinate for sample dispatch according to the airline procedures. Make sure that somebody will collect the samples at their arrival and that the person in charge is not on holidays at the time you send the samples. Keep telephone contact until you are assured that the samples arrived and were properly stored.

1.4.5 *Follow-up*

Ask for a follow-up of the analysis and prepare a manuscript on the findings together with all involved institutions.

2. CONTINGENCY PLAN DRAFT

In the Mediterranean Sea, epidemics of morbillivirus have caused the death of thousands of striped dolphins in 1990-1992 and in 2007 as well as mortalities in long-finned pilot whales (Aguilar and Raga, 1990; Fernandez *et al.*, 2008; Raga *et al.*, 2008; Van Bressem *et al.*, 2009). An uncharacterised morbillivirus was also detected in two short-beaked common dolphins stranded along the coast of Crimea in 1994 during an outbreak of mortality (Birkun *et al.*, 1999). Herpesviruses, *Toxoplasma* spp. and *Brucella* spp. have been identified in odontocetes stranded along the coasts of Spain (Mediterranean Sea and Canary Islands) and Italy (Di Guardo *et al.*, 1995, 2009; Van Bressem *et al.*, 2001b; Esperon *et al.*, 2008). Paralytic phycotoxins may have been responsible for the death of several Mediterranean monk seals in the Mauritanian colony (Hernandez *et al.*, 1998, Harwood, 1998). Thus, Member States should be ready for the eventuality of cetacean mortalities in their waters due to viruses, bacteria, protozoans and HBAs. The development and strengthening of existing national and regional stranding networks will be key to properly address these mortalities. Importantly, data on strandings along the coasts of the Black and Mediterranean Sea as well as the contiguous Atlantic waters should be sent to MEDACES (http://medaces.uv.es/home_eng.htm) set-up in 2001 to co-ordinate all national and regional efforts for riparian countries. The establishment of a CEUM Sub-Committee within the ACCOBAMS Scientific Committee would further improve answer to strandings by facilitating coordination between Member States and helping with infrastructure and capacity building. The foundation of CEUM Working Group that would communicate by e-mail would facilitate information diffusion.

2.1 OSCB

An efficient contingency plan will be based on the foundation of a national OSCB that will be responsible for the activities and decisions related to unusual mortality event as well as on timely relaying information on their occurrence to the Member States and to the suggested CEUM Sub-Committee. The easy and open communication between OSCBs will help determine when a die-off is underway, ensure a timely and adequate intervention and, ultimately, uncover the cause of the die-off and explore environmental factors that may have enhanced its severity. Minimal personal of an OSCB should be one scientist, preferably a marine mammal research veterinarian with good knowledge in the biology of cetaceans.

2.2.1. Team

2.2.1.1. Administrative support team

At least one person should be in charge of the administration of the OSCB. His/her responsibilities should include:

- Coordination with local authorities;
- Communication with media and public;
- Development of education activities and material;
- Management of volunteers;
- Building of a website;
- Finance management.

2.2.1.2. Scientists

A biologist and a veterinarian, both ideally with experience with cetaceans, should be appointed by the OSCB. Their responsibility should include the following items:

- Develop a stranding network that can react quickly to cetacean mortality events;
- Develop protocols for attending strandings and for the collection of tissues for microbiology, parasitology and HBA testing;
- Prepare the material necessary for attending a die-off (everything should be ready and at hand for instant leave);
- Provide field staff and build capacity;
- Recruit and manage volunteers;
- Timely intervention and incident control coordination: an educated decision on response level (equipment and personnel);
- Coordination with other similar networks within and outside the Member States;
- Adequate decision regarding the fate of live-stranded cetaceans (release, rehabilitation, euthanasia);
- Collection of biological data and pictures;
- Necropsy of dead cetaceans;
- Collection of samples;
- Contact with laboratories that will process the samples;
- Contact with the authorities that will deliver CITES permits;
- Contact with the airlines that will transport the samples: ask for their specific requirements for the packaging and dispatch of biological materials;
- Prepare a protocol for packing and dispatching biological material;
- Send the samples;
- Carcass disposal in agreement with national regulation.

2.2.1.3. Volunteers

Volunteers should be recruited to help with strandings. They may have distinct backgrounds and personalities and should be given tasks according to their respective skills.

2.2 Memoranda of Understanding with Collaborators

Memoranda of understanding should be established with other institution and laboratories willing to help at the occasion of an outbreak of mortality. Laboratories (bacteriology, virology, parasitology, HBA research) should be asked to send specific protocols for sampling, preserving and sending the samples. Ideally they should provide the vials, fluids and other material required for sampling. Otherwise they should specify the material needed for sampling and the firm where to buy it.

2.3 Get ready to detect an epidemic and unusual mortality events

Regular visits to the beaches by scientists and volunteers of the OSCB should be organized, so that a baseline for a 'normal' stranding number may be established by species, geographic location, season of the year etc. All cetaceans that are fresh or moderately decomposed should be necropsied and samples sent for parasitological, bacteriological and virological to get an idea of the common macro- and micro-fauna in these populations. The OSCB should make sure that the media have the hotline phone number, distribute posters on epidemics in public places and regularly communicate with coast guards, fishermen associations and any person or organization susceptible to register unusual mortalities of marine mammals.

- ◆ Criteria pointing to the occurrence of an unusual mortality event⁴⁴ are:
 - Marked increase in the magnitude or a marked change in the nature of morbidity, mortality or strandings when compared with prior records;
 - A temporal change in morbidity, mortality or strandings is occurring;
 - A spatial change in morbidity, mortality or strandings is occurring;
 - The species, age, or sex composition of the affected animals is different than that of animals that are normally affected;
 - Affected animals exhibit similar or unusual pathologic findings, behavior patterns, clinical signs, or general physical condition (e.g., blubber thickness);
 - Morbidity is observed concurrent with or as part of an unexplained continual decline of a marine mammal population, stock, or species.
- ◆ The following criteria for defining an epidemic are:
 - It is unexpected;
 - It involves the stranding and death of unusual large number of cetaceans from one or several species;
 - It may start in one country and progress to others;
 - It may last for several months;
 - It may recur;
 - It demands an immediate response.

2.4. Get ready to attend an epidemic

When an epidemic is suspected, the OSCB should get in contact with national and international collaborators and the suggested CEUM Sub-Committee, and call its volunteers as soon as possible. Once ready, the OSCB scientists should go at once to the site of stranding taking all the necessary equipment already pre-packed. They should give volunteers their tasks before attending the animals. The administrator should liaise with the local authorities, public and media.

2.5. Determine the end of the event

The end of the epidemic may be difficult to pinpoint but in the case of morbillivirus infection will likely be gradual. Collaboration between all Member States will be essential to estimate the end of the mortality event.

3. OUTLINE OF A PROGRAMME TO BUILD CAPACITY

Capacity building is a prerequisite to an efficient die-off response. It should concern the staff of the OSCB, volunteers, coastguards and navy officials, fishermen and the general public (please see § 1.2.3.). The following programme outlines the steps that may be taken to realize this target.

⁴⁴ Source: <http://www.nmfs.noaa.gov/pr/health/mmume/criteria.htm>

- Organization of annual workshops on cetacean epidemics and infectious diseases for the staff of the OSCBs. National and international experts of morbilliviruses, *Brucella* spp. and other bacteria as well as of HBAs should ideally be invited to participate;
- Organization of training courses on cetacean strandings, infectious agents and sample collection for the staff of the nascent OSCBs. These training courses may take place at the OSCB, CEUM facilities or at the laboratory of national and international stranding networks;
- Organization of national meetings with other relevant bodies related to strandings (universities, coastguards, oceanaria, etc) and presentation of documents on cetacean epidemics and diseases;
- Acquire capacity building material (books, papers, reports, CDs, DVDs, protocols) from other stranding networks, NGOs and scientists;
- Development of a library dedicated to marine mammal strandings and epidemics;
- Communication with other OSCBs;
- Preparation of leaflets on the biology of cetaceans and the reasons of strandings and mass die-offs targeting the general public;
- Preparation of children booklets and posters on whales and dolphins and stranding events.

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5. LITERATURE CITED

- Aguilar, A. and Raga, J.A. 1993. The striped dolphin epizootic in the Mediterranean Sea. *Ambio*, **22**, 524-528.
- Barr, B., Dunn, J.L., Daniel, M.D. and Banford, A. 1989. Herpes-like viral dermatitis in a beluga whale (*Delphinapterus leucas*). *Journal of Wildlife Diseases*, **25**, 608-611.
- Birkun, A., Kuiken, T., Krivokhizhin, S., Haines, D.M., Osterhaus, A.D.M.E., Van de Bildt, M.W.G., Joiris, C.R., and Siebert, U. 1998. Epizootic of morbilliviral disease in common dolphins (*Delphinus delphis ponticus*) from the Black Sea. *Veterinary Record*, **144**, 85-92.
- Black, F. 1991. Epidemiology of Paramyxoviridae. In: Kingsbury, D.W. (ed) *The Paramyxoviruses*. Plenum Press, New York, p 509-536.
- Blanchard, T.W., Santiago, N.T., Lipscomb, T.P., Garber, R.L., Mcfee, W.E. and Knowles, S. 2001. Two novel alphaherpesviruses associated with fatal disseminated infections in Atlantic bottlenose dolphins. *Journal of Wildlife Diseases*, **37**, 297-305.
- Bompar, J.-M., Dhermain, F., Poitevin, F. and Cheylan, M. 1991. Les dauphins méditerranéens victimes d'un virus mortel. *La Recherche*, **22**, 506-508.
- Bortolotto, A., Casini, L. and Stanzani, L.A. 1992. Dolphin mortality along the southern Italian coast (June-September 1991). *Aquatic Mammals*, **18**, 56-60.
- Bossart, G.D., Baden, D.G., Ewing, R.Y., Roberts, B., and Wright, S.C. 1998. Brevetoxicosis in manatees (*Trichechus manatus latirostris*) from the 1996 epizootic: gross, histologic, and immunohistochemical features. *Toxicological Pathology*, **26**, 276-282.
- Brew, S.D., Perrett, L.L., Stack, J.A., Macmillan, A.P. and Staunton, N.J. 1999. Human Exposure to *Brucella* recovered from a Sea Mammal. *Veterinary Record*, **144**, 483.
- Cameron, C.E., Zuerner, R.L., Raverty, S., Colegrove, K.M., Norman, S.A., Lambourn, D.M., Jeffries, S.J. and Gulland, F.M. 2008. Detection of pathogenic *Leptospira* bacteria in pinniped populations via PCR and identification of a source of transmission for zoonotic leptospirosis in the marine environment. *Journal of Clinical Microbiology*, **46**, 1728-33.
- Cebrian, D. 1995. The striped dolphin *Stenella coeruleoalba* epizootic in Greece, 1991-1992. *Biological Conservation*, **74**, 143-145.
- Conrad, P.A., Miller, M.A., Kreuder, C., James, E.R., Mazet, J., Dabritz, H., Jessup, D.A., Gulland,

- F.M. and Grigg, M.E. 2005. Transmission of *Toxoplasma*: Clues from the study of sea otters as sentinels of *Toxoplasma gondii* flow into the marine environment. *International Journal of Parasitology*, **35**, 1155-1168.
- Corbel, M.J. 1997. Brucellosis: an overview. *Emerging Infectious Diseases*, **3**, 213-21.
- Dierauf, L.A., Vandenbroek, D., Roletto, J., Koski, M., Amaya, L. and Gage, L. 1985. An epizootic of leptospirosis in California sea lions. *Journal of the American Veterinary Medical Association*, **187**, 1145-1148.
- Di Guardo, G., Agrimi, U., Morelli, L., Cardeti, G., Terracciano, G. and Kennedy, S. 1995. *Post mortem* investigations on cetaceans found stranded on the coasts of Italy between 1990 and 1993. *Veterinary Record*, **136**, 439-442.
- Di Guardo, G., Proietto, U., Di Francesco, C.E., Marsilio, F., Zaccaroni, A., Scaravelli, D., Mignone, W., Garibaldi, F., Kennedy, S., Forster, F., Iulini, B., Bozzetta, E., and Casalone, C. 2009. Cerebral toxoplasmosis in striped dolphins (*Stenella coeruleoalba*) stranded along the Ligurian Sea coast of Italy. *Veterinary Pathology*, 46, in press.
- Domingo, M., Ferrer, L., Pumarola, M., Marco, A., Plana, J., Kennedy, S., McAliskey, M., and Rima, B.K. 1990. Morbillivirus in dolphins. *Nature*, **348**, 21.
- Domingo, M., Visa, J., Pumarola, M., Marco, A., Ferrer, L., Rabanal, R., and Kennedy, S. 1992. Pathologic and immunocytochemical studies of morbillivirus infection in striped dolphins (*Stenella coeruleoalba*). *Veterinary Pathology*, **29**, 1-10.
- Dubey, J.P., Zarnke, R., Thomas, N.J., Wong, S.K., Van Bonn, W., Briggs, M., Davis, J.W., Ewing, R., Mense, M., Kwok, O.C.H., Romand, S. and Thulliez, P. 2003. *Toxoplasma gondii*, *Neospora caninum*, *Sarcocystis canis*-like infections in marine mammals. *Veterinary Parasitology*, **116**, 275-296.
- Duignan, P.J., House, C., Geraci, J.R., Duffy, N., Rima, B.K., Walsh, M.T., Early, G., St Aubin, D.J., Sadove, S., Koopman, H. and Rhinehart, H. 1995a. Morbillivirus infection in cetaceans of the western Atlantic. *Veterinary Microbiology*, **44**, 241-249.
- Duignan, P.J., House, C., Geraci, J.R., Early, G., Copland, H.G., Walsh, M.T., Bossart, G.D., Cray, C., Sadove, S., St. Aubin, D.J. and Moore, M. 1995b. Morbillivirus infection in two species of pilot whales from the Western Atlantic. *Marine Mammal Science*, **11**, 150-162.
- Duignan, P.J., House, C., Odell, D.K., Wells, R.S., Hansen, L.J., Walsh, M.T., St Aubin, D.J., Rima, B.K. and Geraci, J.R. 1996. Morbillivirus in bottlenose dolphins: evidence for recurrent epizootics in the Western Atlantic and Gulf of Mexico. *Marine Mammal Science*, **12**, 495-515.
- Esperón, F., Fernández, A. and Sánchez-Vizcaíno, J.M. 2008. Herpes simplex-like infection in a bottlenose dolphin stranded in the Canary Islands. *Diseases of Aquatic Organisms*, **81**, 73-76.
- Ewalt, D.R., Payeur, J.B., Martin, B.M., Cummins, D.R. and Miller, W.G. 1994. Characteristics of a *Brucella* species from a bottlenose dolphin (*Tursiops truncatus*). *Journal of Veterinary Diagnostic Investigation*, **6**, 448-452.
- Fenner, F.J., Gibbs, E.P.G., Murphy, F.A., Rott, R., Studdert, M.J. and White, D.O. 1993. *Veterinary Virology*, 2nd edn. Academic Press Inc., San Diego, California.
- Fernández, A., Esperón, F., Herraéz, P., Espinosa de los Monteros, A., Clavel, C., Bernabé, A., Sanchez-Vizcaino, M., Verborgh, Ph., DeStephanis, R., Toledano, F. and Bayon, A. 2008. Morbillivirus and pilot whale deaths, Mediterranean Sea. *Emerging Infectious Diseases*, **14**, 792-794.
- Fire, S.E., Flewelling, L.J., Naar, J., Twiner, M.J., Henry, M.S., Pierce, R.H., Gannon, D.P., Wang, Z., Davidson, L. and Wells, R.S. 2008. Prevalence of brevetoxins in prey fish of bottlenose dolphins in Sarasota Bay, Florida. *Marine Ecology Progress Series* 368:283-294.
- Flewelling, L.J., Naar, J.P., Abbott, J.P., Baden, D.G., Barros, N.B., Bossart, G.D., Bottein, M.-Y.D., Hammond, D.G., Haubold, E.M., Heil, C.A., Henry, M.S., Jacocks, H.M., Leighfield, T.A., Pierce, R.H., Pitchford, T.D., Rommel, S.A., Scott, P.S., Steidinger, K.A., Truby, E.W., Van Dolah, F.M., and Landsberg, J.H. 2005. **Brevetoxicosis: Red tides and marine mammal mortalities.** *Nature*, **435**, 755-756
- Forcada, J., Aguilar, A., Hammond, P.S., Pastor, X. and Aguilar, R. 1994. Distribution and numbers of striped dolphins in the western Mediterranean Sea after the 1990 epizootic outbreak. *Marine Mammal Science*, **10**, 137-150.

- Forsyth, M.A., Kennedy, S., Wilson, S., Eybatov, T. and Barrett, T. 1998. Canine distemper virus in a Caspian seal. *Veterinary Record*, **143**, 662-664.
- Foster, G., Macmillan, A.P., Godfroid, J., Howie, F., Ross, H.M., Cloeckert, A., Reid, R.J., Brew, S. And Patterson, I.A.P. 2002. A Review of *Brucella* sp. infection of sea mammals with particular emphasis on isolates from Scotland. *Veterinary Microbiology*, **90**, 563-580.
- Foster, G., Osterman, B.S., Godfroid, J., Jacques, I. and Cloeckert, A. 2007. *Brucella ceti* sp. nov. and *Brucella pinnipedialis* sp. nov for *Brucella* strains with cetaceans and seals as their preferred hosts. *International Journal of Systematic and Evolutionary Microbiology*, **57**, 2688-2693.
- Garibaldi, F., Mignone, W., Caroggio, P., Ballardini, M., Podestà, M., Bozzetta, E., Casalone, C., Marsilio, F., Di Francesco, C.E., Proietto, U., Colangelo, P., Scaravelli, D. and Di Guardo, G. 2008. Serological evidence of *Morbillivirus* infection in striped dolphins (*Stenella coeruleoalba*) found stranded on the Ligurian Sea coast of Italy. Proceedings of 22th ECS Conference, Egmond aan Zee, The Netherlands, 10-12. March 2008, pp. 192-193.
- Geraci, J.R. and Lounsbury, V.J. 2005. *Marine Mammals Ashore: A Field Guide for Strandings*. Second Edition National Aquarium in Baltimore, Inc, Baltimore, MD.
- Geraci, J.R., Anderson, D.M., Timperi, R.J., St. Aubin, D.J., Early, G.A., Prescott, J.H., and Mayo, C.A. 1989. Humpback whales (*Megaptera novaeangliae*) fatally poisoned by a dinoflagellate toxin. *Canadian Journal of Fisheries and Aquatic Science*, **46**, 1895-1898.
- Gilmartin, W.G., DeLong, R.L., Smith, A.W., Griner, L.A., and Dailey, M.D. 1980. An investigation into unusual mortality in the Hawaiian monk seal, *Monachus schauinslandi*. In: Hawaiian monk seal die-off response plan, a workshop report, 1980 (Ed. W.G. Gilmartin), pp. 32-41. San Diego, National Marine Fisheries Service.
- Grachev, M.A., Kumarev, V.P., Mammev, V.P., Zorin, V.L., Baranova, L.V., Denikina, N.N., Belicov, S.I., Petrov, E.A., Kolsnik, V.S., Kolsnik R.S., Beim, A.M., Kudelin, V.N., Nagieva, F.G., and Sidorovo, V.N. 1989. Distemper virus in Baikal seals. *Nature*, **338**, 209.
- Gonzalez, L., Patterson, I.A., Reid, R.J., Foster, G., Barberan, M., Blasco, J.M., Kennedy, S., Howie, F.E., Godfroid, J., MacMillan, A.P., Shock, A. and Buxton, D. 2002. Chronic meningoencephalitis associated with *Brucella* sp. infection in live-stranded striped dolphins (*Stenella coeruleoalba*). *Journal of Comparative Pathology*, **126**, 147-52.
- Groussaud, P., Shankster, S.J., Koylass, M.S. and Whatmore, A.M. 2007. Molecular typing divides marine mammal strains of *Brucella* into at least three groups with distinct host preferences. *Medical Microbiology*, **56**, 1512-1518.
- Gulland, F.M., Koski, M., Lowenstine, L.J., Colagross, A., Morgan, L., and Spraker, T. 1996. Leptospirosis in California sea lions (*Zalophus californianus*) stranded along the central California coast, 1981-1994. *Journal of Wildlife Diseases*, **32**, 572-80.
- Haag, A. 2005. Whale fall. *Nature*, **433**, 566-567.
- HARRNESS. 2005. Harmful Algal Research and Response: A National Environmental Science Strategy 2005–2015. Ramsdell, J.S., D.M. Anderson and P.M. Glibert (Eds.), Ecological Society of America, Washington DC, 96 pp.
- Hammond, J.A., Pomeroy, P.P., Hall, A.J. and Smith, V.J. 2005. Identification of real-time PCR quantification of Phocine distemper virus from two colonies of Scottish grey seals in 2002. *Journal of General Virology* **86**, 2563–2567.
- Härkönen, T., Dietz, R., Reijnders, P., Teilmann, J., Harding, K., Hall, A., Brasseur, S., Siebert, U., Goodman, S.J., Jepson, P.D., Dau Rasmussen, T. and Thompson, P. 2006. The 1988 and 2002 phocine distemper virus epidemics in European harbour seals. *Diseases of Aquatic Organisms*, **68**, 115-130.
- Harris, C.M., Travis, J.M. and Harwood, J. 2008. Evaluating the influence of epidemiological parameters and host ecology on the spread of phocine distemper virus through populations of harbour seals. *PLoS ONE*, **3**, 1-6.
- Harwood, J. 1998. What killed the monk seals? *Nature*, **393**, 17-18.
- Hernandez, M., Robinson, I., Aguilar, A., Gonzalez, L.M., Lopez-Jurado, L.F., Reyero, M. I. and Cacho, E. 1998. Did algal toxins cause monk seal mortality? *Nature*, **393**, 28.
- Jensen, T., van de Bildt, M., Dietz, H.H., Andersen, T.H., Hammer, A.S., Kuiken, T., Osterhaus, A.D.M.E. 2002. Another phocine distemper outbreak in Europe. *Science*, **297**, 209

- Kennedy, S. 1998. Morbillivirus infections in aquatic mammals. *Journal of Comparative Pathology*, **119**, 201-225.
- Kennedy, S., Smyth, J.A., Cush, P.F., McCullough, S.J., Allan, G.M., and McQuaid, S. 1988. Viral distemper now found in porpoises. *Nature*, **336**, 21.
- Kennedy, S., Smyth, J.A., Cush, P.F., Duignan, P., Plateen, M., McMullough, S.J., and Allan, G. 1989. Histopathologic and immunocytochemical studies of distemper in Seals. *Veterinary Pathology*, **26**, 97-103.
- Kennedy, S., Smyth, J.A., Cush, P.F., McAliskey M., McCullough, S.J., and Rima, B.K. 1991. Histological and immunocytochemical studies of distemper in harbour porpoises. *Veterinary Pathology*, **28**, 1-7.
- Kennedy, S., Kuiken, T., Ross, H.M., McAliskey, M., Moffett, D., McNiven, M., and Carole, M. 1992a. Morbillivirus infection in two common porpoises (*Phocoena phocoena*) from the coasts of England and Scotland. *Veterinary Record*, **131**, 286-290.
- Kennedy, S., Lindstedt, I.J., Mc Aliskey, M.M., McConnell, S.A. and McCullough, S.J. 1992b. Herpesviral encephalitis in a harbor porpoise (*Phocoena phocoena*). *Journal of Zoo and Wildlife Medicine*, **23**, 374- 379.
- Kik, M.J., Goris, M.G., Bos, J.H., Hartskeerl, R.A. and Dorrestein, G.M. 2006. An outbreak of leptospirosis in seals (*Phoca vitulina*) in captivity. *Veterinary Quarterly*, **28**, 33-39.
- Krafft, A., Lichy, J.H., Lipscomb, T.P., Klaunberg, B.A., Kennedy, S. and Taubenberger J.K. 1995. Postmortem diagnosis of morbillivirus infection in bottlenose dolphins (*Tursiops truncatus*) in the Atlantic and Gulf of Mexico epizootics by polymerase chain reaction-based assay. *Journal of Wildlife Diseases*, **31**, 410-415.
- Kuiken, T., Kennedy, S., Barrett, T., Van de Bildt, M. W. G., Borgsteede, F. H., Brew, S. D., Codd, G. A., Duck, C., Deaville, R., Eybatov, T., Forsyth, M. A., Foster, G., Jepson, P. D., Kydyrmanov, A., Mitrofanov, I., Ward, C. J., Wilson, S., Osterhaus, A. D. M. E. 2006. **The** 2000 canine distemper epidemic in Caspian seals (*Phoca caspica*): pathology and analysis of contributory factors. *Veterinary Pathology*, **43**, 321-338.
- Lloyd-Smith, J.O., Greig, D.J., Hietala, S., Ghneim, G.S., Palmer, L., St Leger, J., Grenfell, B.T. and Gulland, F.M. 2007. Cyclical changes in seroprevalence of leptospirosis in California sea lions: endemic and epidemic disease in one host species? *BMC Infectious Diseases*, **7**, 125.
- Lonergan, M., and Harwood, J. 2003. The potential effects of repeated outbreaks of phocine distemper among harbour seals: a response to Harding *et al.* *Ecology Letters*; **6**, 889-893;
- Lipscomb, T.P., Schulman, F.Y., Moffett, D., and Kennedy, S. 1994. Morbilliviral disease in Atlantic bottlenose dolphins (*Tursiops truncatus*) from the 1987-1988 epizootic. *Journal of Wildlife Diseases*, **30**, 567-571.
- Lipscomb, T.P., Kennedy, S., Moffett, D., Krafft, A., Klaunberg, B.A., Lichy, J.H., Regan, G.T., Worthy, G.A.J., and Taubenberger, J.K. 1996. Morbilliviral epizootic in bottlenose dolphins of the Gulf of Mexico. *Journal of Veterinary Diagnostic Investigation*, **8**, 283-290.
- Mamaev, L.V. Visser, I.K.G., Belikov, S.I. Denikina, N.N. Harder, T. Goatley, L. Rima, B. Edginton, B. Osterhaus, A.D.M.E. Barrett, T. 1996. Canine distemper virus in Lake Baikal seals (*Phoca sibirica*). *Veterinary Record*, **138**, 437-439.
- Martineau, D., Lagace, A., Beland, P., Higgins, R., Armstrong, D. and Shugart, L.R. 1988. Pathology of stranded beluga whales (*Delphinapterus leucas*) from the St. Lawrence Estuary, Québec, Canada. *Journal of Comparative Pathology*, **98**, 287-311.
- McDonald, W.L., Jamaludin, R., Mackereth, G., Hansen, M., Humphrey, S., Short, P., Taylor, T., Swingle, J., Dawson, C.E., Whatmore, A.M., Stubberfield, E., Perrett, L.L. and Simmons, G. 2006. Characterization of a *Brucella* sp. strain as a marine-mammal type despite isolation from a patient with spinal osteomyelitis in New Zealand. *Journal of Clinical Microbiology*, **44**, 4363-4370.
- McLellan, W., Friedlaender, A., Mead, J., Potter, C. and Pabst, D.A. 2002. Analysing 25 years of bottlenose dolphin (*Tursiops truncatus*) strandings along the Atlantic coast of the USA: do historic records support the coastal migratory stock hypothesis. *Journal of Cetacean Research and Management*, **4**, 297-304.

- Mikaelian, I., Boisclair, J., Dubey, J.P., Kennedy, S. and Martineau, D. 2000. Toxoplasmosis in beluga whales (*Delphinapterus leucas*) from the St Lawrence estuary: two cases reports and a serological survey. *Journal of Comparative Pathology*, **122**, 73-76.
- Mikaelian, I., Tremblay, M.P., Montpetit, C., Tessaro, S.V., Cho, H.J., House, C., Measures, L. and Martineau, D. 1999. Seroprevalence of selected viral infections in a population of beluga whales (*Delphinapterus leucas*) in Canada. *Veterinary Record*, **144**, 50-51.
- Miller, W.G., Adams, L.G., Ficht, T.A., Cheville, N.F., Payeur, J.P., Harley, D.R., House, C., and Ridgway, S.H. 1999. Brucella-induced abortions and infection in bottlenose dolphins (*Tursiops truncatus*). *Journal of Zoo and Wildlife Medicine*, **30**, 100-110.
- Miller, M.A., Miller, W.A., Conrad, P.A., James, E.R., Melli, A.C., Leutenegger, C.M., Dabritz, H.A., Packham, A.E., Paradies, D., Harris, M., Ames, J., Jessup, D.A., Worcester, K. and Grigg, M.E. 2008. Type X *Toxoplasma gondii* in a wild mussel and terrestrial carnivores from coastal California: new linkages between terrestrial mammals, runoff and toxoplasmosis of sea otters. *International Journal of Parasitology*, **38**, 1319-1328.
- Müller, G., Wünschmann, A., Baumgärtner, W., Birkun, A., Komakhidze, A., Stanev, T. and Joiris, C. J. 2002. *Veterinary Microbiology* **87**, 183-190.
- Norman, S.A., DiGiacomo, R.F., Gulland, F.M., Meschke, J.S. and Lowry, M.S. 2008. Risk factors for an outbreak of leptospirosis in California sea lions (*Zalophus californianus*) in California, 2004. *Journal of Wildlife Diseases*, **44**, 837-44.
- Ohishi, K., Takishita, K., Kawato, M., Zenitani, R., Bando, T., Fujise, Y., Goto, Y., Yamamoto, S., Maruyama, T. 2004. Molecular evidence of new variant *Brucella* in North Pacific common minke whales. *Microbes and Infection*, **6**, 1199-2204.
- Osterhaus, A.D.M.E. and Vedder, E.J. 1988. Identification of virus causing recent seal deaths. *Nature*, **335**, 20.
- Osterhaus, A., Groen, J., Niesters, H., Van de Bildt, M., Martina, B., Vedder, L., Vos, J., Egmond, H., Sidi, B.A., and Barhan, M.E.O. 1997. Morbillivirus in monk seal mass mortality. *Nature*, **388**, 838-839.
- Raga, J.A., Banyard, A., Domingo, M., Corteyn, M., Van Bresse, M-F., Fernández, M., Aznar, F.J. and Barrett, T. 2008. Dolphin morbillivirus epizootic resurges in the Mediterranean. *Emerging Infectious Diseases*, **14**, 471-473.
- Raverty, S. and Gaydos, J. 2007. Killer whale necropsy and disease testing protocol. <http://www.vetmed.ucdavis.edu/whc/pdfs/orcanecropsyprotocol.pdf>.
- Roizman, B., Desrosiers, R.C., Fleckenstein, B., Lopez, C., Minson, A.C. and Studdert, M.J. 1995. Family Herpesviridae. In: Murphy, F.A., Fauquet, C.M., Bishop, D.H.L., Ghabrial, S.A., Jarvis, A.W., Martelli, G.P., Mayo, M.A. and Summers, M.D. (eds) Virus taxonomy, Sixth Report of the International Committee on Taxonomy of Viruses. *Archives of Virology Supplement 10*. Springer-Verlag. New York, p 114-127.
- R.S.P.C.A. 1997 Stranded cetaceans: guidelines for veterinary surgeons. Royal Society for the Prevention of Cruelty to Animals, Horsham, U.K.
- Scholin, C.A., F. Gulland, G.J. Doucette, S. Benson, M. Busman, F.P. Chavez, J. Cordaro, R. Delong, A. De Vogelaere, J. Harvey, M. Haulena, K. Lefebvre, T. Lipscomb, S. Loscutoff, L.J. Lowenstine, R. Marin, III, P.E. Miller, W.A. McLellan, P.D.R. Moeller, C.L. Powell, T. Rowles, P. Silvagni, M. Silver, T. Spraker, V. Trainer and Van Dolah, F.M. 2000. Mortality of sea lions along the central California coast linked to a toxic diatom bloom. *Nature*, **403**: 80-84.
- Smolarek-Benson, K.A., Manire, C.A., Ewing, R.Y., Saliki, J.T., Townsend, F.I., Ehlers, B. and Romero, C.H. 2006. Identification of novel alpha- and gammaherpesviruses from cutaneous and mucosal lesions of dolphins and whales. *Journal of Virological Methods*, **136**, 261-266.
- Sohn, A., Probert, W.S., Glaser, C.A., Gupta, N., Bollen, A.W., Wong, J.D., Grace, E.M. and McDonald, W.C. 2003. Human neurobrucellosis with intracerebral granuloma caused by a marine mammal *Brucella* spp. *Emerging Infectious Diseases*, **9**, 485-488.
- Steidinger, K.A. and Baden, D.G. 1984. Toxic marine dinoflagellates. In *Dinoflagellates*. (Ed. D.L. Spector), pp. 201-261, Academic Press, New York.
- Torres de la Riva, G., Kreuder Johnson, C., **Gulland, F.M.D.**, Langlois, G.W., Heyning, J.E., Rowles, T.K. and Mazet, J.A.K. 2009. Association of an unusual marine mammal mortality event with

- Pseudo-nitzschia spp. blooms along the southern California coastline. *Journal of Wildlife Diseases*, **45**, 109-121.
- Taubenberger, J.K., Tsai, M., Krafft, A.E., Lichy, J.H., Reid, A.H., Schulman, F.Y. and Lipscomb, T.P. 1996. Two morbilliviruses implicated in bottlenose dolphin epizootics. *Emerging Infectious Diseases*, **2**, 213-216.
- Tryland, M., Kleivane, L., Alfredsson, A., Kjeld, M., Arnason, A., Stuen, S. and Godfroid, J. 1999. Evidence of *Brucella* infection in marine mammals in the North Atlantic Ocean. *Veterinary Record*, **144**, 588-592.
- Van Bressem, M.F., Visser, I.K.G., De Swart, R.L., Örvell C., Stanzani, L., Androukaki, E., Siakavara, K., and Osterhaus, A.D.M.E. 1993. Dolphin morbillivirus infection in different parts of the Mediterranean Sea. *Archives of Virology*, **129**, 235-242.
- Van Bressem, M-F., Van Waerebeek, K., Garcia-Godos, A., Dekegel, D. and Pastoret, P-P. 1994. Herpes-like virus in dusky dolphins, *Lagenorhynchus obscurus*, from coastal Peru. *Marine Mammal Science*, **10**, 354-359.
- Van Bressem, M.-F., Jepson, P. and Barrett, T. 1998. Further insight on the epidemiology of cetacean morbillivirus in the Northeastern Atlantic. *Marine Mammal Science*, **14**, 605-613.
- Van Bressem, M.-F., Van Waerebeek, K. and Raga, J.A. 1999. A review of virus infections of cetaceans and the potential impact of morbilliviruses, poxviruses and papillomaviruses on host population dynamics. *Diseases of Aquatic Organisms*, **38**, 53-65.
- Van Bressem, M.-F., Van Waerebeek, K., Jepson, P.D., Raga, J.A., Duignan, P.J., Nielsen, O., Di Benedetto, A.P., Siciliano, S., Ramos, R., Kant, W., Peddemors, V., Kinoshita, R., Ross, P.S., Lopez-Fernandez, A., Evans, K., Crespo, E. and Barrett, T. 2001a An insight into the epidemiology of dolphin morbillivirus worldwide. *Veterinary Microbiology*, **81**: 287-304.
- Van Bressem, M.-F., Van Waerebeek, K., Raga, J.A., Godfroid, J., Brew, S.D. and MacMillan, A.P. 2001b. Serological evidence of *Brucella* species infection in odontocetes from the south Pacific and the Mediterranean. *The Veterinary Record*, **148**, 657-661.
- Van Bressem, M-F., Raga, J.A., Di Guardo, G., Jepson, P.D., Duignan, P., Siebert, U., Barrett, T., Santos MCO, Moreno, I.B., Siciliano, S., Aguilar, A. and Van Waerebeek, K. 2009. Emerging infectious diseases in cetaceans worldwide and the possible role of environmental stressors. *Diseases of Aquatic Organisms* (accepted for publication).
- Vedros, N.A., A.W. Smith, J. Schonewald, G. Migaki, and R.C. Hubbard. 1971. Leptospirosis epizootic among California sea lions. *Science*, **172**, 1250-1251.
- Visser, I.K.G., Van Bressem, M.F., De Swart, R.L., Van de Bildt, M.W.G., Vos, H.W., Van der Heijden, R.W.j., Saliki, J., Örvell, C., Kitching, P., Barrett, T., and Osterhaus, A.D.M.E. 1993. Characterisation of morbilliviruses isolated from dolphins and harbour porpoises in Europe. *Journal of General Virology*, **74**, 631-641.
- Wohlsein, P., Puff, C., Kreutzer, M., Siebert, U. and Baumgärtner, W. 2007. Distemper in a dolphin. *Emerging Infectious Diseases*, **13**, 1959-1961.

RESOLUTION 4.17

GUIDELINES TO ADDRESS THE IMPACT OF ANTHROPOGENIC NOISE ON CETACEANS IN THE ACCOBAMS AREA

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking in consideration the recommendation of the ACCOBAMS Scientific Committee,

Recognizing that anthropogenic ocean noise is a form of pollution, caused by the introduction of energy into the marine environment, that can have adverse effects on marine life, ranging from disturbance to injury and death,

Recalling Article 236 of the United Nations Convention on the Law of the Sea, which states: “The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. However, each State shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such vessels or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with the said Convention,”

Aware of the work on noise undertaken within, *inter alia*, the International Whaling Commission Scientific Committee, the European Union, the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic, the NATO Undersea Research Center (NURC), the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas, the United States Marine Mammal Commission, the United States National Marine Fisheries Service, the National Oceanic and Atmospheric Administration (NOAA) and other governmental and nongovernmental Organizations,

Welcoming the activities of the International Maritime Organization (IMO) to address the impact of ship-generated noise on cetaceans and the establishment by its Marine Environmental Protection Committee (MEPC58, October 2008 and MEPC 61, October 2010, that plan to prepare draft Guidelines on noise from vessels and its adverse impacts on marine life that should be presented for MEPC 62 in 2011) of a high priority programme of work on minimizing the introduction of incidental noise from commercial shipping operations into the marine environment,

Recalling that:

- Article II of ACCOBAMS requires the Parties to apply conservation, research and management measures to the assessment and management of human–cetacean interactions, on the basis of the precautionary principle;
- the Conservation Plan, which is a full part of the Agreement, requires the Parties to:
 - carry out impact assessments to provide a basis for allowing or prohibiting the continuation or the development of activities that might affect cetaceans or their habitats in the Agreement area and to establish the conditions under which such activities may be conducted; and
 - regulate the discharge at sea of pollutants believed to have adverse effects on cetaceans, and to adopt within the framework of other appropriate legal instruments stricter standards for such pollutants,

Recalling also:

- Resolution 8.22 of 2005 on Adverse Human Induced Impacts on Cetaceans and the 9.19 of 2008 on adverse anthropogenic marine/ocean noise impacts on cetaceans and other biota adopted within the framework of the Bonn Convention on the Conservation of Migratory Species of Wild Animals;

- Resolution 5.4 on Adverse effects of sound vessels and other forms of disturbance on small cetaceans and Resolution 6.2 on adverse effects of underwater noise on marine mammals during offshore constructions activities for renewable energy production of ASCOBANS;
 - Articles 65 and 120 of the United Nations Convention on the Law of the Sea (UNCLOS) on State cooperation through the appropriate international organizations for the conservation and management of marine mammals (Articles 65 and 120); and
 - Directive 92/43/EEC (Habitats Directive) and Directive 2008/56/EC of the European Parliament and of the Council (Marine Strategy Framework Directive);
1. *Welcomes strongly* the Scientific Committee report on the impact of anthropogenic noise on cetaceans in the ACCOBAMS area and its associated guidelines presented in the Annex to this resolution;
 2. *Mandates* the Secretariat to publish these guidelines to the Parties and to operators of noise sources (e.g., seismic exploration industry, offshore windfarms);
 3. *Encourages* the Parties and operators to take these guidelines as a reference in conducting noise-producing activities;
 4. *Encourages* Parties:
 - to address fully the issue of anthropogenic noise in the marine environment, including cumulative effects, in the light of the best scientific information available and taking into consideration the applicable legislation of the Parties, particularly as regards the need for thorough environmental impact assessments being undertaken before granting approval to proposed noise-producing activities;
 - to integrate the issue of anthropogenic noise in management plans for marine protected areas;
 - to avoid or minimize producing noise in marine protected areas, as well as in particular in areas containing critical habitat of cetaceans likely to be affected by man-made sound;
 5. *Strongly requests* Parties to emphasize the need for a precautionary approach and to envisage the appropriate mitigation measures, including a provision for expert review by specialists and a provision for the action to be taken if unusual events, such as atypical mass strandings, occur;
 6. *Mandates* the Agreement Secretariat to develop, on the basis of the reports submitted by States Parties, a typology of activities within the region that have been approved and include a noise component, so that in the occurrence of an unusual event, such as a mass stranding, it will be possible to examine the possible causes;
 7. *Directs* the Secretariat to work with Parties to collect information on noise levels and noise sources in the ACCOBAMS area, and directs the Scientific Committee to evaluate such information, in order to detect the most affected sites within the region and determine if cetacean critical habitats are involved, and to report its findings to the next Meeting of Parties;
 8. *Encourages* Parties and Secretariat to strengthen stranding networks throughout the ACCOBAMS area and to improve the capacity to promptly investigate and intervene in case of atypical mass strandings, including the capacity to collect tissues and perform necropsies, in a manner that is appropriate to detect the occurrence of gas and fat embolic syndrome and to analyze auditory system damage in stranded cetaceans;
 9. *Urges* Parties and Secretariat to support ongoing international efforts, including in the International Maritime Organization, in the development and adoption of vessel-quieting technologies;

10. *Mandates* the Secretariat in collaboration with the Scientific Committee to establish as far as possible a common working group with CMS, ASCOBANS and Pelagos in order to develop appropriate tools to assess the impact of anthropogenic noise on cetaceans and to further elaborate measures to mitigate such impacts and to coordinate efforts on this issue with other international bodies, in particular, the Coordination Unit for the Mediterranean Action Plan, the Commission on the Protection of the Black Sea Against Pollution and the Secretariat of the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic and the International Maritime Organization (IMO);
11. *Entrusts* the Scientific Committee:
 - with the task to continue the study on the extent and temporal variability of the habitat of species that are known to be particularly vulnerable to man-made noise (e.g., *Ziphius cavirostris*), asking the Parties to further support through the Secretariat's action the modelling exercise currently undertaken, in order to ensure that more data are made available, to increase the model's robustness and to compare different algorithms for best results;
 - with the task to provide scientific review of potential effects of anthropogenic noise and appropriate mitigation measures to the Parties that request it;
 - to keep the subject of this Resolution on its agenda and in particular provide a regular review of new information;
12. *Directs* the Secretariat to distribute to the Parties the findings of the Scientific Committee on the habitat of species particularly vulnerable to noise and appropriate mitigation measures, as these findings become available, and encourages the Parties to utilize said findings in minimizing harm to vulnerable species and to report to the next Meeting of Parties on steps they have taken to utilize these findings;
13. *Directs* the Working Group established in Resolution 3.10, in cooperation with the Secretariat, the Scientific Committee, and Parties, to further develop the guidelines presented in the Annex, with the aim of testing the application of the guidelines in particular areas to make them implementable by the Parties and operators, and to report about progress made in implementing this resolution to the next Meeting of Parties.

Guidelines to address the impact of anthropogenic noise on cetaceans in the ACCOBAMS area

General guidelines

Mitigation procedures should be practical in that they should use data that can be readily collected by cetacean observers, account for operating conditions and constraints, and, as far as possible, minimize disruption of operations while maximizing environmental protection.

Besides procedures for specific activities, the following guidelines and concepts should be taken into account for any activity:

- a) Consult databases of cetacean spatial and seasonal distribution and habitat databases so that activities can be planned and conducted to avoid critical habitats and when and where animals are unlikely to be encountered
- b) Collect information and, if required, organize surveys (shipboard and/or aerial) or monitoring with fixed detectors (buoys, bottom recorders, etc.) to assess the population density in the areas chosen for operation
- c) Avoid cetaceans' key habitats and marine protected areas, define appropriate buffer zones around them; consider the possible impact of long-range propagation
- d) Closed areas should be avoided and surrounded by appropriate buffer zones
- e) Consider cumulative impacts not just of noise but of all anthropogenic threats over time; consider effects modelling; include consideration of seasonal and historical impacts from other activities (shipping, military, industrial, other seismic) in the specific survey area and nearby region. For these purposes, databases/GIS that track the history of sonar/seismic and other industrial activities and anthropogenic threats should be developed
- f) Model the generated sound field in relation with oceanographic features (depth/temperature profile, sound channels, water depth, seafloor characteristics) to assess the area possibly affected by relevant impacts
- g) Determine safe / harmful exposure levels for various species, age classes, contexts, etc. This must be precautionary enough to handle large levels of uncertainty. When making extrapolations from other species, measures of uncertainty should quantify the chances of coming up with a wrong, and dangerous conclusion
- h) There should be a scientific and precautionary basis for the exclusion zone (EZ) rather than an arbitrary and/or static designation; exclusion zones should be dynamically modelled based on the characteristic of the source (power and directionality), on the expected species, and on the local propagation features (cylindrical vs spherical spreading, depth and type of sea bottom, local propagation paths related to thermal stratification). These EZ should be verified in the field
- i) In the case of multiple EZ choices, the safest, most precautionary option should be adopted
- j) Consider establishment of an expanded exclusion zone aimed at reducing behavioural disruption. This should be based on received levels much lower than those supposed to produce physiological and physical damage. Whenever possible, consider an expanded exclusion zone where exposure could be limited by reducing the emitted power (power-down) whilst maintaining acceptable operative capabilities
- k) Cetacean mitigation guidelines should be adopted and publicized by all operators, whether military, industrial or academic
- l) A system of automated logging of acoustic source use should be developed to document the amount of acoustic energy produced, and this information should be available to noise regulators and to the public

- m) Mitigation should include monitoring and reporting protocols to provide information on the implemented procedures, on their effectiveness, and to provide datasets to be used for improving existing cetacean databases
- n) During operations, existing stranding networks in the area should be alerted; if required, additional monitoring of the closest coasts and for deaths at sea should be organized
- o) If required, organize post cruise survey to verify if changes in the population density or anomalous deaths occurred as a possible consequence of operations (this requires a knowledge of the area before any operation has occurred – see points a & b)
- p) In the case of strandings possibly related with the operations, any acoustic emission should be stopped and maximum effort devoted to understanding the causes of the deaths
- q) In the case of abnormal behaviours observed in animals close to the operations, any acoustic emission should be stopped and maximum effort addressed at monitoring those animals
- r) Trained and approved Cetaceans Observers (visual observers and/or acoustic monitors where appropriate) should be employed for the monitoring and reporting program including overseeing implemented mitigation rules
- s) Cetacean observers and bio-acousticians in charge of the monitoring program must be qualified, dedicated and experienced, with suitable equipment
- t) Marine mammal observers should report to the National Focal Point that will inform the ACCOBAMS Secretariat using a standardized reporting protocol. Any unexpected condition and/or change in applied protocols should be discussed with the Secretariat in collaboration with the Scientific Committee.
- u) Accurate reporting is required to verify the EIA hypotheses and the effectiveness of mitigation
- v) Procedures and protocols should be based on a conservative approach that reflects levels of uncertainty. They should include mechanisms that create an incentive for good practice.
- w) Take a precautionary approach every time uncertainties emerge; in the case of unexpected events or uncertainties refer to the National Focal Point.

Guidelines for (military sonar and civil) high power sonar

For sonar operations the following guidelines and key concepts should apply in addition to the general guidelines:

- a) Sonar surveys should be planned so as to avoid key cetacean habitat and areas of cetacean density, so that entire habitats or migration paths are not blocked, so that cumulative sonar sound is limited within any particular area, and so that multiple vessels operating in the same or nearby areas at the same time are prohibited
- b) Use of the lowest practicable source power
- c) Adapt the sequencing of sonar lines to account for any predictable movements of animals across the survey area and avoid blocking escape routes
- d) Continuous visual and passive acoustic monitoring (PAM) with a specialized team of cetaceans observers and bio-acousticians to ensure that cetaceans are not in the “exclusion zone” before turning on the acoustic sources and while sources are active.
- e) Equipment for visual monitoring should include suitable binoculars, including big eyes, to be used according to the monitoring protocol
- f) High power sources should be restricted at night, during other periods of low visibility, and during significant surface-ducting conditions, since current mitigation techniques may be inadequate to detect and localize cetaceans. Because of the impact of adverse weather conditions on the visual detection of mammals, emission during unfavourable conditions should be restricted as well
- g) Passive acoustic monitoring (PAM) (towed array technology or other suitable technologies with enough bandwidth to be sensitive to the whole frequency range of cetaceans expected in the area) should be used to improve detection capabilities. PAM should be mandatory for night operations or when visibility is poor. However, PAM may be inadequate mitigation for night operations if cetaceans in the area are not vocal or easily heard.
- h) At least two dedicated Cetacean Observers should be on watch at every time on every operative ship; organize shifts to allow enough rotation and resting periods to MMOs. In case of acoustic

monitoring, at least one operator should be on watch and shifts should be organized to allow 24/24h operation, unless automatic detection/alerting systems with proven effectiveness are available

- i) Before beginning any emission there should be a dedicated watch of at least 30 minutes to ensure no animals are within the EZ
- j) Extra mitigation measures should be applied in deep water areas if beaked whales have been seen diving on the vessel trackline or if habitats suitable for beaked whales are approached: in such cases, the watch should be prolonged to 120 minutes to increase the probability that deep-diving species are detected (e.g. Cuvier's beaked whales). Ideally, however, sonar exercises should not be done in areas that beaked whales are known to inhabit.
- k) Every time sources are turned on, there should be a slow increase of acoustic power (ramp-up or soft start) to allow cetaceans sufficient opportunity to leave the ensonified area in the event that visual and passive searches are unsuccessful. Ramp-up should be at least 30 minutes (the effectiveness of this procedure is still debatable)
- l) The beginning of emissions should be delayed if cetacean species are observed within the exclusion zone (EZ) or approaching it. Ramp-up may not begin until 30 minutes after the animals are seen to leave the EZ or 30 minutes after they are last seen (120 minutes in case of beaked whales)
- m) Avoid exposing animals to harmful acoustic levels by preventing them from entering into the EZ, by changing the ship course, if applicable, or by reducing (power-down) or ceasing (shut-down) the acoustic emissions
- n) Shut-down of source(s) whenever a cetacean is seen to enter the EZ and whenever aggregations of vulnerable species (such as beaked whales and sperm whales) are detected anywhere within the monitoring area

Guidelines for seismic surveys and airgun uses

Guidelines for mitigating the effects of seismic surveys have been experimented with mostly in the context of academic seismic surveys conducted under NMFS permits. Most of the following guidelines are equivalent to those required for sonar operations and should apply in addition to general guidelines:

- a) Seismic surveys should be planned so as to avoid key cetacean habitat and areas of cetacean density, so that entire habitats or migration paths are not blocked, so that cumulative seismic noise is limited within any particular area, and so that multiple vessels operating in the same or nearby areas at the same time are specifically regulated or prohibited.
- b) Use of the lowest practicable source power
- c) Limit horizontal propagation by adopting suitable array configurations and pulse synchronization and eliminating unnecessary high frequencies.
- d) Adapt the sequencing of seismic lines to account for any predictable movements of animals across the survey area and avoid blocking escape routes
- e) Modelling of the generated sound field in relation with oceanographic features (depth/temperature profile, water depth, seafloor characteristics) to dynamically set the Exclusion Zone. Confirm models by EZ tests in the field.
- f) Mitigation procedures should be practical in that they should use data that can be readily collected by cetacean observers during offshore operations, account for operating conditions and constraints of seismic surveys and, as far as possible, minimize disruption of surveys while maximizing environmental protection
- g) Continuous visual and passive acoustic monitoring (PAM) with a specialized team of cetacean observers and bioacousticians to ensure that cetaceans are not in the Exclusion Zone before turning on the acoustic sources and while sources are active.
- h) Equipment for visual monitoring should include suitable binoculars and big eyes to be used according to the monitoring protocol

- i) Ideally, high power airgun configurations should be prohibited at night, during other periods of low visibility, and during significant surface-ducting conditions, since current mitigation techniques may be inadequate to detect and localize cetaceans. Because of the impact of adverse weather conditions on the visual detection of mammals, emissions during unfavourable conditions should be restricted as well
- j) Passive acoustic monitoring (PAM) (towed array technology or other suitable technologies with enough bandwidth to be sensitive to the whole frequency range of cetaceans expected in the area) should be used to improve detection capabilities. PAM should be mandatory for night operations or when visibility is scarce. However, PAM may be inadequate mitigation for night operations if cetaceans in the area are not vocal or easily heard.
- k) At least two dedicated Cetacean Observers should be on watch at one time on every operative ship; shifts should be organized to allow enough rotation and resting periods to MMOs. In the case of acoustic monitoring, at least one operator should be on watch and shifts should be organized to allow 24/24h operation., unless automatic detection/alerting systems with proven effectiveness are available
- l) Before beginning any emission there should be a dedicated watch of at least 30 minutes to ensure no animals are within the EZ
- m) Extra mitigation measures should be applied in deep water areas if beaked whales have been seen diving on the vessel trackline or if habitats suitable for beaked whales are approached: in such a cases the watch should be at least 120 minutes to increase the probability that deep-diving species are detected (e.g. Cuvier's beaked whales).
- n) Every time sources are turned on, there should be a slow increase of acoustic power (ramp-up or soft start) to allow cetaceans sufficient opportunity to leave the ensonified area in the event that visual and passive searches are unsuccessful (the effectiveness of this procedure is still debatable)
- o) The beginning of emissions should be delayed if cetacean species are observed within the exclusion zone (EZ) or approaching it. Ramp-up may not begin until 30 minutes after the animals are seen to leave the EZ or 30 minutes after they are last seen (120 minutes in case of beaked whales)
- p) Exposing animals to harmful acoustic levels should be avoided by preventing them from entering the EZ, by changing the ship course, if applicable, or by reducing (power-down) or ceasing (shut-down) the acoustic emissions
- q) There should be a shut-down of source(s) whenever a cetacean is seen to enter the EZ and whenever aggregations of vulnerable species (such as beaked whales) are detected anywhere within the monitoring area
- r) If more than one seismic survey vessel is operating in the same area, they should maintain a minimum separation distance to allow escape routes between sound fields.
- s) Data sharing among surveyors should be encouraged to minimize duplicate surveying. Also, if old seismic data can be usefully re-analyzed using new signal processing or analysis techniques, this should be encouraged.

Guidelines for coastal and offshore construction works

Coastal and offshore construction works, which may include demolition of existent structures, may produce high noise levels, even for prolonged periods, depending on the technologies used and on local propagation features that include propagation through the substrate.

Construction works on the coast or on the shoreline, including harbours, may propagate noise (e.g. from pile drivers and jack hammers) over wide areas in particular where the substrate is rocky. Traditional percussive pile-driving produces vibrations that propagate well and can ensonify large marine areas at distances of more than 100km; in such conditions alternative technologies should be used. In some cases mitigation can be achieved through the use of bubble screens or material screens that attenuate sound emitted from the source or other technical modifications.

In the case of prolonged activities, such as construction works of large structures, a scheduling of the most noisy activities could be evaluated as a measure to avoid continuous exposures especially during critical periods for cetaceans living or transiting in the area; the concentration of noisy operations in

short periods of time and alternative construction technologies should be also evaluated to minimize noise impacts.

- a) Modelling of the generated sound field in relation to geological and oceanographic features (depth/temperature profile, water depth, coastal and seafloor characteristics) should occur, in addition to verification in the field; the area where animals could receive harmful noise levels (Exclusion Zone) should be defined
- b) Noise producing activities should be scheduled according to the presence of cetaceans, if seasonal
- c) Alternative technologies should be used or countermeasures to reduce noise diffusion, i.e. bubble curtains should be adopted
- d) Noise monitoring stations at given distances from the source area should be set up to monitor for both local and long range noise levels and verify if predicted levels are reached or not
- e) Visual observation points/platforms to monitor for the presence and behaviour of cetaceans should be set up
- f) Before beginning any noise producing action there should be a dedicated watch of at least 30 minutes to ensure no animals are within the EZ
- g) In areas where water depths in the EZ exceed 200m the watch should be at least 120 minutes to increase the probability that deep-diving species are detected

It is also important to consider the noise that will be generated by the structures once they are operative. Bridges propagate vibrations related to the traffic; offshore wind-farms and oil extraction platforms produce their own noise and thus their environmental impact should be carefully evaluated and mitigated with dedicated rules.

Guidelines for offshore platforms

Offshore platforms may be used for a variety of different activities, such as seafloor drilling, oil/gas extraction, electricity production (wind-farms), each one with its own particular impacts on the marine environment. Their placement should be carefully regulated; if their impacts include noise, they should be required to undergo a specific implementation of monitoring and mitigation procedures to be defined on a case by case basis and separately for the construction phase and for the operative life. The growing number of windfarms in coastal areas may have an impact on cetaceans, in particular because of the noise they make. They should be designed and operated to produce the lowest possible noise in all activity phases.

Guidelines for Playback & Sound Exposure Experiments

Playback and Controlled Exposure Experiments (CEEs) are experiments in which animals in the wild are exposed to controlled doses of sound for the purposes of assessing their behavioural or physiological responses. CEEs are one of several methods that have historically been and are increasingly being applied to the study of cetacean behavioural responses to sound. These approaches can complement opportunistic observations or the tagging of animals around noise-producing activities. CEEs (which include some recent experiments under the generic heading of Behavioural Response Studies (BRS)), are designed to introduce small amounts of additional sound into the ocean in order to scientifically determine responses and assess the potential risk from human activities. However, playbacks may carry some risks themselves to target individuals and potentially expose not only the target species and/or individuals to be studied, but also additional ones. These considerations need to be carefully addressed through precautionary protocols in the execution of CEEs and the possible risks should be balanced against the potential for these studies to provide answers to management and/or scientific questions on a case by case basis.

Given that some CEEs can be controversial, and because of the known underlying concerns, it is particularly important that they are carefully designed and carefully conducted and their limitations and risks acknowledged. In order to achieve optimal scientific and conservation value, those involved in conducting, funding and managing large-scale CEE experiments should strive for international

cooperation, coordination and very transparent information exchange and where possible joint programmes of work. Avoidance of duplicative or overlapping research will also help to prevent any unnecessary introduction of noise into the marine environment.

Controlled Exposure Experiments typically strive to use, without exceeding harmful levels, sound exposures that are as realistic as possible (relative to known human sound sources), but with the capability of close control over the type and nature of exposures. Many CEEs are designed to minimize the exposure required to elicit a detectable response. Opportunistic studies, on the other hand, involve actual sound sources and, thus, more realistic exposures, though the lack of experimental control in some circumstances can limit the power of resulting observations.

Both kinds of studies must include (or be preceded) by baseline studies of behaviour and physiology so that the results of the experiments are meaningful and can be properly interpreted. . To increase the utility of the results to regulatory decision-making, researchers conducting CEEs should openly communicate the design, procedures, and results of such studies to policymakers.

As with all biological research, methods that can yield conclusive results with less risk of harm to the animals should be preferred. Systematic observations using ongoing sound-producing activities should be used in place of CEEs if they can provide similar information with similar power to detect effects. It is noted, however, that the lack of experimental control over sources in opportunistic contexts, as well as the safety and/or national security considerations inherent in some situations can significantly limit their value in many real-world applications. Systematic studies of ongoing sound-producing activities can validate and strengthen monitoring efforts required as mitigation, and have the benefit that such studies do not introduce additional sound directed at the mammals. The advantages of both observational and experimental studies are increased as more attention is given to optimizing measurement methods and study designs with the greatest power to detect real effects and provide convincing results. In practice, research investigating the impacts of large sound sources could be most successful when using a suite of approaches including observations of both controlled and uncontrolled sound exposures. Therefore, controlled experiments and opportunistic observations are usually best seen not as alternatives, but rather as complementary approaches that yield the most powerful results when both are conducted.

Sound exposure experiments require an explicit protocol to manage possible interactions among the sound source(s) and the target(s); in general, while designing and conducting such experiments, these guidelines should be taken into consideration:

- use sound exposures that are as realistic as possible (while minimizing exposure required to detect responses) and with the same or similar characteristics of sound that the mammals are likely to be exposed to
- model sound propagation from the source to the targets based on local oceanographic features and background noise information
- use available technologies to monitor both target and non-target animals; monitor other individuals and species – which may require different methods but may provide additional information
- design experiments so that monitored animals are those exposed to highest levels
- halt sound emission if adverse response or behavioural changes are observed on either target or non target animals
- limit repeated exposures on the same target(s) unless required by the research protocol
- avoid enclosed areas, avoid blocking escape routes
- avoid “chasing” animals during playbacks; if they move away -- don’t modify the course to follow them with the playback source
- exposures that are expected to elicit particular behavioural responses (e.g., responses elicited by predator sounds, conspecific signals) may be particularly useful control stimuli in CEEs; however, such exposures should be used only as necessary as part of a careful experimental paradigm that includes specific mitigation and monitoring protocols. In such cases, it is

important to consider that the response may not be related to the loudness of the exposure but to the behavioural significance of the signal used.

Guidelines for shipping

noise from ships should be evaluated both at close range for its direct possible effects on local marine life and at long-range for the contribute to background noise at low frequencies. It is still difficult to say how much the radiated noise should be reduced to get visible effects. However, noise reduction should be evaluated in order to reduce both local and long range effects (see quieting technologies).

Guidelines for other mitigation cases

Any activity that produces noise levels that may pose risks to cetaceans requires attention and the implementation of monitoring and mitigation procedures. Some of the cases reported in this chapter (touristic boats and whale watching) may not produce physical injuries; however they contribute to the underwater noise and may have a significant impact on the behaviour and welfare of the animals, and, in the long term, a negative effect on the local population. At least in sensitive areas these should be taken under control and eventually limited.

Touristic boats

Tourist traffic in some areas is becoming a serious problem; noise irradiated by engines and propellers is an important component of the disturbance to animals.

Tourist boats should avoid approaching dolphins and dolphins schools, as well as larger cetaceans, and especially if calves are present. Specific guidelines are already available and their distribution should be supported as much as possible.

In case of sensitive habitats and marine protected areas, the relevant authorities should severely restrict the use of tourist motorboats and eventually encourage the use quieter electric engine boats.

Boats should be as quiet as possible and noise controls should be made at the beginning of every field season. Noise limits should be set to reduce the behavioural disturbance to animals as much as possible.

Whale watching

Whale watching is an activity that is increasing every year and that may have an impact on cetacean populations, stocks, and individuals. Rules and permits are already in force in many countries, but the noise issue is seldom taken into consideration. Noise irradiated by engines and propellers is an important component of the disturbance to animals. Beyond complying with national rules and restrictions, whale watching operators should also comply with noise emission restrictions.

Boats should be as quiet as possible and noise controls should be made at the beginning of every field season. Noise limits should be set to reduce the behavioural disturbance to animals as much as possible.

Explosive disposal of residual war weapons, use of explosives for testing or for decommissioning structures

In many areas of the Mediterranean Sea the detonation of residual war weapons is a recurrent activity that needs special care; also explosives are used widely for offshore decommissioning of structures and for military trials, e.g. for testing ships and submarines.

In all such cases, the definition of an Exclusion Zone is required, based on the power of the expected explosion(s) and on the oceanographic features; consequently the EZ area should be monitored to be sure no animals are inside. The watch before starting operations should be at least 30 min, it should be prolonged to 120 minutes in areas where deep divers could be present. Additional measures could

include the use of absorbing materials, e.g. bubble curtains that are proven to attenuate the shock wave or at least to dampen the shock wave onset. The use of aversive sound devices to remove animals from the danger area for the relatively short period of blasting holds great promise for mitigation. However, further studies to develop and test such devices with the range of species of interest would be required before these could be relied on for mitigation.

Underwater acoustically active devices

Underwater acoustics is an expanding field and new acoustic technologies are continuously developed, tested and applied for a variety of uses, e.g. for searching/monitoring/exploiting environmental resources, for conducting scientific research, and for military purposes.

Examples of activities that may require a permit include: oceanographic experiments based on the use of high power acoustic sources, including the use of acoustic positioning devices, the use of deterrent devices (Pingers, Acoustic Deterrent Devices, and Acoustic Harassment Devices, in particular if used in array configurations), e.g. to protect commercial fisheries or to protect industrial water intakes (cooling systems).

In all cases where high noise levels are expected in areas with the potential presence of cetaceans, at least the following guidelines should apply:

- a) There should be modelling of the generated sound field in relation to oceanographic features (depth/temperature profile, water depth, coastal and seafloor characteristics) and verification in the field; the area where animals could receive harmful noise levels (Exclusion Zone) should be defined
- b) Activities should be planned for areas with low cetacean densities, avoiding wherever possible sensitive species, such as beaked whales, and sensitive habitats (e.g. breeding areas, nursing areas, etc.)
- c) Noise producing activities should be scheduled according to the presence/absence of cetaceans, if seasonal
- d) Noise monitoring stations should be set up to monitor for both local and long range noise levels and verify if predicted levels are reached or not
- e) Visual observation points or mobile platforms should be set up to monitor for the presence and behaviour of cetaceans
- f) PAM stations or mobile platforms should be setup to monitor for the presence and behaviour of cetaceans
- g) Before beginning any noise producing action there should be a dedicated watch of at least 30 minutes to ensure no animals are within the EZ

In areas where water depths in the EZ exceed 200m the watch should be at least 120 minutes to increase the probability that deep-diving species are detected.

RESOLUTION 4.18

GUIDELINES ON THE GRANTING OF EXCEPTIONS TO ARTICLE II, PARAGRAPH 1, FOR THE PURPOSE OF NON-LETHAL *IN SITU* RESEARCH IN THE AGREEMENT AREA

The Meeting of the Parties to the Agreement on the Conservation on Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS):

Aware of the fact that cetaceans are particularly vulnerable to disturbance,

Recognising the value of non-lethal *in situ* research, to provide sound scientific foundation to the decisions of the Parties, but that such activity entails risks to cetacean populations and impacts to individual welfare that may be difficult to evaluate or predict,

Recalling that:

- Article II, paragraph 1, of ACCOBAMS prohibits any deliberate “taking” of cetaceans,
- Article I, paragraph 3, of ACCOBAMS provides that “taking” shall have the same meaning as in Article II, paragraph 1, i), of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), that includes “harassing”,
- Article II, paragraph 2, of ACCOBAMS establishes the possibility for any Party to grant an exception to this prohibition for the purpose of non-lethal *in situ* research aimed at maintaining a favourable conservation status for cetaceans and after having obtained the advice of the Scientific Committee,
- In an emergency, Parties shall immediately inform the Bureau and the Scientific Committee, through the ACCOBAMS Secretariat, of any exception that has been granted and the ACCOBAMS Secretariat then shall inform all Parties of the exception without delay by the most appropriate means,
- Article XI, paragraph 1, states that the provisions of ACCOBAMS shall not affect the right of any Party to maintain or adopt more stringent measures for the conservation of cetaceans and their habitats,

Considering that for the purpose of the present Resolution, harassing should mean to disrupt deliberately or incidentally the normal behaviour or prior activity of a cetacean either by actions or omissions,

1. *Recommends* Parties:

- to limit exception permits⁴⁵ to “taking” that only has the potential to disturb a cetacean population by causing disruption of behavioural patterns, and excluding those takings which have the potential to injure a cetacean or cetacean population;
- to consider that harassment risk begins when a vessel is voluntarily closer than the minimum distance identified in common rules of commercial cetaceans watching [ACCOBAMS Resolution 4.7];

2. *Adopts* the “Guidelines on the granting of exceptions to Article II, paragraph 1, for the purpose of non-lethal *in situ* research in the Agreement area”, as in the Annex to this Resolution, to be applied for research in waters under the jurisdiction of States Parties and to their nationals conducting research wherever in the Agreement area;

3. *Recommends* to Parties, other Riparian States and Range States, when granting such exceptions permit, in line with Resolution 2.15 on tissue banks, to request that all materials collected or obtained under this exception shall be maintained according to accepted curatorial standards. After completion of initial research goals, any remaining samples shall be deposited into a *bona*

⁴⁵ Permit should be considered as a general term covering any form of national procedure to notify exception granting.

fide scientific collection, which meets the minimum standards of collection curation and data cataloguing, as established by the scientific community. Information from each sample should be optimized by conducting all possible analyses on each one;

4. *Asks* the Secretariat:
 - to seek the advice of the Scientific Committee on any experimentation, conducted by non Parties States in the context of cooperation with ACCOBAMS, which may induce or risk cetacean harassing and communicate this advice to its principal investigator;
 - pursuant to the definition of Range States⁴⁶, to contact the pertinent administration of non-Party States whose ships are engaged in research activities that could cause or risk cetacean disturbance in order to seek their collaboration;
 - in application of Article II, paragraph 2, to establish, update and make available on the web site the list of the national authorities in charge of granting exception permits and all the exception permits granted under this Resolution;
5. *Decides* that the present Resolution replaces Resolution 2.8.

⁴⁶ Art. I, para. 3.g: "'Range State' means any State that exercises sovereignty and/or jurisdiction over any part of the range of a cetacean population covered by this Agreement, or a State, flag vessels of which are engaged in activities in the Agreement area which may affect the conservation of cetaceans".

Guidelines on the granting of exceptions to article II, paragraph 1, for the purpose of non-lethal *in situ* research in the Agreement area⁴⁷

I. Introduction

1. Exceptions for scientific research under international instruments

Almost no species-based treaties have equivalent mechanisms to ACCOBAMS. Although the 1979 Agreement on the Conservation of Small Cetaceans of the Black and North Seas and the North Atlantic Marine Mammal Commission⁴⁸ promote scientific research, they do not provide for strict prohibitions/research exceptions nor do their institutions have specific powers to advise on national actions.

a. International Convention on the Regulation of Whaling (ICRW)

The nearest equivalent to the ACCOBAMS system is ICRW's permit review system with the key difference that its exception procedure covers lethal research.

Any Contracting Government may grant a "special permit" authorizing a national to kill, take and treat whales for purposes of scientific research: such actions are then exempt from the ICRW's operation⁴⁹. It must immediately report such authorizations to the International Whaling Commission (IWC) and submit an annual report on the results of such research⁵⁰.

Consolidated *Guidelines for the review of scientific permit proposals*⁵¹ call on Governments to seek the ICRW's Scientific Committee's advice before deciding on permits. Review criteria are whether:

- the permit adequately specifies its aims, methodology and the samples to be taken;
- the research is essential for rational management, the Committee's work or other critically important research needs;
- the methodology and sample size are likely to provide reliable answers to the questions asked;
- the questions can be answered using non-lethal research methods;
- the catches will have an adverse effect on the stock;
- there is the potential for scientists from other nations to join the research programme.

The IWC may comment on the permit proposal after receiving the Committee's report and pass Resolutions asking governments to refrain from issuing specific permits. However, responsibility for permit decision-making remains with the government concerned, as under the ACCOBAMS system.

The ICRW system has run up against two main difficulties: first, the need to streamline review procedure; second, the lack of consensus on general interpretational questions stemming from the Guidelines that call for more than purely scientific judgement (e.g. what comprises 'essential' for management? what constitutes 'reliable'? what counts as a 'critical' research need?).

A Scientific Permits Working Group set up to improve the permit review process produced a draft Pro Forma in 2006⁵². One area of disagreement was whether review criteria should include the degree to

⁴⁷ Document based on the preparatory study written by: Clare Shine, Consultant in Environmental Policy and Law

⁴⁸ Established under the Agreement on Cooperation in Research, Conservation and Management of Marine Mammals in the North Atlantic (Nuuk, 1992).

⁴⁹ Art. VIII.1.

⁵⁰ Art. VIII.3.

⁵¹ See generally <http://www.iwcoffice.org/conservation/permits.htm>

⁵² See *Report of the Scientific Committee IWC/58/Rep1 and Annex P (Revised Suggestions for improved review of Special Permit proposals and results within the Scientific Committee)* at www.iwcoffice.org/commission/sci_com/screport.htm.

which the research proposal addresses information relevant to IWC management needs or the Scientific Committee's work.

b. Post-exception reporting systems within European level

Two European instruments mandating strict protection of cetaceans provide for exceptions for scientific research⁵³. National authorities are required to submit periodic reports⁵⁴ on exceptions already granted. This kind of system lacks the up-front screening role built in to ACCOBAMS but if properly followed, can provide useful input (detection of abuses, areas in need for tightening up).

Two generic conditions must be met to justify the grant of an exception (the wording is taken from the more recent 1992 Habitats Directive, used in the European Union to implement the Bern Convention):

- there must be no satisfactory alternative;
- the exception must not be detrimental to “the maintenance of the populations of the species concerned at a favourable conservation status in their natural range”.

Reports submitted to the European Commission⁵⁵ must specify:

- the species subject to the derogations and the reason for the derogation, including the nature of the risk, a reference to alternatives rejected and scientific data used;
- the means, devices or methods authorized for the capture/killing of a protected animal and the reasons for their use;
- the circumstances of when and where such derogations were granted;
- details of the competent national authority and its relevant powers;
- the supervisory measures used and the results obtained.

2. Exceptions for scientific research at the national level

a. United States of America (US)

i. Legal framework and review process

The US has a long-established framework for strict protection of cetaceans. The competent agency, the National Marine Fisheries Service (NMFS), may authorise exceptions for scientific research:

- for species not listed as endangered/threatened under the Marine Mammal Protection Act⁵⁶;
- for endangered/threatened species, stricter rules apply under the Endangered Species Act⁵⁷.

The MMPA's provisions apply to “any person, vessel or other conveyance subject to the jurisdiction of the United States regarding taking on the high seas or in waters or on lands under the jurisdiction of the United States”⁵⁸.

All research must meet two conditions:

- any taking during the research must be “humane” (the method of taking that involves the least possible degree of pain and suffering to animals practicable). There are no standard criteria to interpret this term;

⁵³ Art.9, Convention on the Conservation of European Wildlife and Habitats 1979 (Bern Convention); Art.16, Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

⁵⁴ To the Bern Convention Standing Committee and the European Commission respectively.

⁵⁵ Pursuant to Art.16(3) Habitats Directive.

⁵⁶ Section 104 MMPA; 16 U.S.C. 1361 *et seq.*

⁵⁷ Section 10(a)(1)(A) ESA, 16 U.S.C. 1531 *et seq.* These incorporate and go further than the MMPA's provisions.

⁵⁸ s.102, MMPA; 16 U.S.C. 1372.

- the proposed ‘taking’ must be for a “bona fide” scientific purpose⁵⁹. There is no general agreement on precisely how this standard should be implemented, but the proposed research must *inter alia* be likely to yield something new and worthwhile.

The basic threshold for an MMPA permit is “taking”, defined as “to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal”.

In 1994⁶⁰, a two-tier system was set up to distinguish between taking that may involve disturbance and taking that may involve injury and to simplify administrative procedures for the former category. The two types of authorisation are summarised below:

***Scientific Research Permits for Level A Harassment:**

A scientific research permit is required for research involving “Level A Harassment”, defined as “*any act which has the potential to injure a marine mammal or marine mammal stock in the wild*”, and for all research involving an ESA-listed species.

All permit applications must be reviewed by the Marine Mammal Commission (MMC) for consistency with applicable legal requirements and relevant regulations. The MMC provides non-binding recommendations to implementing agencies but does not have enforcement powers. It is advised by a nine-member Committee of Scientific Advisors on Marine Mammals⁶¹. Applications are subject to a 30-day public comment period.

About 30-40 applications are made per year, not including applications for amendments. The average processing time is a little over 100 days but may be much longer. NMFS recommends submitting applications at least 6 months in advance of the intended research start date for non-ESA listed species and at least 1 year in advance for research on ESA-listed species.

Lethal taking may be authorised under a scientific research permit but only where the applicant demonstrates that a non-lethal method of conducting the research is not feasible (similar to the ICRW standard). Lethal taking from a depleted species or stock may only be permitted if research results will directly benefit that species or stock or the research fulfils a critically important research need.

The MMC recognizes that accidental mortalities or injuries may occur in the course of conducting some types of activities (e.g., captures, tagging, sedation). It is common practice for permits to specify a low level of accidental mortalities in the course of the research. If that number is reached, research activities must be stopped until the circumstances surrounding the mortalities are reviewed and authorisation to proceed is granted.

***“General authorization” for Level B Harassment for Scientific Research:**

“Level B harassment” is defined as “*an act of pursuit, torment, or annoyance of marine mammals which has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioural patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but does not have the potential to injure a marine mammal or marine mammal stock in the wild*”⁶².

⁵⁹ Defined to cover scientific research, the results of which (A) likely would be accepted for publication in a refereed scientific journal; (B) are likely to contribute to the basic knowledge of marine mammal biology or ecology; or (C) are likely to identify, evaluate, or resolve conservation problems (MMPA 1972: § 1362).

⁶⁰ Following amendments to the MMPA.

⁶¹ Both these bodies were established under the MMPA 1972.

⁶² 16 U.S.C. 1374 Sec.104(c)(3)(C).

The indicative list of activities likely to involve only Level B harassment⁶³ currently includes photo-identification studies, behavioural observations, vessel surveys and aerial surveys over water or land. The only quantified standard under existing regulations is limited to pinniped rookeries⁶⁴.

Collection of tissues, fluids or other cetacean parts naturally sloughed, excreted or otherwise discharged by a living marine mammal in the wild also counts as low-impact taking that does not require a permit. Holding, registration and transfer requirements for such parts are the same as for those salvaged from beached or stranded marine mammals⁶⁵. NMFS indicates that approaches for collection purposes should generally respect the distances laid down for the general public e.g. for whalewatching.

The grey area regarding interpretation is where Level B-type activities present – independently or linked to other factors - a risk of Level A harassment. NMFS now routinely excludes from the General Authorization procedure:

- activities that meet the regulatory definition of “intrusive”⁶⁶;
- active acoustics (because it is difficult to ensure no ESA-listed species would be affected or that the impact would not exceed level B impacts); and
- procedures like remote biopsy sampling or tag attachment, as these could result in level A harassment under certain circumstances.

The General Authorization procedure does not involve review by MMC. It works as follows:

- researchers submit a Letter of Intent containing detailed information to enable NMFS to accurately determine whether the research is bona fide and its impacts are limited to Level B Harassment;
- if NMFS determines that the project is eligible, based on the information provided by the applicant, no public comment period is necessary;
- the researcher then receives a Letter of Confirmation that s/he is covered under the GA and may commence research activities immediately;
- Any taking not covered by the General Authorization, and conduct of activities causing Level A harassment, is an offence subject to penalties under MMPA.

16-20 General Authorizations are issued per year, representing a small subset of research activities. Researchers must notify the NMFS Regional Office at least two weeks before starting on-site activities and comply with any requirements for coordination.

Research activities conducted under General Authorizations are reviewed periodically to ensure that they do not individually or cumulatively result in takes other than by Level B harassment. Annual reports submitted by researchers are one of the tools used by NMFS and MMC for monitoring. NMFS indicates that there is no evidence that this system is being abused.

ii. Environmental impacts of research

Scientific research permitting count as a “decision-making process” for the purposes of the National Environmental Policy Act (NEPA⁶⁷) which requires federal agencies to consider the environmental

⁶³ Listed in implementing regulations at 50 CFR 216.45(a)3.

⁶⁴ Aerial surveys may only be carried out over rookeries at altitudes greater than 1,000 ft (305m). Flights at lower altitudes are considered to present a risk of potential injury (Level A harassment) and are thus subject to permit.

⁶⁵ Implementing regulations (50 CFR part 216.26 as amended).

⁶⁶ 50 CFR 216.3: the definition includes any procedure that will break or cut the skin of an animal, the insertion of instruments, the use of substances on or near animals that are likely to contact the animal or be ingested and that are likely to affect the animal's tissues (e.g. eyes), or other types of stimuli that may involve a risk to the health or the welfare of the animal.

impacts of their proposed actions and reasonable alternatives to those actions. Agencies must prepare an Environmental Assessment, an Environmental Impact Statement or classify the action as “categorically excluded” from this requirement.

NMFS has developed guidance⁶⁸ for applying NEPA requirements to permit decisions. Although scientific research permits generally qualify for a Categorical Exclusion, certain factors must first be considered. A more detailed assessment may be required for research involving:

- the presence of a geographic area with unique characteristics;
- public controversy;
- uncertain environmental impacts or unique or unknown risks⁶⁹;
- establishing a precedent or decision in principle about future proposals;
- the possibility of cumulatively significant impacts;
- the possibility of any adverse effects upon endangered or threatened species or their habitats.

The last factor means that a Environmental Assessment will usually be required before issuing permits affecting ESA-listed cetacean species.

NMFS must also consider the cumulative impacts on cetaceans from the total number of permits issued under Categorical Exclusions.

iii. Issues most relevant to ACCOBAMS

The US system is similar to ACCOBAMS to the extent that agency decision-making is preceded by independent scientific review by an advisory body.

Key problems are the length of time taken to process permit applications and bottlenecks in EIA procedures. Both problems mainly affect research involving ESA-listed species and/or invasive procedures with some risk of mortality or morbidity. A major internal review began in June 2006.

The main causes of delay include incomplete applications, applications not processed in order received and insufficient staff resources relative to workload: staff also recognise the need to better coordinate and prioritise EIA procedures.

NMFS and MMC do not yet have programmatic/quantitative standards for use in permit decision-making, although a NMFS-led panel has developed a checklist for reviews.⁷⁰ MMC reviews individual applications on an essentially case-by-case basis, building on members’ experience. NMFS indicates that objective criteria or guidelines would be useful to strengthen consistency in the review process but would not remove the need to consider all factors associated with a proposal.

The MMC notes difficulties in tackling cumulative impacts of multiple research projects focused on similar areas/populations⁷¹. The US currently has no formal procedure for deciding between or coordinating similar research projects, which may lead to a ‘first come, first served’ situation. One option under consideration is to prepare online EIA documentation to cover routine ‘direct take’ requests as well as a clear list of activities or procedures benefiting from Categorical Exclusion under MMPA and ESA permits. MMC identifies the need to prepare environmental impact statements that consider a broader range of environmental stressors in the context of cetacean research.

⁶⁷ 42 U.S.C. 4321 et seq.

⁶⁸ NOAA Administrative Order No. 216-6 (NAO 216-6), Environmental Review Procedures for Implementing the National Environmental Policy Act. See in particular section 5.05c (Exceptions for Categorical Exclusions).

⁶⁹ NMFS is currently working on environmental assessment of standards for acoustic exposure.

⁷⁰ Originally developed for use in a general review of humpback and killer whale research in the eastern North Pacific.

⁷¹ See e.g. Reeves R.R and Ragen T.J. 2003. Future Directions in Marine Mammal Research (Report of the Marine Mammal Commission Consultation, August 4-7 2003).

Sectoral programmes and non-cetacean research that may result in incidental disturbance or injury ('indirect take') are subject to separate permit procedures under MMPA. Applications are copied to NMFS staff responsible for research permits to help them monitor cumulative impacts (required for NEPA).

b. Australia

The Australian context is more straightforward because:

- *the cetacean research community is relatively small and well-known to permit officials;*
- *research in Commonwealth waters is mainly focused on three whale species (blue, southern right and humpback) and to a lesser extent, dolphins;*
- *most research is government-funded which makes project coordination easier;*
- *environmental stressors are lower because of Australia's relative isolation.*

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) requires a permit to "interfere with⁷², injure, take, trade, keep, move, possess or treat⁷³ a cetacean", not only in the Australian Whale Sanctuary⁷⁴ but also in international waters. A permit may be granted for "actions that will contribute significantly to the conservation of cetaceans" including scientific research for this specific purpose. No permit may be issued to kill a cetacean⁷⁵.

Permits are determined by the Approvals and Wildlife Division, Department of the Environment and Heritage. Applicants must complete two forms which may be submitted simultaneously:

- *Cetacean research and incidental impacts permit form⁷⁶;*
- *Cetacean Preliminary Information Form (required for environmental assessment).*

Research applications are electronically notified to individuals and bodies listed in the public consultation register, who may make written submissions to the Minister. They are also published in a newspaper⁷⁷ and on the Department website. The comment period varies from 5-20 days.

Applicants are required to seek approval from their university or State Animal Ethics Committee (AEC) for invasive research techniques (e.g. biopsies, tagging, controlled exposure experiments). AEC approval is not generally required for non-invasive techniques (photo-identification, collection of sloughed skin, faeces, blow samples unless this involves an approach much closer than that allowed for the general public under whale watching rules).

When determining permit applications and possible conditions, the Minister must consider:

- the precautionary principle⁷⁸;
- the environmental assessment report on the proposed action;
- all written comments received by the set deadline.

In addition to detailed implementing regulations⁷⁹, the Department has developed *Standard Conditions for Cetacean Permits* although these do not cover all types of potentially invasive procedure. The

⁷² Defined as to "harass, chase, herd, tag, mark or brand"

⁷³ Defined as to "divide or cut up, or extract any product from, the cetacean.

⁷⁴ Includes all Commonwealth waters from the 3 nautical mile state waters limit out to the boundary of the Exclusive Economic Zone (i.e. out to 200 nautical miles and further in some places) as well as coastal waters of a State or territory that are "prescribed waters" (s.225 EPBC Act). NB All Australian states and territories also protect whales and dolphins within their waters.

⁷⁵ s.238 (4), EPBC Act.

⁷⁶ See <http://www.deh.gov.au/coasts/species/cetaceans/permits/research-incidental.html>.

⁷⁷ As no comments have ever been received in response to newspaper advertisements, DEH indicates that this requirement may be dropped as a result of the ongoing review of regulations.

⁷⁸ s.391(2) EPBC Act.

⁷⁹ Environment Protection and Biodiversity Conservation Regulations 2000, as amended by Environment Protection and Biodiversity Conservation Amendment Regulations 2006 (No.1).

Department indicates the average time taken to process an application is 2-3 months, but may be 4-5 weeks. Where an applicant wishes to appeal (e.g against refusal of a permit or against its conditions) it may request a statement of reasons. This has happened twice to date.

Where unintentional death, injury, taking or harassment results from an action authorised under the permit, the permit holder must notify the Department within seven days of the incident⁸⁰.

A research permit application automatically triggers the Act's EIA provisions because cetaceans are categorised as a "matter of national environmental significance"⁸¹. The Cetacean Preliminary Information Form is treated as a "referral" i.e. the applicant does not have to initiate separate procedures for the EIA component.

Five methods of assessment range from an accredited assessment process to full public inquiry⁸². Information provided in the Form is usually sufficient for assessment. Applicants should submit relevant management/conservation plans along with the Form to simplify the public comment process. In potentially controversial cases, the Department encourages applicants to contact objectors directly.

Sectoral activities that may indirectly affect cetaceans, notably seismic surveys conducted by oil and gas exploration companies, are assessed by a separate division under separate provisions of the Act. The Department is generally consulted on the likelihood and timing of cetacean presence in the area concerned and on mitigation methods. Conditions may be attached to any consent where it is known that cetaceans may be present. The Department is currently revising Guidelines on consideration of cetacean impacts from such operations⁸³.

⁸⁰ s.232, EPBC Act.

⁸¹ s.165. Such matters include actions affecting migratory species, threatened species and ecological communities.

⁸² s.67. The Minister must consider information received before deciding on the appropriate approach for assessment (s.86).

⁸³ See <http://www.deh.gov.au/coasts/species/cetaceans/industry.html#petroleum>.

c. Examples in ACCOBAMS area

	Aim	Relevant Institutions	Timing	Relevant Documents
Albania	Authorization for research activities	Nature Protection Policies Directorate Ministry of Environment, Forests and Water Administration, Rruga e Durrës, 27 Tirana -	One to three months	Law 9587/2006 Law 7908/1995 Law 8870/2002
Croatia	Permits for research of strictly protected species, including cetaceans	Ministry of Culture, Nature Protection Directorate	1 year	Nature Protection Act 70/05, 139/08
Monaco	Authorization for marine research activities			Loi n°1.198 du 27/03/1998
Morocco		Ministère de l'Agriculture, du Développement Rural et des Pêches Maritimes Département des Pêches Maritimes BP 476 Agdal Rabat		
Portugal	Research permit	Ministry for the Environment Institute for the Nature Conservation and Biodiversity (ICNB)	The authorization must be issued within 45 days after the application has been received by ICNB	Decree – Law 49/2005 (24 th February)
Romania	Research permits - Permits for collection and transfer of samples	Romanian Ministry of Environment and Waters Management	1 month at least	
Slovenia	Permit in all marine areas under national jurisdiction is requested for research when using methods causing disturbance of species (e.g. through marking or blood samples or sampling parts of their dead bodies).	Ministry for the Environment and Spatial Planning, Environmental Agency of the Republic of Slovenia	1 or 2 months after a complete application is received	Decree on the protection of wild animal species (OJ RS, 41/04)
Spain	Navigation and Reserach permits	Subdirección General de Seguridad Marítima y Contaminación / Deputy Directorate-General for Maritime Security and Pollution, Ministerio de Fomento / Ministry of Public Works. Ruiz de Alarcón, 1. E-28071-Madrid (Spain). Fax: +34915979287	Around 2 months	Law 4/1989
Tunisia	Research permits	Competent Ministry	6 months before the beginning of the research activity	Décret n. 97- 1836/15 -09-97

3. Risks associated with potentially invasive research

Advances in technology have opened up new field research possibilities to a growing number of cetacean researchers. However, several of the procedures to collect data to fill critical information gaps carry risks of harm to the research subjects, i.e. the animals.

One example is non-lethal sampling of cetacean tissues in the wild, the samples being used to improve scientific knowledge generally and to facilitate worldwide scientific collaborations that will lead to better knowledge of cetaceans in the Agreement Area⁸⁴. Another is research that involves exposure to potentially harmful noise in order to determine maximum safe levels of exposure and thus ultimately to protect cetaceans from threats posed by sound-generating human activities in their natural environment.

Cetaceans are, like many other organisms, vulnerable to disturbance, which may disrupt normal behaviour and even trigger reactions comparable to those used to avoid predation⁸⁵. Research activities that disturb cetaceans may cause stress and place the animals at greater risk of injury or predation. Excessive stress resulting from harassment can reduce health, performance, immune function and reproduction and harassment may force cetaceans away from optimal habitat.

Potentially invasive research on cetaceans is thus a controversial subject, particularly in the Agreement Area where cetaceans benefit from strict legal protection, have high visibility and are held in considerable public esteem. Parties to ACCOBAMS recognise that non-lethal in situ research can provide a sound scientific foundation for their decisions but that “such activity entails risks to cetacean populations and impacts to individual welfare that may be difficult to evaluate or predict”⁸⁶.

This leads to a balancing act. Impacts on individual animals need to be weighed against the benefits of the research for conservation at the population, species or ecosystem level. Decisions to authorise research also need to consider the conservation status of the species involved and the possible cumulative impacts of separate research projects.

These draft Guidelines provide a framework for decision-makers to distinguish professionally conducted research with scientifically valid objectives and high welfare standards from unprofessional, irresponsible or superfluous studies carried out by individuals who lack the minimum necessary expertise. They also streamline the permitting process so that high-quality and urgently needed programmes do not get unreasonably delayed.

4. ACCOBAMS: relevant provisions and experience to date

The importance of research to improve knowledge of cetacean biology, ecology and population dynamics and support the implementation of conservation measures is a central tenet of the ACCOBAMS Agreement. However, research is not a right under the Agreement but a privilege, an exception to the general prohibition on deliberate taking⁸⁷.

The Agreement imposes the following checks and balances on research:

- it must be non-lethal, *in situ* and aimed at maintaining a favourable conservation status for cetaceans⁸⁸;
- the precautionary principle should be applied to research activities in Annex II⁸⁹;

⁸⁴ ACCOBAMS Resolution 2.10 (*Facilitation of exchange of tissue samples*).

⁸⁵ See eg Frid, A. and L. M. Dill. 2002. *Human-caused disturbance stimuli as a form of predation risk*. Conservation Ecology 6(1): 11 (<http://www.consecol.org/vol6/iss1/art11>).

⁸⁶ Resolution 2.8 (*Framework guidelines on the granting of exceptions for the purpose of non-lethal in situ research aimed at maintaining a favourable conservation status for cetaceans*).

⁸⁷ Art.II.1.

⁸⁸ Article II.2.

⁸⁹ Art.II.4.

- advice should be obtained from the Scientific Committee before the Party concerned decides whether to issue a research permit⁹⁰.

A Party is not legally bound to follow the Committee's advice, although a general obligation of good faith applies to treaty implementation⁹¹. It must immediately inform the Committee, through the Agreement Secretariat, of any research exception it has granted.

The ACCOBAMS system thus combines national decision-making with regional expertise and oversight. If properly implemented, it should deliver consistency in research permitting throughout the Agreement Area.

The Committee has adopted *Procedures for the evaluation of research and management proposals*⁹² which cover submission of proposals, review by individual Committee members and the timeframe for providing opinions to the requesting Party. However, the Secretariat indicates that the Committee has never received a formal request for prior advice on research proposals from any Country Party or non Party. As a result, regional oversight and coordination of research is basically not operational. Variations between Parties' regulations, definitions and procedures have caused long delays in obtaining multiple permits for international cooperative research projects. Resolution 2.11 (*Facilitation of scientific research campaigns and programs*) calls for improved coordination between States and with international organisations on ACCOBAMS-supported research and for provision to the Secretariat of information on national permit systems and competent authorities. These problems have been taken into account in the draft Guidelines.

5. Animal welfare and ethical guidance

There are sound scientific as well as ethical and legal reasons why research procedures should be humane. Disturbance may create biases that affect both gathering and analyzing of data⁹³. Ethically acceptable procedures that minimize interference to individual study animals, populations and their habitats may thereby increase the validity of the experimental data⁹⁴.

There are no international guidelines dealing specifically with welfare/ethical standards in cetacean research although two initiatives are under way:

- the Society for Marine Mammalogy (Ethics Subgroup) is developing Guidelines for the Treatment of Marine Mammals In Field Research to reflect internationally acceptable approaches and provide a resource for Animal Ethics Committees around the world. The preliminary draft was not available for citation when this report was prepared;
- The European Cetacean Society established an Ethical Advisory Committee in 2005. Its Steering Committee is developing guidelines to be approved by members before preparation of detailed recommendations on best scientific practice. The Society will reject material for publication if the research was not carried out consistently with the new guidelines (this was already the case informally but formal Guidelines are intended to improve compliance and transparency).

⁹⁰ The Committee's General Rules of Procedure provide (Rule 20) that "in application of Article II.2 of the Agreement, any Party may ask for advice on derogations. The Secretariat shall communicate the request to the members for advice within 30 days. The advice received within the 30 days will be immediately communicated to the requesting Party".

⁹¹ With reference to international agreements, "every treaty in force is binding upon the parties to it and must be performed by them in good faith" (Vienna Convention on the Law of Treaties 1969, art. 26).

⁹² At its second meeting (Istanbul, 20-22 November 2003).

⁹³ *Live animal capture and handling guidelines for wild mammals, birds, amphibians & reptiles*. 1997. Standards for Components of British Columbia's biodiversity; no.3.

⁹⁴ Animal Behavior Society & Association for the Study of Animal Behaviour (1997) Guidelines for the treatment of animals in behavioural research and teaching. <http://www.societies.ncl.ac.uk/asab/ethics.html>.

A range of codes and protocols on animal welfare⁹⁵ support three generally applicable principles:

- **Replacement**
Techniques that totally or partially replace the use of animals for research with other methods (not always feasible in the cetacean field research context).
- **Reduction**
Projects must use no more than the minimum number of animals necessary to ensure scientific and statistical validity, but this principle should not be implemented at the expense of greater suffering of individual animals. Studies must not be repeated unnecessarily.
- **Refinement**
Investigators must use the best available scientific and educational techniques to reduce the adverse impact on animals. Welfare of the animals must be a primary consideration in the provision of care, based on behavioural and biological needs, and projects should be designed to avoid or minimise pain and distress in animals.

In Canada, investigators using vertebrates in field research should adhere to humane principles and follow Canadian Council on Animal Care guidelines⁹⁶ when assigning a category based on the potential level of pain and distress. Research protocols must be submitted to an appropriate review committee where studies are classified in Categories B⁹⁷ through E⁹⁸. CCAC operates a precautionary approach when considering categorization of protocols.

Observational studies are generally categorized as Category A, provided that there is no disturbance of the animals. They may be assigned to a more invasive category if e.g. the investigator needs to approach the cetaceans more closely than standard whalewatching guidelines to better identify an individual using photo-identification.

In the US, an MMC-backed Advisory Committee is developing a discussion document on Ethical and Animal Welfare Aspects of Directed Acoustic Research on Marine Mammals. This has not yet obtained consensus within the working group.

II. Guidelines on the granting of exceptions for the purpose of non-lethal *in situ* research aimed at maintaining a favourable conservation status for cetaceans

1. Objectives

1.1 These Guidelines are intended to facilitate consistent and efficient implementation of the exception procedure established under Article II, paragraph 2, of the Agreement. According to this Article, four sets of Guidelines might be developed:

- a) guidelines for research permits
- b) emergency plan to be implemented in case of pollution (Resolution 4.16)
- c) emergency plan to be implemented in case of epizootics (Resolution 4.16)
- d) rescue operations for wounded or sick cetaceans (Resolution 4.16)

1.2 These Guidelines are designed to ensure that all scientific research on cetaceans in the Agreement Area:

⁹⁵ E.g. New Zealand's National Animal Ethics Advisory Committee's operations under the Animal Welfare Act 1999; Australian code of practice for the care and use of animals for scientific purposes, 7th Edition 2004, from which the following extracts are taken.

⁹⁶ E.g. Ethics of Animal Investigation; Guidelines on the care and use of wildlife; Categories of Invasiveness in Animal Experiments, all available from <http://www.ccac.ca/en/>.

⁹⁷ "Experiments which cause little or no discomfort or stress".

⁹⁸ "Procedures which cause severe pain near, at, or above the pain tolerance threshold of unanesthetized conscious animals".

- is conducted to high scientific and animal welfare standards;
- contributes to regional priorities for conservation and management;
- is undertaken with appropriate regional co-ordination and oversight in order to maximise the benefit of the research carried out in the Agreement area and minimise negative effects on individuals, populations and ecosystems.

1.3 These Guidelines are a living document maintained by the Scientific Committee of ACCOBAMS. That Committee may revise and clarify the Guidelines in the light of experience gained during their application and in accordance with new techniques or information that becomes available.

1.4 A list of definitions is presented in Appendix 1.

2. Target audience

2.1 The Guidelines are intended to provide advice to Parties and the Secretariat with respect to the granting of exceptions and to all wishing to engage in scientific research on cetaceans in the Agreement Area.

2.2 In addition, it is hoped that the Guidelines will prove valuable to the appropriate authorities in other Range States. To that end, the ACCOBAMS Secretariat should send them to all such authorities, both initially and whenever changes are made, with a request for consultation with the Secretariat before the nationals of such states undertake research in the Agreement Area.

3. Geographical scope

3.1 The Guidelines should be interpreted and applied in conformity with relevant rules of international law as reflected in the United Nations Convention on the Law of the Sea 1982, particularly Art 65, 77, 245 and 246.

3.2 Each Party should take the necessary legislative, regulatory or administrative measures to apply the Guidelines to all cetacean research activities:

- conducted in waters under its sovereignty and/or jurisdiction;
- conducted by its nationals on the high seas;
- conducted from any vessel subject to its jurisdiction.

3.3 Parties, other Range States, should cooperate to promote observance of the Guidelines, particularly in waters beyond national jurisdiction. The Parties should notify the Secretariat immediately if they become aware of unauthorised research activities that could disturb or injure cetaceans. The Secretariat should contact the competent authority of the Range State whose nationals/vessels are engaged in such activities.

4. Legal threshold for obligatory research permits

4.1 A permit is required for all research activities that involve potential harassment of cetaceans in breach of the prohibition on deliberate taking laid down by Article II.1 of the Agreement.

4.2 Harassment should be interpreted for the purpose of these Guidelines to mean disruption of a cetacean's normal behaviour or prior activity by deliberate or negligent acts of pursuit, dispersal, herding, interference, torment, tagging, marking, branding or other acts that annoy or trouble cetaceans, as well as attempts and repeated approaches for such purposes.

4.3 Research activities that fall within this category include but are not limited to:

- tagging of animals, irrespective of the method used;
- remote biopsy sampling;
- other activities involving invasive procedures;

- restraint or detention of a cetacean, even temporary;
- acoustic playback experiments;
- investigation of impacts of active and passive sonar systems, including controlled exposure experiments;
- experiments involving acoustic deterrent devices; and
- close-range behavioural observation and photo-identification.

4.4 All permit applications should be reviewed and determined in accordance with the criteria listed in these Guidelines and any technical indicators developed by the Scientific Committee.

4.5 Each Party should designate a competent authority to issue permits for scientific research on cetaceans in accordance with these Guidelines.

5. Notification of low-impact research

5.1 The following activities are considered to present low harassment risk, provided that the vessel involved does not deliberately approach live cetaceans closer than the minimum distances [laid down by Resolution 4.7]:

- behavioural observations;
- aerial surveys using aircraft or helicopters, including with photo-identification;
- boat-based surveys, including with photo-identification;
- collection of tissues, fluids or other cetacean parts naturally sloughed, excreted or otherwise discharged from a live cetacean in the wild;
- collection of dead cetaceans or parts thereof.

5.2 Activities listed in para. 5.1 can be carried out on the basis of a previous notification to the competent national authorities. Applicants should provide a written outline of the proposed project, objectives and techniques, giving enough information to determine whether the activity is *bona fide* scientific research and humane.

5.3 Activities conducted under notification should avoid chronic, low-grade or cumulative disturbance on research subjects resulting from techniques such as prolonged boat-based focal-follow photography. Where an authorised activity is found to present a risk of harassment, the competent national authorities should require the researcher(s) to apply for a research permit in accordance with these Guidelines.

5.4 Researchers carrying out activities under notification should submit an annual report of their activities to enable possible cumulative impacts to be anticipated and monitored.

5.5 Procedures conducted on live-stranded animals by professional staff or an attending veterinarian for purposes of animal care, as well as medical procedures that, in the reasonable judgement of the attending veterinarian, would not constitute a risk to the health or welfare of the captive animal, present low harassment risk.

6. Criteria for evaluating permit applications

6.1 Before issuing a permit, a Permit Authority should determine that the proposed research is:

- *bona fide* and does not involve unnecessarily duplicative research;
- humane; and
- is not likely to have significant adverse effects on other components of the marine ecosystem of which the target species or population is a part.

6.2 The Permit Authority should ensure compliance with relevant legal requirements for public consultation, environmental impact assessment and/or conservation of marine protected areas prior to the issue of a research permit.

6.3 The Permit Authority should have necessary powers to:

- attach conditions/research protocols to a permit;
- vary such conditions/protocols where necessary for technical or animal welfare reasons;
- transfer the permit to a new investigator where consistent with these Guidelines;
- suspend or cancel a permit in cases of non-compliance.

6.4 The Permit Authority should be consulted by the department(s) responsible for environmental impact assessment of sectoral programmes or activities that may incidentally disturb or injure cetaceans. It should have the right to make recommendations and propose mitigation measures prior to any decision being taken on the programme or activity concerned.

7. Factors to be examined in granting a permit

(i) Research team

7.1 The relevant qualifications and experience of the Principal Investigator (and where applicable, the Co-Investigator) and, where appropriate, other key participants in the research (e.g. boat skippers etc.) will be examined. Attention will be paid as to whether the personnel have the necessary skills and background to ensure that:

- the project has a high probability of meeting its scientific objectives; and
- stress on the animals is minimised and within current animal welfare standards.

7.2 The provision for capacity building, where applicable and appropriate, will be examined.

7.3 Underwater observations and operation or manoeuvring of a boat around cetaceans should not be conducted without appropriate training and/or the relevant experience and certification.

7.4. Projects conducted in areas where local expertise is lacking should contribute to capacity building by involving local researchers and/or students and providing opportunities for learning and professional growth.

(ii) Objectives of the research

7.5 The clarity and relevance of research objectives will be examined, taking into account:

- regional conservation and management priorities defined by Parties to the Agreement⁹⁹
- research needs identified by the ACCOBAMS Scientific Committee;
- the development of appropriate conservation and management measures at the national or regional level; and/or
- the implementation of Recommendations adopted by relevant intergovernmental Organisations insofar as these are consistent with policies and Recommendations adopted by ACCOBAMS.

(iii) Quality of the project design

7.6 The proposed *temporal* and *geographical scope* of the project, the *field* and *laboratory methods* and the *analytical techniques* will be examined. The review will consider whether they are scientifically appropriate and have a realistic chance of meeting the project's objectives within the proposed timeframe. In considering this, due care will be given to reviewing whether:

- sample size (including age/sex class) is appropriate;
- the research is unnecessarily duplicative; and
- the proposed methods techniques are well understood and specified.

⁹⁹ e.g.[Resolution 4. 5 “Work Programme 2011-2013”]

7.7 Project *location, timing* and *field methods* will also be examined to ensure that they:

- minimise potential negative effects on populations, ecosystems and individuals consistent with the research objectives – justification for use of techniques that involve potential negative effects will be carefully examined and alternative methods may be recommended if consistent with achieving the objectives of the study in an efficient manner;
- are consistent with applicable legislation and current best practice for cetacean research and animal welfare as reflected in these Guidelines.

In examining the above, due consideration will be given to (a) the status of the population(s) concerned; (b) the potential value to the conservation of the population(s) concerned and (c) the potential value of the research to the overall goals of ACCOBAMS. Particular attention will be given to proposed new field methods and recommendations may be made regarding the need for further assessment of potential negative effects before recommending their use.

7.8 Plans for response to accidental death or serious injury will also be examined. These should include, at least, agreement to suspend research for a sufficient time to review the circumstances surrounding the incident and identify measures to reduce the risk of further incidents. This will normally include:

- agreement that the Principal Investigator will notify the Permit Authority and the ACCOBAMS Secretariat of any such incident as soon as possible and submit a written report within seven days describing the relevant circumstances and proposed mitigation measures;
- Provision for prompt review of the report by the Permit Authority and if necessary, revision of the research protocol under the permit before authorising the work to recommence.

(iv) Archiving

7.9 The proposal will be examined to ensure that biological, photographic and other material will be archived appropriately, with regard for such aspects as:

- assurance that any samples remaining after the completion of initial research are deposited into an appropriate scientific collection (i.e. one that meets acceptable standards of curation and data cataloguing);
- assurance that optimal use is made of any tissues collected, e.g. the carrying out of other analyses not part of the primary research proposal, or the facilitation of tissue exchanges. Exchange of cetacean tissue samples collected during research activities should be facilitated, notably between competent laboratories registered with the CITES Secretariat, in accordance with Resolution 2.10 (Facilitation of exchange of tissue samples).¹⁰⁰

(v) Reporting procedures and presentation/use of final results

7.10 The proposal will be examined to determine whether there are adequate and timely reporting procedures:

- between the permit holder and the Permit Authority;
- between the permit holder and the scientific community (e.g. the ACCOBAMS Scientific Committee, other national or international bodies) in terms of progress and final reports;
- plans for publication of results in the scientific literature.

7.11 Consideration will also be given to plans for:

- using the results to develop practical recommendations for conservation and management;
- using the results to promote capacity building at the appropriate level;

¹⁰⁰ See ACCOBAMS Resolutions 2.10 (Facilitation of exchange of tissue samples) and 2.15 (Guidelines on tissue banks).

8. Compliance

8.1 Activities conducted under a research permit must comply with:

- applicable requirements of the Country and/or in the marine area of research operations with regard to cetacean conservation, marine environmental protection, animal welfare and the import, transit or export of biological material;
- specific conditions laid down by the permit.

8.2 It should be an offence to carry out or attempt to carry out research or related activities without the necessary permit or in breach of permit conditions or applicable legislation, whether intentionally or negligently. National legislation should provide for meaningful penalties in the event of a conviction.

8.3. The Permit Authority should notify the Secretariat of cases of non-compliance.

9. Role of the Scientific Committee

9.1 The ACCOBAMS Scientific Committee is responsible for the granting of previous general advice on research activities requiring obligatory permit under these Guidelines and advises the relevant Permit Authority(ies) on how to handle the applications.

9.2 The Committee should advise the Secretariat on any experimentation, conducted by non-Party Range States in the context of cooperation with ACCOBAMS that may induce or risk cetacean harassment, indicating specific measures to prevent or minimise such risks.

9.3 As an integral part of the Guidelines, the Committee has developed as a live document a guide to best practice with respect to research techniques, methods and equipment to address particular research questions and topics and to be amended regularly (Appendix 3). In developing this guide it will also indicate whether such techniques can normally be considered of 'potentially low impact' or of 'potentially significant impact' (see below), recognising the need to consider the frequency and duration of their use in any one application (or among applications).

APPENDIX 1

Definitions

Acute behavioural response – Repeated, prolonged or excessive actions of a cetacean whose normal behaviour has been disrupted as a result of harassment. It includes but is not limited to a rapid change in direction or speed; escape tactics such as prolonged diving, underwater course changes, underwater exhalation, or evasive swimming patterns; interruptions of breeding, nursing, or resting activities; attempts by a cetacean to shield a calf from a vessel or human observer by tail swishing or by other protective movement; or the abandonment of a previously frequented area.

Agreement Area: The geographical area defined under Article I.1.a) of ACCOBAMS

Approach - A continuous sequence of vessel manoeuvres involving a vessel, aircraft, or researcher's body in the water, including drifting, directed toward a cetacean or group of cetaceans for the purposes of conducting authorized research which involves one or more instances of coming closer than 100 m to that cetacean or group of cetaceans or closer than permitted under the common rules of cetacean watching as presented in Resolution 1.11.

Bona fide research - Scientific research on cetaceans that is (a) conducted by qualified personnel, the results of which are likely to contribute to basic knowledge of cetacean biology or ecology or to the identification, evaluation or resolution of conservation problems affecting cetacean populations, species or habitats in the Agreement Area, and (b) likely to be submitted to and accepted for publication in a refereed scientific journal. This definition excludes non-cetacean research that may incidentally lead to taking of cetaceans.

Co-Investigator - On-site representative of the Principal Investigator with comparable qualifications and responsibilities.

Harassment¹⁰¹ – Disruption of a cetacean's normal behaviour or prior activity by deliberate or negligent acts of pursuit, dispersal, herding, interference, torment, tagging, marking, branding or other acts that annoy or trouble cetaceans, as well as attempts and repeated approaches for such purposes.

Humane - The method of taking that involves the least possible degree of pain and suffering practicable to the animal involved, consistent with the goal of the research and given the information being sought.

Invasive (intrusive) research – A procedure conducted for bona fide scientific research involving:

- A break in or cutting of the skin or equivalent;
- insertion of an instrument or material into an orifice, introduction of a substance or object into the animal's immediate environment that is likely either to be ingested or to contact and directly affect animal tissue (i.e., chemical substances); or
- a stimulus directed at animals that may involve a risk to health or welfare or that may have an impact on normal function or behaviour (i.e. audio broadcasts directed at animals that may affect behaviour).

Normal behaviour - Behaviour of an animal in the wild in the absence of disturbance or threat resulting from human activities, including but not limited to migrating, breathing, nursing, breeding and feeding.

¹⁰¹ This proposed definition combines elements from Resolution 2.8 and the Australian, Canadian and American legislative definitions.

Permit Authority – Competent authority designated by a Contracting Party to consider and determine research permit applications.

Range State - Any State that exercises sovereignty and/or jurisdiction over any part of the range of a cetacean population covered by this Agreement, or a State, flag vessels of which are engaged in activities in the Agreement area which may affect the conservation of cetaceans.

Research permit – A general term covering any form of national procedure used to grant an exception to the prohibition on deliberate taking of cetaceans for the purpose of conducting specified scientific research in accordance with Article II.2 of the Agreement.

Permit Holder - Person, institution or agency that applies for the permit and has ultimate responsibility for the activities carried out by individuals under the authority of the permit.

Principal Investigator - The individual with primary responsibility for the work carried out under a research permit, including selection and supervision of research assistants (may also be the Permit Holder).

Research Assistant - Individual who works under the direct supervision of the Principal Investigator and/or Co-Investigator and is assigned responsibilities commensurate with his or her qualifications, knowledge and experience (including but not limited to data recording and serving as safety observer or boat tender).

Taking - Hunting, fishing, capturing, harassing, deliberately killing, or attempting to engage in any of these (CMS Article I.1.i, incorporated into the Agreement by Article I.3).

Unnecessarily duplicative research – Research for which the results are not necessary to verify the results of previous studies; can be reasonably and accurately predicted from the body of knowledge currently available in the scientific literature; or can be predicted from the expected results of ongoing or authorised studies.

APPENDIX 2

Pro forma for permits

The *pro forma* provides the format that should be used for applications for permits by Permit Authorities

PART A - SUMMARY OF APPLICATION

1. Project Title

2. Date of submission

3. Location of proposed research

Will the proposed research be conducted (tick more than one box where applicable):

In waters under national sovereignty and/or jurisdiction?
YES / NO

In international waters?
YES / NO

From vessels under the national jurisdiction?
YES / NO

4. Project abstract (maximum 200 words)

Summarise the problem or question to be addressed, the methods to be used, possible outcomes and the importance of the proposed research for advancing cetacean science and conservation in the Agreement Area.

5. Funding

How will the proposed research be funded?

PART B - RESEARCH TEAM

6. Permit holder

- Provide full name and contact details of the person, institution or agency making the permit application.
- Where applicable, is this institution an ACCOBAMS Partner Organisation?
- Where applicable, is this person the Principal Investigator?

7. Principal Investigator

- Provide full name and contact details of the person who will have primary responsibility for any taking and related activities carried out under the research permit.
- Specify qualifications, knowledge and experience relevant to the type of proposed activities, with particular reference to cetacean research already conducted in the Agreement Area.
- Indicate professional links to any ACCOBAMS Partner Organisation.

- Attach to the *pro forma* a copy of the curriculum vitae and a list of publications relevant to the objectives, methods or other aspects of the proposed research.

8. Co-Investigator

Where the research team includes a Co-Investigator (on-site representative of the Principal Investigator with comparable qualifications and responsibilities), please provide information as for Section 10.

9. Research assistants

- Provide name and contact details of each research assistant who will be working under the direct supervision of the Principal and/or Co-Investigator.
- Provide a brief summary of each assistant's role in the project and relevant experience, qualifications and training. Do not send full curriculum vitae.

10. Capacity building

- Does the project provide for participation of scientists from other Countries in the Agreement Area?
- For research involving waters under the jurisdiction of another State, what if any steps have been taken to involve local researchers and/or students?

PART C - DETAILED DESCRIPTION OF THE PROPOSED RESEARCH

11. Specific location of research activities

- Describe each marine area in which research activities will be conducted, including longitude and latitude, and attach an A4 sized map to show the boundaries of such area or areas.
- Is any part of these waters designated as a marine protected area or fisheries reserve? If so, indicate whether an additional permit is required to conduct research, from which agency or department and whether this has already been obtained.

12. Objectives of the proposed research

- State the broad goal and specific objectives of the research and where applicable, the hypothesis to be tested.
- Describe how the proposed research will contribute to maintaining a favourable conservation status for cetaceans in the ACCOBAMS Area, making specific reference where possible to:
 - conservation and management priorities defined by Parties to ACCOBAMS;
 - research needs identified by the ACCOBAMS Scientific Committee;
 - relevant recommendations of other intergovernmental Organisations.
- What is the expected nature of the research results and how will success be evaluated?

13. Coordination with other research programmes

- What steps have been taken to identify:
 - complementary or overlapping research programmes in the ACCOBAMS Area?

- activities in the research area that may affect the conduct or results of this research and/or increase the risk of adverse effects on the research subjects (i.e. cetacean species or populations)?
- How would the proposed research be coordinated with such programmes or activities to avoid duplication and minimise impacts on cetaceans?

14. Start date and duration of proposed research

- Indicate the start date and duration of the proposed research.
- Provide a timetable for fieldwork and analysis.

15. Sample size and design

- For each species covered by the study, please specify:
 - Common and scientific name;
 - Number of animals to be sampled or disturbed (only applies to certain types of research);
 - Age/size (e.g. are calves, mothers and/or pregnant females likely to be disturbed?);
 - Time of year when the research will take place.
- Justify the size and design of the sample by reference to statistical power or other aspects.

16. Research techniques

- For each technique that involves potential harassment of a cetacean, specify:
 - reasons for selection;
 - specific research questions being posed;
 - data required to answer these questions;
 - estimated accuracy of the data that will be collected;
 - how such data will address the project's overall objectives;
 - means that will be used to evaluate the project's success.
- Where a project involves multiple techniques (capture, marking, tagging, sampling etc.), indicate the number of procedures to which each animal may be subjected and the steps that will be taken to minimise re-use of the same animals.

17. Ethics and animal welfare considerations

17.1 Have non-invasive or less invasive techniques been considered for collecting the data necessary for this research? If so, on what basis were they rejected?

17.2 Describe the likely short- and long-term impacts on the welfare of the individual(s) and the population(s) under study? How will these be assessed and monitored?

17.3 Provide evidence to support the choice of invasive techniques (e.g. approval of research protocol by a competent Animal Ethics Committee, consistency with a code adopted by a professional association).

17.4 What steps will be taken to minimise pain or distress to the subjects of the research?

17.5 Has a contingency plan been prepared?

18. Aerial or boat-based surveys and/or photo-identification

- boundaries of the survey area(s);
- time(s) of year for the surveys;
- type of survey craft (e.g. fixed-wing, helicopter, etc.) or vessel.

For aerial surveys

- survey altitude;
- ground speed
- photo-ID altitude
- number of passes per animal or group;
- measures to minimize disturbance.

For boat-based surveys

- protocols for going “off track” to photo-id animals
- type/size of photo-id vessel
- vessel speed
- number of close approaches per animal or group
- measures to minimize disturbance.

19. Procedures involving collection of tissues or other samples from animals

Justification for selection of sampling technique

Remote biopsy sampling

- type of vessel and speed
- minimum approach distance
- number of close approaches per animal
- type of sample (blubber biopsy, muscle biopsy)
- size and kind of biopsy dart
- dart deployment method (e.g. cross bow, rifle, pole, etc.) including force of impact
- maximum depth of dart penetration
- preferred sampling site on animal (i.e. shoulder, back, hindquarter, etc.)
- target number of samples and sampling scheme
- size of individual sample (diameter x depth)
- measures to avoid serious injury or mortality.

Blood sampling

- method of collection
- location of sample (which blood vessel);
- total volume needed for assay;
- total volume to be collected.

Serial blood samples (e.g., total body water or metabolic rate measurements)

- total number of samples per animal
- sampling interval
- total volume per sample.

20. Procedures involving remote attachment of scientific instruments

- minimum approach distance
- approach method (i.e. type of vessel, vessel speed etc.)
- maximum number of close approaches per animal
- deployment method (i.e. pole, crossbow, shotgun etc.)
- attachment method (i.e. suction cup, implantable)
- if implantable, depth of penetration (blubber layer, implant in the muscle?) and composition of attachment device
- maximum duration of attachment (implications for tag design and battery requirements)
- method of removal/retrieval, if applicable
- location of attachment on animal
- type of instrument
- mass and total external dimensions of instrument
- if instrument emits signal, indicate frequency (Hz), intensity (dB), pulse rate and duration of signal
- maximum number and type of tags an individual animal would receive
- arrangements for monitoring the individual during tagging research (re-sights)
- post-tagging monitoring.

21. Procedures involving non-remote external attachment of scientific instruments

- attachment method (e.g., epoxy, harness, flipper or fin tag, etc.)
- location of attachment on animal
- type of instrument attached
- mass and total external dimensions of instrument
- if instrument emits signal, indicate frequency (Hz), intensity (dB), pulse rate and duration of signal
- maximum duration of attachment and implications for tag design and battery requirements
- method of removal/retrieval, if applicable
- arrangements for monitoring the individual during tagging research (re-sights)
- post-tagging monitoring.

22. Procedures involving active acoustics (playbacks or broadcasts):

- type of signal
- depth in water column
- power output
- source level
- frequency
- maximum intended received level
- signal duration and duty cycle
- inclusion of a propagation model is desirable.

RESULTS OF THE PROPOSED RESEARCH

23. Intended outputs

23.1 Describe the anticipated products of the research (e.g. articles for publication in peer-reviewed literature, reports, photographs, acoustic recordings, workshops, identification catalogues)

23.2 How will the research results contribute to technical recommendations to governments and/or management bodies?

23.3 Where and when will the research results be published or made available to the public?

23.4 Could the research results be used in capacity-building activities in other parts of the Agreement Area?

23.5 Disposal of biological material

23.6 Will biological material be collected under the research permit for laboratory or other analysis?

23.7 If so, describe the proposed arrangements for disposal or archiving of such material after completion of initial research goals.

APPENDIX 3

Technical indicators for acceptable research methods and equipment

Several jurisdictions outside the Mediterranean and Black Seas have established highly prescriptive conditions for observing and treating cetaceans under research permits (e.g. Standard Conditions for Cetacean Permits under Australia's Environment Protection and Biodiversity Conservation Act 1999). Some of those were reviewed during the preparation of this annex. They include, for example, specific limits on approach distances for tagging, biopsy sampling and photography; specifications on how many approaches are allowed during a unit of time; and requirements for work to be interrupted if the animals respond in specific ways.

It was decided that at the present stage of development of an ACCOBAMS strategy for dealing with the granting of exceptions, a less prescriptive approach was appropriate and that the technical indicators would be optimally presented as guidelines rather than as requirements. Also, it was agreed that this annex would be subject to ongoing review and revision by the Scientific Committee such that improvements could be made in the light of experience and new scientific findings.

Aerial survey

This is a generally low-impact activity, particularly as long as the aircraft is flying on a steady course along predetermined routes as in a line- or strip-transect survey. Circling over the animals, a procedure that is often necessary to obtain reliable identifications and accurate counts during surveys, is of most concern. Disturbance is caused mainly by noise from the aircraft's propeller rotation and engine although the shadow of an overflying craft can elicit a startle response on the part of cetaceans at the surface. The level of sound entering the water generally decreases with flight altitude, so as a general rule, the survey design should ensure that the searching altitude is 183 m (=600 feet) or higher – the chosen altitude will depend on the size of the target animals (e.g. 183 m for porpoises and other small cetaceans found in small groups; 230 m for larger cetaceans, e.g. fin whales). Circling over animals should only occur if it is necessary to confirm species identification and/or school size and it should be carried out as quickly and as high as possible whilst still meeting the scientific objectives.

Ship-based survey

This is also a generally 'low impact' activity. The main concern is how the animals are approached, if they are approached. The following Guidelines should be applicable in most circumstances:

- When approaching animals:
- Maintain an oblique angle in relation to their heading (ca. 110° to 160°) and do not attempt to cut them off; try to ensure that they are aware of the approaching vessel; establish a course parallel to theirs before closing to within 50 m.
- Reduce speed to accommodate to the animals' speed.
- Never make sharp turns or quick changes in speed when near the animals; all turns and speed changes should be progressive and slow to give the animals a chance to notice and react.
- Do not allow the vessel to come between a mother and calf.
- If animals show strong reactions to an approach, abandon it and move away.
- Do not chase the animals if they show an avoidance response.

Photo-identification

This too is a generally 'low impact' activity. The main concern is how the animals are approached (this is also a component in the evaluation of other techniques such as biopsy sampling and tagging/markings).

- Approach the animal(s) following the Guidelines for ‘Ship-based survey’ above, but once parallel to the individual or group, start closing slowly at a small angle until the necessary distance for obtaining suitable photographs has been achieved, then complete the photography session and move away deliberately and without revving the engine.
- Before closing in to cetacean(s) known to bow-ride, allow some time for animals to approach and bow-ride your boat, an act that will facilitate photographing as well as sampling/tagging.
- If the animals show strong reactions to the approach, abandon it and move away.
- Do not allow the vessel to come between a mother and calf.
- Do not chase the animals if they show an avoidance response.

Biological sampling

Small tissue (and faecal) samples collected from free-living cetaceans are used in a wide variety of studies, many with high relevance to conservation. In all cases, such sampling should be carried out only by experienced, trained researchers. Also, if the target animals show strongly negative reactions to repeated approaches (e.g. rapid movement away from the research vessel, changing their respiratory cycle in an obvious way), the procedures should stop and the animals left alone.

Biological samples are obtained in three main ways, as follows:

- *Biopsies*

Obtaining biopsies from live, free-ranging cetaceans should not be attempted unless it is well justified within the context of a bonafide research program. The use of biopsy darts fired from a rifle or crossbow is generally regarded as the most invasive non-lethal method of obtaining biopsies. It should be carried out only by experienced and trained researchers. As a general rule, biopsies from large cetaceans should be collected using a specially designed rifle, crossbow or pole; those from medium-sized cetaceans using a pole or, in special circumstances and with caution, a crossbow; and those from small cetaceans using only a pole. Some additional general guidelines for biopsy sampling are as follows:

- Avoid calves and mothers with small calves except when well justified by the importance of genetic or other information.
- For long-range biopsies (rifle, crossbow) do not fire at ranges of less than:
 - 7 m for large whales (baleen whales, sperm whale, adult male killer whale) and
 - 12 m for medium-sized whales (female and immature killer whale, pilot whales, Risso’s dolphin, beaked whales).
- Rifles and crossbows should be avoided for smaller cetaceans (striped, common and bottlenose dolphins, and porpoises).
- If animals show strong reactions to repeated approaches, stop procedures and leave them.
- Try to avoid multiple sampling of the same animal during a single encounter, e.g. by always sampling from the same side of animals.
- Do not use oversized tips (e.g. large whales’ tips for small cetaceans).
- Calibrate the strength of the rifle (e.g. according to species) and the distance according to the power of the device. Avoid using powerful crossbows (compound ones) at short distances (7 m); consider having different crossbows for different species of cetaceans (e.g. one for large ones and one for medium-sized ones).

- *Skin swabs*

- Try to avoid small calves and mothers with small calves.
- Try to avoid multiple sampling of the same animal during a single encounter.

- *Sloughed skin and faeces*

- Try to use nets and avoid entering the water unless necessary.
- Do not force animals to make shallow dives to encourage skin sloughing.
- Do not place the boat between mothers and calves to collect faeces or sloughed skin.

Many of these suggestions are not much more than common sense. What is important is that researchers, when applying for an exception, provide an explicit rationale as to why any potentially disturbing or intrusive procedures are necessary to acquire data, and how the data will contribute to scientific understanding and cetacean conservation. It should be possible to demonstrate in the application that every reasonable effort has been made to minimize disturbance and the risk of harm to the animals themselves.

Tagging or marking

The application of tags to animals (or actively marking them in some way), whilst often being extremely informative, is among the most intrusive research methods. This is particularly true if deliberate live-capture to apply the tags or marks is proposed. As a result a great deal of effort has been made to develop devices and procedures to reduce, and minimize, the risk of harm. Any tagging or marking must be performed quickly, easily, and with minimal pain. While care for individual animals is always important, from a conservation perspective, it is especially important to take carefully into account the status of the population when deciding the appropriate research technique to use to answer questions. For endangered/severely depleted populations, the conservation benefits of learning more about the animals (and thus informing better mitigation against threats) must be weighed against the potential for damage to the health of an individual animal or animals.

Different tagging or marking techniques have different levels of ‘invasiveness’ and the choice of the most appropriate techniques should be considered carefully in relation to the questions being asked. Time-depth recorders (TDRs) attached by suction cups are often used for short-term monitoring of diving behaviour, while implanted or dart-attached satellite tags are often used to obtain longer-term data on movements and migration.

When applying for a permit, a detailed description of the method(s) selected and a justification for that selection should be included. If a more invasive technique is proposed (e.g. implanted tag instead of suction cup), the pros and cons should be reviewed thoroughly in order to justify one method over the other. If similar results can be obtained with a less intrusive attachment technique, priority should be given to it over any more invasive one.

When reviewing an application for tagging/marking, the following must be considered:

- the conservation status of the affected population;
- the approach will yield valuable results (especially from a conservation/management perspective);
- the process is not likely to result in immediate or long-term hindrance or irritation to the animal;
- the process is not likely to significantly affect an individual’s survival or reproductive capacity.

Controlled Exposure Experiments (CEEs)

Controlled exposure experiments provide a way of testing the effects of various stimuli on wildlife. Such experiments, when carried out on free-ranging cetaceans, need to be carefully designed and rigorously executed to ensure that the information being sought is obtained efficiently but with minimal or no risk to the research subjects. ACCOBAMS particularly concerned about the potential proliferation of CEEs on beaked whales in areas of the Mediterranean Sea where circumstances are amenable (e.g. the animals are predictably present, logistics and environmental conditions are often favorable) has established clear guidelines for Parties contemplating such activities. These include prior notification to the Scientific Committee and requirements that (a) all possible alternative means of obtaining the needed information, e.g. opportunistic study of beaked whales exposed to measured types and levels of underwater sound, have been fully explored; (b) monitoring has a high probability of detecting both target and non target animals in real time across the area of potential exposure; and

(c) the experimental design is sufficient to satisfy clear, specific management objectives and is part of a long-term study of population status and health.

RESOLUTION 4.19

MODEL MEASURES ON CONSERVATION OF CETACEANS
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The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Recalling that compliance with the obligations arising from ACCOBAMS requires the adoption and enforcement of relevant national legislation, as provided for in Annex 2, paragraph 1, to ACCOBAMS,

Considering that it is appropriate that, in drafting and adopting national legislation, the Parties follow, wherever appropriate, a uniform model based on the achievement of a favourable conservation status for cetaceans,

1. *Takes note* of the Model Measures on Conservation of Cetaceans that is annexed to the present Resolution;
2. *Mandates* the Agreement Secretariat:
 - to transmit the Model Legislation on Conservation of Cetaceans to the Parties for their consideration and comments; and
 - to report on this subject at the next Meeting of the Parties.

Model Measures on Conservation of Cetaceans

Considering that:

- Cetaceans are an integral part of the marine ecosystem which must be conserved for the benefit of present and future generations and that conservation of cetaceans is a common concern,
- for hundreds of years cetaceans were taken or killed for commercial purposes, with some cetaceans stocks hunted to near extinction,
- cetaceans are particularly vulnerable to the long-lasting effects arising from over-exploitation and many cetaceans stocks have not recovered,
- today cetaceans face an uncertain future due to a variety of threats, including degradation and disturbance of their habitats, ozone depletion, chemical and noise pollution, marine debris, vessel strikes, entanglements with fishing gear, prey depletion, reduction of food resources, increasing offshore industrial development and escalating threats from climate change, including ocean acidification,
- because cetaceans migrate throughout the world's oceans, international cooperation is required to successfully conserve and protect them,
- where there are threats of serious or irreversible damage to cetaceans, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent the damage,
- [State] is a party to a number of international relevant instruments, such as the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, the Convention for the Protection of the Black Sea against Pollution and its Protocols, International Convention for the Regulation of Whaling, the Convention on the Conservation of European Wildlife and Natural Habitats, the Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora [check if the State is a party to all of them];
- the following Law is adopted [or equivalent formula in national use].

SECTION I GENERAL PROVISIONS

Art. 1 Definitions

For the purposes of this law:

1. "Cetaceans" means animals, including individuals, of species, subspecies or populations of *Odontoceti* or *Mysticeti*.
2. "Habitat" means any area in the range of cetaceans where they are temporarily or permanently resident, in particular, feeding areas, calving or breeding grounds and migration routes.
3. "Conservation status" means the sum of the influences acting on cetaceans that may affect their long-term distribution and abundance.

Conservation status is taken as favourable when:

- population dynamics data indicate that the cetaceans are maintaining themselves on a long-term basis as a viable component of their ecosystems;
- the range of the cetaceans is neither currently being reduced, nor is likely to be reduced, on a long-term basis;
- there is, and will be in the foreseeable future, sufficient habitat to maintain the population of the cetaceans on a long-term basis;
- the distribution and abundance of the cetaceans approach historic coverage and levels to the extent that potentially suitable ecosystems exist and to the extent consistent with wise wildlife management.

4. “Endangered” in relation to a particular cetacean species, subspecies or populations means that it is in danger of extinction throughout all or a significant portion of its range.
5. “Taking” means to hunt, capture or harass a cetacean.
6. “Harassing” means the disruption of a cetacean’s normal behaviour or prior activity by deliberate or negligent acts of pursuit, dispersal, herding, interference, torment, tagging, marking, branding or other acts that annoy or trouble cetaceans, as well as attempts and repeated approaches for such purposes.
7. “Cetaceans watching” means any activity conducted for the purpose of observing a cetacean, including but not limited to being in the water for the purposes of observing or swimming with a cetacean, or otherwise interacting with a cetacean.
8. [“Drift net” means any gillnet held on the sea surface or at a certain distance below it by floating devices, drifting with the current, either independently or with the boat to which it may be attached. It may be equipped with devices aiming to stabilise the net or to limit its drift;]
9. “Competent national authority” means [indicate it, on the basis of national legislation].

Art. 2

Purposes of the Law

The purposes of this law are the following:

- a) to reduce, and where possible, eliminate sources of human-caused death, injury, harassment and disturbance of the cetaceans;
- b) to strengthen cetaceans conservation and protection efforts of relevant international organizations;
- c) to initiate, expand and fund research to improve the understanding of cetaceans, cetacean health and reproduction, cetacean habitats, as well as the impacts of human activities and other threats to cetaceans.

Art. 3

Geographical Scope of the Law

1. The geographical scope of this Law, hereinafter referred to as the “area covered by this Law”, is constituted by territory of [State], as well as the maritime internal waters, the territorial sea and the exclusive economic zone [or fishing zone or ecological protection zone] of [State],
2. Beyond the area covered by this Law, the provisions of this Law apply to acts or omissions which, as the case may be, are attributed to:
 - a) nationals of [State];
 - b) persons of whatever nationality who for whatever reason are on board a vessel flying the flag of [State] or an aircraft registered in [State];
 - c) corporations incorporated in [State];
 - d) owners or persons in charge of the operation of a vessel flying the flag of [State] or an aircraft registered in [State].

SECTION II

PROHIBITED OR REGULATED ACTIVITIES

Art. 4

Possession or Use of Drift Nets

It is unlawful to keep on board or to use any drift nets.

Art. 5

Fishing Gears

It is unlawful to discard or leave adrift at sea fishing gears.

Cetaceans that are caught incidentally in fishing gear shall be immediately released in conditions that assure their survival.

Art. 6
Killing or Injuring a Cetacean

It is unlawful to take any action that results in the death or injury of a cetacean.

Art. 7
Taking of Cetaceans

It is unlawful to take a cetacean or attempting to engage in such activity.

Art. 8
Possession of Cetaceans

It is unlawful to possess a cetacean, a part of a cetacean or a product derived from a cetacean killed or taken in violation of this Law.

Art. 9
Import of Cetaceans

1. It is unlawful to import into [State] any cetacean or part any cetacean which was killed or taken in violation of this Law or killed or taken in another State.
2. It is unlawful to import into [State] any product derived from a cetacean if the importation into the [State] of the cetacean from which such product is made is unlawful under para. 1 of this Article or if the sale in commerce of such product in the country of origin of the product is illegal.

Art. 10
Use of Ports

It is unlawful to use any port, harbour or other place under the jurisdiction of [State] to take, import or possess a cetacean, any part of a cetacean or any product derived from a cetacean in violation of Art.9.

Art. 11
Trade in Cetaceans

It is unlawful to transport, purchase, sell, barter, export or offer to purchase, sell or export any cetacean, any part of a cetacean or any product derived from a cetacean in violation of this Law.

Art. 12
Exceptions

The provisions of this Section do not apply:

- a) for the purpose of non-lethal in situ research aimed at maintaining a favourable conservation status for cetaceans, after having obtained the advice of the ACCOBAMS Scientific Committee and a permit by the [competent national authority] issued under Art. 13;
- b) in emergency situations for cetaceans, when exceptionally unfavourable or endangering conditions occur;
- c) to an action that is taken in a humane manner and is reasonably necessary to relieve or prevent suffering of a cetacean;
- d) to an action that is reasonably necessary to prevent a risk to human life or health;
- e) to an action that occurs as a result of an unavoidable accident, other than an accident caused by negligent or reckless behaviour;
- f) an unintentional action or omission which would be a contrary to Arts. from 5 to 11 above, provided that the author, within seven days after becoming aware of it, notifies the [competent national authority] in writing, by telephone or by use of any other electronic equipment that the action or omission occurred and provides other relevant particulars, including time and place.

SECTION III MEASURES FOR THE CONSERVATION OF CETACEANS

Art. 13

Scientific Research

1. The [competent national authority] shall promote a comprehensive programme of scientific research to improve knowledge about cetaceans in order to ensure their favourable conservation status.
2. The [competent national authority] shall ensure that scientific research activities on cetaceans:
 - are conducted to high scientific and animal welfare standards;
 - contribute to regional priorities for conservation and management;
 - are undertaken with appropriate regional co-ordination and oversight in order to maximise the benefit of the research and minimise negative effects on individuals, populations and ecosystems.
3. Scientific research initiatives on cetaceans include, but are not limited to:
 - a) the periodical monitoring of cetacean status and trends, especially in poorly known areas or as regards species for which little data are available;
 - b) the determination of the migration routes, habitat use and the breeding and feeding areas, in order to define where human activities may need to be regulated as a consequence;
 - c) the evaluation of the feeding requirements of cetaceans in order to adapt fishing regulations and techniques accordingly;
 - d) the development of systematic research programmes on dead, stranded, wounded or sick cetaceans to determine the main interactions with human activities and to identify present and potential threats;
 - e) the collection of information on cetaceans causes of deaths obtainable through cetaceans necropsies, particularly of endangered cetaceans species;
 - f) the development of passive acoustic techniques to monitor cetacean population;
 - g) an assessment of the direct and indirect effects of anthropogenic noise on cetaceans distribution, behaviour, and reproduction;
 - h) information on the impacts on reproduction and immune systems from chemical pollutants;
 - i) information on ecosystem changes due to climate warming;
 - j) the development of more cetacean-friendly fishing gear and methods, including effective fishing gear marking systems;
 - k) the use of passive acoustic sonar and other technologies, including vessel design, to reduce mortality of cetaceans from vessel strikes.

In designing and carrying out this scientific research programme, the [competent national authority] shall co-operate with institutions and experts that are knowledgeable about regional issues relating to cetaceans conservation and management.

Art. 14

Permits for Research

1. Only non-lethal in situ research aimed at maintaining a favourable conservation status for cetaceans is allowed on the basis of a permit granted under an application.
2. Applications for non-lethal in situ research activities that involve the taking of cetaceans shall be reviewed and determined by the [competent national authority] on the basis of the relevant Guidelines adopted under the ACCOBAMS and after having obtained the advice of the ACCOBAMS Scientific Committee.
3. As soon as practicable after receiving the application, the [competent national authority] must cause to be published on the internet the details of the application and an invitation for anyone to give the [competent national authority] comments within twenty days on whether the permit should be issued.
4. In making a decision on the application, the [competent national authority] must consider the comments made under para. 2 above, if any.

5. The [competent national authority] must not issue the permit unless satisfied that the holder of the permit will take all reasonable steps to minimise the interference with cetaceans.
6. No permit shall be issued by the [competent national authority] if there are threats of serious or irreversible damage for cetaceans and their habitats and if measures to prevent such damage are not adopted.
7. The [competent national authority] shall not grant a permit authorising its holder to kill a cetacean or to take a cetacean for live display.
8. Any permit issued under this Article shall specify:
 - a) the number and kind of cetaceans which are authorized to be taken,
 - b) the location and manner in which they may be taken, and
 - c) any other terms or conditions which the [competent national authority] deems appropriate.
9. Researchers holding permit shall submit to the [competent national authority] an annual report of their activities.
10. The [competent national authority] may modify, suspend, impose further conditions to, or revoke in whole or part any permit issued under this Article in order to make such permit consistent with any change made after the date of issuance with respect to any applicable regulation or in any case in which a violation of the terms and conditions of the permit is found.

Art. 15

Impact Assessment for Activities that May Affect Cetaceans or their Habitat

1. The [competent national authority] shall conduct on a regular basis an impact assessment on the conservation status of cetaceans for either allowing or prohibiting the continuation or the future development of activities that may affect cetaceans or their habitat in the area covered by this Law, including fisheries, offshore exploration and exploitation, nautical sports, as well as establishing the conditions under which such activities may be conducted.
2. The results of the impact assessment shall guide in the establishment of the conditions to issue a permit for the relevant activities under Art. 16.

Art. 16

Permits for Activities that May Affect Cetaceans or their Habitat

1. In issuing permits for activities covered by Art. 15 of this Law and in prescribing related regulations, the competent national authorities shall give full consideration to all factors related to the conservation status of cetaceans, including but not limited to the effect of such permits and regulations on:
 - a) existing and future levels of cetaceans species and population stocks;
 - b) existing international treaty obligations;
 - c) the marine ecosystem and related environmental considerations;
 - d) the conservation, development, and utilization of fishery resources; and
 - e) the economic and technological feasibility of implementation.
2. The [competent national authority] shall undertake periodical scientific reviews of the impact of permits issued under this Article on the cetaceans, providing an opportunity for public comments during the course of such review, and shall include a response to public comments in the final report on such reviews.
3. The competent authorities may modify, suspend, impose further conditions to, or revoke in whole or part any permit issued under this Article in order to make such permit consistent with any change made after the date of issuance with respect to any applicable regulation or in any case in which a violation of the terms and conditions of the permit is found.

Art. 17

Cetacean By-Catch

The [competent national authority] shall:

- a) adopt regulations to reduce cetacean by-catch in fishing activities through the use of appropriate devices, such as pingers and acoustic mitigation devices;
- b) regularly monitor the effectiveness and efficiency of such devices;
- c) estimate cetacean by-catch for different types of fisheries;

- d) raise awareness of fishermen about the need to mitigate the impact of fishing on cetacean populations.

Art. 18 **Noise Restrictions**

The [competent national authority] shall:

- a) take into account the relevant instruments adopted at the international level, adopt regulations for minimizing the introduction of incidental noise from commercial shipping operations and other activities into the marine environment for purposes of reducing the potential adverse effects on cetaceans and other marine life;
- b) study and reduce the adverse effects of anthropogenic noise, including when produced by military activities, on cetaceans and other marine life;
- c) identify and promote the use of areas to be avoided by commercial vessels and other navigational measures, such as speed reduction areas in important cetaceans habitats, in order to minimize the threat of serious injury to cetaceans resulting from collisions with commercial vessels.

Art. 19 **Discharges at Sea**

The [competent national authority] shall establish and maintain a regularly updated list of pollutants believed to have adverse effects on cetaceans and shall adopt regulations on the discharge at sea of such pollutants.

Art. 20 **Specially Protected Areas**

1. Within the framework of the national legislation on protected areas and the relevant international treaties, the [competent national authority] shall establish and manage one or more specially protected areas for cetacean conservation, corresponding to the areas which serve as habitats of cetaceans or which provide important food resources for them.
2. The areas referred to in para. 1 shall be established under specific regulations and shall be managed under a management plan and according to criteria agreed upon at international level.
3. If other States are involved, the areas referred to in para. 1 shall be established under an international treaty.
4. The [competent national authority] shall, if appropriate, propose the areas referred to in para. 1 for inscription in lists established under international treaties.

Art. 21 **Capacity Building, Training and Education**

1. The [competent national authority] shall give priority to capacity building in order to develop the necessary expertise to ensure a favourable conservation status for cetaceans, in particular as regards:
 - a) the development of systems for collecting data on observations, incidental catches, strandings, epizootics and other phenomena related to cetaceans;
 - b) the keeping of lists of national authorities, research and rescue centres, scientists and non-governmental organizations concerned with cetaceans;
 - c) the preparation of a directory of protected or managed areas which could benefit the conservation of cetaceans and of marine areas of potential importance for the conservation of cetaceans;
 - d) the preparation of a directory of national and international legislation concerning cetaceans;
 - e) the establishment of data banks for the storage of information collected under paragraphs a) to d) above;
 - f) the preparation of an information bulletin on cetacean conservation activities;
 - g) the preparation of information, awareness and identification guides for distribution to users of the sea;

- h) the preparation of a synthesis of veterinary recommendations for the rescue of cetaceans; and
 - i) the development and implementation of training programmes on conservation techniques, in particular, on observation, release, transport and first aid techniques, and responses to emergency situations.
2. In collaboration with competent international institutions and the corresponding authorities of other States, the [competent national authority] shall develop common tools for the collection and dissemination of information about cetaceans and shall organize training courses and education programmes.

Art. 22

Emergency Plans

1. The [competent national authority] shall develop and implement emergency measures for cetaceans when exceptionally unfavourable or endangering conditions occur. In particular, it shall:
- a) prepare, in collaboration with competent bodies, emergency plans to be implemented in case of threats to cetaceans, such as major pollution events, important strandings or epizootics;
 - b) evaluate capacities necessary for rescue operations for wounded or sick cetaceans; and
 - c) prepare a code of conduct governing the function of centres or laboratories involved in this work.
2. In collaboration with competent international institutions and the corresponding authorities of other States, the [competent national authority] shall develop common tools for the preparation and implementation of emergency plans.

SECTION IV CETACEAN WATCHING

Art. 23

Scope of this Section

This Section addresses cetacean-watching activities carried out for commercial purposes by vessels or aircraft.

Art. 24

Impact assessment

1. Before allowing cetacean-watching activities, the [competent national authority] shall require an assessment on their impact on the favourable conservation status for cetaceans.
2. The impact assessment shall be based on the best available scientific information.
3. No cetacean-watching activities are authorized if there are threats of significant adverse impact on the behavioural patterns or physiological well-being of cetaceans, having regard to the number and effect of existing cetacean-watching operations.
4. Based on the results of the impact assessment, the [competent national authority] shall establish special conditions to carry out cetacean-watching activities.
5. The impact assessment shall be repeated at periodic intervals.

Art. 25

Permit

1. Any commercial cetacean-watching activity shall be carried out under a permit granted by the [competent national authority].
2. Every applicant for a permit for a vessel or aircraft cetacean-watching operations should submit to the [competent national authority] an application in writing setting out:
 - a) the type, number and speed of vessels or aircraft intended for use and the maximum number of vessels or aircraft the operator proposes to operate at any time;

- b) information relating to the noise level of each vessel or aircraft both above and below the sea;
 - c) the area of operation;
 - d) the base of operation;
 - e) the duration and frequency of trips;
 - f) the species of cetaceans with which the operation will have contact and the kind of contact;
 - g) the method of location of cetaceans;
 - h) the maximum number of passengers to be taken on board;
 - i) the experience with cetaceans demonstrated by the persons in command of the vessel or aircraft;
 - j) the educational materials provided to the passengers;
 - k) the altitude of the aircraft.
3. No permit shall be granted if the competent national authority is not satisfied that:
- a) the operator and the staff who come into contact with cetaceans have sufficient experience with cetaceans;
 - b) the operator and the staff have sufficient knowledge of the local area and of sea and weather conditions;
 - c) the operator and the staff who come into contact with cetaceans have no convictions for offences involving the mistreatment of animals;
 - d) the operation proposed has sufficient educational value to the public.
4. The competent national authority may at any time suspend or revoke a permit, or restrict the operation authorized by a permit, where:
- a) the holder contravenes or fails to comply with any requirement relating to cetacean-watching or any condition specified in the permit;
 - b) to suspend, revoke or amend a permit is necessary, on reasonable grounds, for maintaining the favourable conservation status for cetaceans.

Art. 26

Behaviour around cetaceans

The following conditions shall apply where cetacean-watching activities are being carried out:

- a) vessels and aircraft shall be operated so as not to disrupt the normal movement or behaviour of cetaceans;
- b) contact with cetaceans shall be abandoned at any stage if they show signs of becoming disturbed or alarmed;
- c) no cetacean shall be separated from a group;
- d) no rubbish or food shall be thrown near or around the cetaceans;
- e) no sudden or repeated change in the speed or direction of vessels or aircraft shall be made except in the case of an emergency;
- f) where a vessel stops to enable the passengers to watch a cetacean, the engines shall be placed in neutral;
- g) no aircraft shall be flown below 183 metres (600 feet) above sea level;
- h) no vessel shall approach within 100 metres of a cetacean;
- i) no vessel shall cut off the path of a cetacean;
- j) no cetacean shall be prevented from leaving the vicinity of the vessel;
- k) a vessel less than 300 metres from cetaceans shall move at a constant speed no faster than 5 knots and no faster than the slowest cetacean in the vicinity, and shall stop when it approaches within 100 metres of a cetacean;
- l) a vessel departing from the vicinity of cetaceans shall proceed slowly until the vessel is at least 300 metres from the nearest cetacean;
- m) aircraft shall be operated in such a manner that, without compromising safety, the aircraft's shadow is not imposed directly on cetaceans;

- n) only one vessel or aircraft at any one time shall be allowed to stay in the watching area;
- o) the presence in the watching area shall be limited to around 15 minutes for vessels or 2 minutes for aircraft, especially if other vessels or aircraft are waiting for their turn;
- p) vessels shall approach a cetacean only diagonally from the side;
- q) activities such as swimming with cetaceans shall be forbidden or strictly regulated;
- r) cetaceans shall not in any other way be disturbed or harassed.

Art. 27

Training and special quality mark

1. The [competent national authority] shall organise training courses for cetacean-watching operators and staff and grant them a certificate
2. The [competent national authority] shall grant a special quality mark to the operators who have behaved in conformity with the applicable regulations or guidelines, have obtained a training certificate and have a qualified guide on board.

SECTION V CRIMINAL PROVISIONS

Art. 28

Sanctions¹⁰²

1. The possession on board of drift nets is sanctioned.
2. The use of drift nets is sanctioned.
3. The act of discarding or leaving adrift at sea fishing gears is sanctioned.
4. The omission to immediately release cetaceans that are caught incidentally in fishing gear in conditions that assure their survival is sanctioned.
5. The killing or injuring a cetacean is sanctioned.
6. The taking of cetaceans is sanctioned.
7. Possession of a cetacean, a part of a cetacean or a product derived from a cetacean taken or killed in violation of this provision is sanctioned.
8. The import into [State] of any cetacean, part of a cetacean or product derived from a cetacean in violation of Art. 9 is sanctioned.
9. The use of any port, harbour or other place under the jurisdiction of [State] to take, import or possess a cetacean, any part of a cetacean or any product derived from a cetacean in violation of Art. 9 is sanctioned.
10. The transport, purchase, sale, barter, export or the offer to purchase, sell or export any cetacean, any part of a cetacean or any product derived from a cetacean in violation of this Law is sanctioned.
11. Failure to notify the information provided for in Art. 12 f) is sanctioned.
12. Failure to comply with the conditions for a permit under Art. 14, Art. 16 or Art. 25 is sanctioned.
13. Failure to comply with the conditions of behaviour around cetaceans set forth in Art. 26 is sanctioned.

Art. 29

Aggravating Circumstances

The sanctions provided for in Art. 28 may be aggravated if the cetacean:

- a) was pregnant at the time of killing or taking;
- b) was nursing at the time of killing or taking, or less than eight months old, whichever occurs later;
- c) belonged to a species or population stock which the [competent national authority] has designated as endangered; or

¹⁰² The type and level of sanctions should be determined by the State concerned

- d) was killed or taken in a manner deemed inhumane by the [competent national authority].

Art. 30

Seizure and Forfeiture

1. Any vessel that is employed in any manner in the unlawful taking or killing of any cetacean shall have its entire cargo or the monetary value thereof subject to seizure and forfeiture.
2. All cetaceans or products derived from cetaceans seized or forfeited under para. 1 shall be disposed by the [competent national authority] in such a manner that it deems appropriate.

Art. 31

Earmarking of Fines

Fines paid under Art. 28 shall be earmarked for activities devoted to scientific research, capacity building, training or education in the field of cetacean, as well as for the establishment of a fund to compensate fishermen having suffered damage to ensure the immediate release of cetaceans caught incidentally in fishing gears.

RESOLUTION 4.20

STRENGTHENING THE STATUS OF ACCOBAMS PARTNERS
--

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Recognizing the significant role played by many Organisations and Institutions in the conservation of cetaceans in the Agreement area,

Desirous of strengthening the involvement of qualified Organisations and Institutions in implementation of ACCOBAMS and of encouraging them to undertake further action to achieve the Agreement's objectives,

Taking note of the information provided by the Secretariat on the activities of ACCOBAMS Partners in the past triennium,

1. *Decides:*

- that Organisations and Institutions interested in formal recognition as Partners to the ACCOBAMS should present an application to the Agreement Secretariat for its inclusion in the agenda of the next meeting of the Bureau for decision;
- that this status will facilitate their involvement in the implementation of the international priorities adopted by the Contracting Parties and financed by the budget of the Agreement or by the supplementary conservation fund, and that ACCOBAMS Partners will receive information about the Scientific Committee in priority;
- to urge the Agreement Secretariat to provide the Organisations and Institutions which are "Partners" a logo with the label "ACCOBAMS Partner", which they will be authorised to use for all relevant activities of the Agreement;
- that the status "ACCOBAMS Partner" vis-à-vis the Agreement may be reviewed by the Meeting of the Contracting Parties on the basis of a report submitted by the Bureau;

2. *Adopts* the rules and criteria for the status of ACCOBAMS Partner, as annexed to the present Resolution;

3. *Decides* that the application form reproduced in the Appendix to the Annex to this Resolution shall be submitted also by the Organisations and Institutions that have already been granted the ACCOMBAMS Partners status;

4. *Decides* that the present Resolution replaces Resolutions 1.13 and 3.5.

Rules and criteria for the status of ACCOBAMS Partner

Criteria for applying to the status of ACCOBAMS Partner

Recognizing that Organisations and Institutions technically qualified for the conservation of cetaceans that are formally recognized as ACCOBAMS Partners by the Meeting of the Contracting Parties will be expected to contribute on a regular basis and to the best of their ability to the further development of policies, technical and scientific tools of the Agreement and to their application, the status of Partner shall be conferred on Organisations and Institutions that have:

- (a) statutory objectives that are in full agreement with the spirit and objectives of ACCOBAMS;
- (b) a statement of purpose that explicitly, or by clear implication, includes conservation of cetaceans and of their habitat, human-cetacean interactions or other activities relevant to the Agreement;
- (c) experience in providing support to implementing practical research, collection and analysis of information or other educational and training activities that contribute to cetacean conservation;
- (d) demonstrated experience in implementing partnership ventures, such as for training and education, technical and scientific expertise, policy development or evaluation and assessment, particularly when such ventures would bring new and additional benefits to the functioning of the ACCOBAMS partnership;
- (e) demonstrated willingness and ability to cooperate with national and international governmental and non-governmental bodies;
- (f) stated their readiness to contribute actively on a regular basis to further development of policies and tools of the Agreement and their application, particularly by assisting Parties to meet their obligations under the Agreement;
- (g) as a preferential qualification, have already communicated with the Secretariat and cooperated with ACCOBAMS in the achievement of its objectives; and
- (h) submitted an application in writing to the Executive Secretary with a commitment to comply with the present rules, as in the form reproduced in the Appendix.

The application form reproduced in the Appendix shall be submitted also by the Organisations and institutions that have already been granted the ACCOBAMS Partners status in the past.

Rules and commitments of ACCOBAMS Partners

1. Partners shall present at the beginning of their mandate a programme of collaboration with the Secretariat during the triennium. The programme shall be relevant to their contribution to the Agreement in terms of activities carried out in the frame of the Partnership, related to the conservation plan and/or support to the Secretariat.
2. Partners shall commit themselves to make proper use of the ACCOBAMS Partners logo in compliance with the mission and the principles of the Agreement and its conservation plan. Any use of the ACCOBAMS Partner logo shall be previously communicated to the ACCOBAMS Executive Secretary and authorized in written by him/her.

3. At each Meeting of the Parties, the ACCOBAMS Partners shall report on implementation of their collaborative programme with ACCOBAMS and on use of the ACCOBAMS Partner logo. To this end, their reports shall reach the Secretariat at least 2 months before the Bureau meeting held to prepare the Meeting of the Parties.
4. The Bureau may decide to withdraw the status of Partner if no activities are reported, if they are considered not to be relevant and if they are contrary to achievement of ACCOBAMS goals or to the present rules and commitments. Withdrawal of the status of Partner does not prejudice any legal action for improper use of the logo.
5. Partners shall be invited to participate in an observer capacity and as advisors in all activities of the Agreement, except when otherwise decided by the Meeting of the Parties.
6. ACCOBAMS Partners shall communicate regularly with the Secretariat concerning activities related to ACCOBAMS objectives. They are also encouraged to share information, including their publications, with their National Focal Points. Partners that own original data on cetaceans in the Agreement area are particularly encouraged to share such data, as appropriate, through the MEDACES stranding database and through the OBIS SEAMAP database.
7. Partners may also be invited, if required, to contribute to evaluation of project proposals, project implementation and evaluation of project results and to participate in the development of policy and technical and/or scientific instruments for application of the Agreement.
8. Any application form shall be submitted by the Executive Secretary to the relevant National Focal Point(s), if any, for their opinion. The opinion shall be submitted to the Bureau to facilitate a decision.

APPENDIX I

Application for the Status of ACCOBAMS' Partner

To the ACCOBAMS Secretariat
Les Terrasses de Fontvieille, Jardin de l'UNESCO
MC-98000 Monaco

The _____ (name of the Organisation / Institution) represented by _____ in quality of _____ with the aim to apply for the ACCOBAMS Partner Status and in Accordance with Annex to Resolution 4.20, declares the following characteristics apply to the Organisation/Institution:

	YES	NO
1. Having a statement of purpose that explicitly, or by clear implication, includes conservation of cetaceans and of their habitat, man-cetacean interactions or other activities relevant and in full agreement with the spirit of ACCOBAMS;		
2. Having experience in providing support to and/or implementing practical research, collection and analysis of information or other educational and training activities that contribute to cetacean conservation;		
3. Having demonstrated experience in implementing partnership ventures, such as for training and education, technical and scientific expertise, policy development or evaluation and assessment, particularly when such ventures would bring new and additional benefits to the functioning of the ACCOBAMS partnership;		
4. Demonstration of willingness and ability to cooperate with national and international governmental and nongovernmental bodies including Governmental and Non-Governmental Organisations;		
5. Having stated their readiness to contribute actively on a regular basis to further development of policies and tools of the Agreement and their application, particularly by assisting Contracting Parties to meet their obligations under the Agreement;		
6. Having already communicated with the Secretariat and cooperated with ACCOBAMS in the achievement of its objectives;		

The _____ (name of the Organisation / Institution) provides as well:

- a. a copy of its Statute (original and a certified translation into English)
- b. Curriculum Vitae
- c. the following information:

Address, telephone, email and website	
Statute and mission	
Collaboration with other Organisations	
Main reason to request Partnership	Expected benefits to ACCOBAMS ----- Expected benefits to the Organisation / Institution
Please list below ideas for planned or proposed activities relevant for the achievement of ACCOBAMS goals and to be carried under the logo of ACCOBAMS Partnership	

DECLARATION OF COMMITMENT

On behalf of the Organisation / Institution, I commit to comply with the rules specified in the Annex to Resolution 4.20.

Date and place

Signature

RESOLUTION 4.21

ACCOBAMS LOGOS: CONDITIONS FOR USE

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Considering that any direct visual identification of the Agreement could only be beneficial for mediation and to promote public awareness of the Agreement,

Recalling the Agreement logo and the adoption of the Partners ACCOBAMS logo as adopted in Resolution 1.14 on “Adopting a logo for the Agreement and conditions for its use”,

Recalling also the Resolution 4.20 on “Strengthening the status of ACCOBAMS Partners”,

1. *Takes note* of the conditions for the use of ACCOBAMS and ACCOBAMS Partners logos as reproduced hereinafter:

Official version:

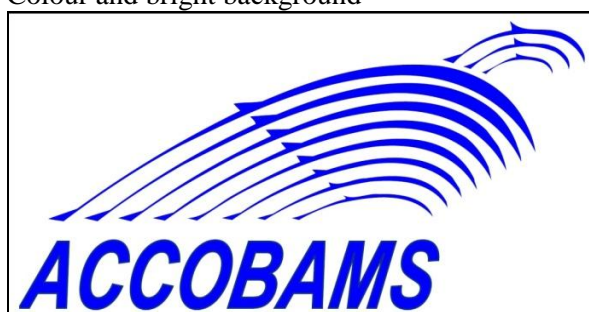


Official variations:

Colour and dark background



Colour and bright background



Black and white



2. *Instructs* the Agreement Secretariat to make available the official logos on the ACCOBAMS website;
3. *Decides that* any change from official version and variations are prohibited;
4. *Urges* any applicant to request the use of the ACCOBAMS logo to the Agreement Secretariat;
5. *Asks* the ACCOBAMS Partners and International Organisations to inform regularly the Agreement Secretariat on the use of the logos.

RESOLUTION 4.22

TRIBUTE TO THE ORGANISERS

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Aware of the significant effort required in preparing and organizing the present session of the Meeting of the Parties,

1. *Expresses* its gratitude for the invaluable support of the Government of the Principality of Monaco, which made available all the means necessary for the success of this Meeting in Monaco;
2. *Congratulates* the Agreement Secretariat, the Scientific Committee and the Extended Bureau on the excellent preparation for the present session of the Meeting of the Parties to the Agreement and their concrete efforts to facilitate implementation of the Agreement.

RESOLUTION 4.23

DATE, VENUE AND FUNDING OF THE FIFTH SESSION OF THE MEETING OF THE PARTIES

The Meeting of the Parties to the Agreement on the Conservation of the Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS):

Recalling Article III, paragraph 2, of the Agreement, which states that the Agreement Secretariat shall convene, in consultation with the Convention Secretariat, ordinary sessions of the Meeting of the Parties at intervals of not more than three years, unless the Meeting of the Parties decides otherwise;

Noting that the Fourth session of the Meeting of the Parties was hosted by the Government of the Principality of Monaco, from 9th to 12th November 2010,

Aware of the benefits that can accrue to the Agreement and to Parties, particularly developing countries and those with economies in transition, that host sessions of the Meeting of the Parties in regions in the Agreement area,

1. *Decides* that the Fifth session of the Meeting of the Parties shall take place at the end of 2013;
2. *Welcomes* and accepts with great appreciation the offer of Morocco to host the Fifth session of the Meeting of the Parties;
3. *Encourages* States Parties to consider the benefits of rotating the venue where the Meeting of the Parties is held, with particular consideration for developing countries and countries with economies in transition.

RESOLUTION 4.24

ACCOBAMS STRATEGY (PERIOD 2013-2023)

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS),

Recalling Article III, paragraph 8, sub-paragraphs a), b) and c) of the ACCOBAMS;

Considering that the effectiveness of ACCOBAMS and of the resolutions adopted within the ACCOBAMS framework would be strengthened by an elaboration of a long-term Strategy for ACCOBAMS, covering the period 2013-2023,

Convinced that this Strategy will be in line with developments occurring in other relevant fora, such as the United Nations General Assembly, Conference of the Parties to the Convention on Biological Diversity and the European Union,

1. *Agrees* that the vision for ACCOBAMS Strategy for period 2013-2023 is that cetacean populations in the Black Sea, Mediterranean Sea and contiguous Atlantic Area will be moving towards favourable conservation status¹⁰³, expressed as healthy populations and habitats with minimised adverse human impacts; and that this will be promoted through active regional cooperation facilitated by ACCOBAMS ”;

2. *Mandates* the Secretariat to:

- prepare, in close consultation with the Bureau and Scientific Committee, preliminary analysis of effectiveness of ACCOBAMS, and
- organise a working group to prepare a draft Strategy in support of the vision and using the preliminary analysis as basis for this Strategy. The working group will be opened for the participation of all focal points and partners and it will be active through exchange of e-mails, if necessary meetings, and coordinated by a facilitator to be identified by the Secretariat in consultation with the Bureau and the Chair of the Scientific Committee. The facilitator will report about the progress made in the elaboration of the Strategy and its content to the meetings of the Scientific Committee and Bureau;

3. *Decides* that the draft Strategy (2013-2023) shall be examined for approval by the Fifth Meeting of the ACCOBAMS Parties.

¹⁰³ The EU Habitats Directive provides a definition of favourable conservation status.

RESOLUTION A/4.1

AMENDMENTS: EXTENSION OF THE ACCOBAMS GEOGRAPHICAL SCOPE

The Meeting of the Parties to the Agreement on the Conservation of the Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS):

Noting that cetacean populations present in the North of Portugal, Galician and Cantabric Seas are connected, as shown by the most recent scientific studies,

Noting that the European Directive 2008/56/EC, establishing a framework for Community action in the field of marine environmental policy (Marine Strategy Framework Directive), and the OSPAR Convention for the protection of the marine environment of the North-East Atlantic, create the sub-region “Bay of Biscay and the Iberian Coast” in order to implement their obligations,

Noting that the scopes of the ACCOBAMS Agreement and of the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) are slightly different, with the former including all cetacean species, and the latter focusing only on small cetaceans,

Recognizing that the implementation of the above mentioned international Instruments together with the ACCOBAMS Agreement, would be coherent,

Affirming their willingness to strengthen their collaboration with the ASCOBANS Parties and Secretariat in order to establish synergies in matters and activities of common interests,

Recognizing that the implementation of conservation and management measures for all cetacean populations along marine waters covered by the sovereignty or jurisdiction of both Portugal and Spain would benefit from the inclusion of all species and populations within one single Agreement,

1. *Replaces* the name of the Agreement with: “Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and neighbouring Atlantic Area”;

2. *Replaces* the Article 1.a) with:

“1. a) The geographic scope of this Agreement, hereinafter referred to as the "Agreement area", is constituted by all the maritime waters of the Black Sea and the Mediterranean and their gulfs and seas, and the internal waters connected to or interconnecting these maritime waters, and of the neighbouring Atlantic Area west of the Straits of Gibraltar. For the purpose of this Agreement:

- the Black Sea is bounded to the southwest by the line joining Capes Kelaga and Dalyan (Turkey);
- the Mediterranean Sea is bounded to the east by the southern limits of the Straits of the Dardanelles between the lighthouses of Mehmetcik and Kumkale (Turkey) and to the west by the meridian passing through Cape Spartel lighthouse, at the entrance to the Strait of Gibraltar; and
- the neighbouring Atlantic Area west of the Strait of Gibraltar is bounded to the east by the meridian passing through Cape Spartel lighthouse (Morocco); to the west by the line joining the lighthouses of Casablanca (Morocco) and Cape St. Vicente (Portugal) until this line reaches the parallel of latitude 36° N, then by the parallel of latitude 36° N until it reaches the external limit of marine waters covered by the sovereignty or jurisdiction of Portugal, then by the external limit of marine waters covered by the sovereignty or jurisdiction of Portugal and Spain until the land border between Spain and France.

3. *Replaces* the Article I, paragraph 3.j) with:
““Subregion”, depending on the particular context, means either the region comprising the coastal States of Black Sea or the region comprising the coastal States of the Mediterranean Sea and neighbouring Atlantic Area; any reference in the Agreement to the States of a particular subregion shall be taken to mean the States which have any part of their territorial waters within that subregion, and States, flag vessels of which are engaged in activities which may affect the conservation of cetaceans in that subregion;”
4. *Replaces* the Article XIV (entry into force), paragraph 1, with:
“This Agreement shall enter into force on the first day of the third month following the date on which at least seven coastal States of the Agreement area or regional economic integration organizations, comprising at least two from the subregion of the Black Sea and at least five from the subregion of the Mediterranean Sea and neighbouring Atlantic Area, have signed without reservation in respect of ratification, acceptance or approval, or have deposited their instruments of ratification, acceptance or approval in accordance with Article XIII of this Agreement”;
5. *Replaces* the headline of the second part of the Annex 1 with:
“Indicative List of cetaceans of the Mediterranean Sea and neighbouring Atlantic Area to which this Agreement applies”;
6. *Replaces* the paragraph 3 of the Annex 2 (Conservation Plan) with:
“3. Habitat protection.
Parties shall endeavour to establish and manage specially protected areas for cetaceans corresponding to the areas which serve as habitats of cetaceans and/or which provide important food resources for them. Such specially protected areas should be established within the framework of the Regional Seas Conventions (OSPAR, Barcelona and Bucharest Conventions), or within the framework of other appropriate instruments”.

ANNEX XI

**GUIDELINES FOR IMPLEMENTING A PELAGOS/ACCOBAMS LABEL FOR
COMMERCIAL WHALE WATCHING ACTIVITIES**

-

**CREATION AND ADOPTION OF THE LABEL BY THE PARTIES ON THEIR
TERRITORY**

GUIDELINES FOR IMPLEMENTING A PELAGOS/ACCOBAMS LABEL FOR COMMERCIAL WHALE WATCHING ACTIVITIES

- CREATION AND ADOPTION OF THE LABEL BY THE PARTIES ON THEIR TERRITORY

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Introduction

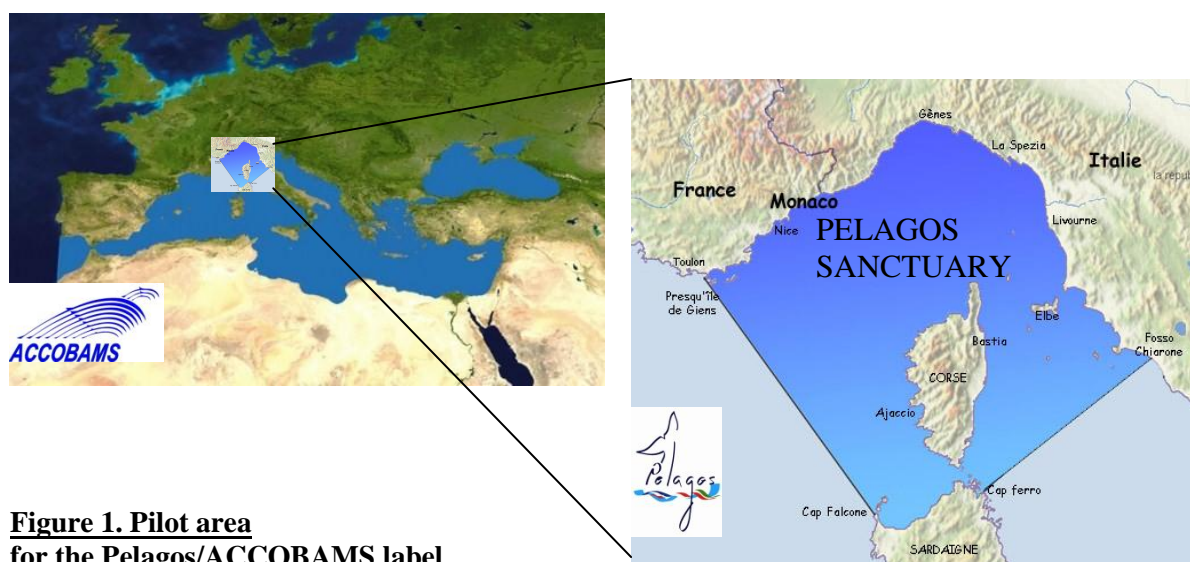
The unregulated practice of watching cetaceans in their natural environment from the sea or the air (referred to below as ‘whale watching’) is likely to result in harm both to biodiversity and to sea ecotourism. In the absence of a whale watching label delivered by a State or competent International Organisation, the danger is that such self-awarded ‘labels’ will be produced by commercial operators, with no scientific or economic ecotourism guarantee.

During the 3rd Meeting of the ACCOBAMS Parties in November 2007, the Contracting Parties to the Agreement adopted the principle of establishing a label for whale watching activities and the test of such label in the Pelagos Sanctuary. The Permanent Secretariat, in collaboration with the Scientific Committee and the President of Pelagos, were asked to present draft Guidelines on the implementation of the label, subject of this report, during the 4th Meeting of the ACCOBAMS Parties.

Previously, during the 4th Conference of Pelagos Parties in Monaco in November 2009, Contracting Parties to the Agreement opted to grant a **label** for whale watching in the Pelagos Sanctuary and then extended this to the ACCOBAMS area. Legal ownership of this label belonged mutually and jointly to Pelagos and ACCOBAMS; it was **joint legal property**. Subsequently, the Bureau of ACCOBAMS, in consultation with the President of Pelagos, decided to opt for a national certification process.

To acquire the label, whale watching operators have to **take the initiative in a voluntary scheme**. The label must be a way of promoting those operators who respect a certain number of rules of conduct in this activity already adopted in the ACCOBAMS context. The label implies a form of partnership with operators, as well as a yearly assessment of how well it is working in the light of developments in its content. **The aim of this project is to suggest in the long term, the introduction of a license** for whale watching, in order to guarantee the strictest possible respect for the principles enunciated by Pelagos and ACCOBAMS.

These guidelines, intended for the Parties, indicate the technical and administrative steps that are necessary for creating and adopting a label in its territory.



1. Procedure for creating the label

1.1 Label

The label is made up of a logo plus conditions of contract, both complying with ISO 14001 and 14024 international standards. The constituent elements of the label appear in the annex.

1.1.1 Conditions of contract

The conditions of contract collate conditions for granting the label. It includes the following items: training in the quality practice of whale watching activities;

- Code of Good Conduct for whale watching in the Mediterranean Sea;
- practical details of whale watching activities;
- contribution of whale watching operators to scientific research on cetaceans;
- informing passengers for a responsible approach to whale watching;
- The letter of intention, to be signed by the operator, commits him to respecting the conditions of contract that he has to accept in order to use the label. The letter is drafted as follows: *‘The applicant promises explicitly to respect the obligations for which he is liable in the Code of Conduct and possibly supplementary additions that may be necessary.’*

The conditions of contract must be evaluated by the Bureau of ACCOBAMS in consultation with a representative of the Pelagos Agreement, every two years after they enter into force for an eventual reviewing..

1.1.2 Logo

The label’s identity is represented by a logo, deemed from the intellectual property angle to be both a brand and a drawing.

1.1.3 Deposit of the Label

The label must be deposited at an international level by ACCOBAMS and Pelagos Secretariats.

1.2 National Certification Committee

1.2.1 Composition proposed

- A national representative of ACCOBAMS;
- A national representative of Pelagos (needed in the Pelagos Sanctuary and desirable beyond);
- The manager of the Marine Protected Area (only in the concerned territory);
- A representative of relevant authorities in whale watching (example: Ministry of Tourism, of Economy or Transport);
- A scientific expert;
- A legal and/or economist expert.

1.2.2 Powers and responsibilities

The Certification Committee is responsible for:

- assessing the cost of labeling from study of administrative costs in examining cases on its territory and modalities of financing;
- granting, refusing, suspending and withdrawing the whale watching operators’ labels;
- monitoring and control of the respect of the label’s conditions of contract;

- recognising training bodies on respect for the label;
- monitoring of the plan communication for label promotion;
- notifying granting, refusing, suspending and withdrawing of the label to the Pelagos and ACCOBAMS Secretariat;
- evaluating of the label functioning by Pelagos and ACCOBAMS Scientific Committees.

1.3 Communication plan

The Certification Committee shall ensure that adequate publicity of the label is implemented with the whale watching operators and the general public and shall promote the label including by the following tools:

- visuals to be affixed to the boats and reception centres of the relevant operators,
- various means of communication intended for the public (webpage, media and awareness for prescribers of the tourist supply involved in whale watching activity, such as tourist offices and booking agencies, directing the public to label-holding operators, etc.),
- a regular (yearly) reference work made available to the public (on offer in tourist offices, town halls and naturalist shops). It will introduce:
 - whale watching in the Mediterranean, and the stakes involved;
 - the Code of Good Conduct,
 - the species that can be observed, how to identify them and some ideas about ecology,
 - interest in calling on label-holding operators (guaranteed ecological approach and quality educational provision),
 - a complete list of label-holding operators, their rates and their names and phone numbers.

2. Procedure for adopting the label by the Parties on their territory

2.1 Consulting the partners

Parties wishing to establish the label on their territory will beforehand consult their local, regional and national partners associated in introducing the label (institutional bodies like Ministry of Environment, of Tourism, of Maritime Transport and Scientific research, research centres, Marine Protected Area agencies, the local authorities concerned, etc.).

Also, one should associate in the various stages of the label's introduction representatives of those people working in the field and non-profit making associations who are engaging in a whale watching activity.

The Parties can also seek the consultative advice of recommended bodies like tourist offices, marinas, industrial tribunals for fisheries, etc.).

2.2 Creating of the National Certification Committee

Each party wishing to adopt the label on its territory, committed to creating a National Certification Committee in consultation with the Bureau of ACCOBAMS, and only in the Pelagos area, a representative of the Pelagos Agreement.

2.3 Protecting the label

After adopting the label, the Parties commit themselves to ensuring its protection, by:

- **registering** it with the national and international intellectual property protection bodies (in France, for example, the INPI);
- **having it nationally recognised** through law or statutory regulation, by establishing a text of recognition, recommendation and protection for the label enacted by each Party.

2.4 Authorizing the controlling agents

Each labelling request from operators must be forwarded to the Secretariat of the National Certification Committee, responsible for investigating cases. It should be noted that the cost of preparing the file falls on the person making the request.

The National Certification Committee decides on the granting or refusal of the label and reserves the right to appeal to independent expertise for the processing of cases.

3. Procedure for delivering the label and checking on its use

3.1 Requests for the label

Each requests for the label must be prepared by each country's National Focal Point and then handed over, accompanied by an opinion, to the Certification Committee.

The Certification Committee may then possibly call on independent experts to prepare the file and may decide to grant or refuse the label.

3.2 Granting the label

The granting of the label is subjected to respect the conditions of contract attached.

The Secretariat of the Certification Committee will notify the Bureau of ACCOBAMS and Pelagos representative to each label granting.

3.3 Refusal of the label

In case of refusal to issue a label, the Certification Committee sends the recipient a briefing justified.

The Secretariat of the Certification Committee will notify the Bureau of ACCOBAMS and Pelagos representative to each label refusal.

3.4 Report to the Parties

The overview of the label requests, granting and refusal must be presented in the national report which will be submitted to the both Agreements.

4. Checking that the label is respected

4.1 Controlling agents

Use of the label must be checked by the public service agents of the state, who have been given prior training that is recognised or authorized by the National Certification Committee.

4.2 Control operations

The certified operators can be inspected at any time by public service of the same state only, with the exception of the Pelagos area where the right of control should be covered within the Pelagos Agreement.

All certified operators should be visited at least once a year or more if necessary (in case of breach or unsatisfactory recurrent back of observation sheets, whose format is presented in the appendix).

If there is breach, the reports drawn up by the controlling agents must be handed over to the Secretariat of the National Certification Committee. The Committee decides on the suspension or withdrawal of the label from an operator who has not respected the set of obligations linked to the label.

The National Certification Committee reserves the right to appeal to independent expertise for the processing of cases.

4.3 Breach

4.3.1 Penalties

When the commitments appertaining to the label are not respected, penalties are provided for. These concern two levels: that of the staff on board who have undergone training (the training is now null and void and has to be redone) and that of the operator (the label may be suspended). The following Table summarizes this assessment system:

Breach	Level	Description of the penalty
1 st report contract	Staff who have undergone training	Recommendation plus a reminder of the conditions of contract.
	Structure (operator)	Recommendation plus a reminder of the conditions of contract.
2 nd report contract	Staff who have undergone training	Warning, possibly plus the training being declared null and void, according to the seriousness of the breach.
	Structure (operator)	Warning, possibly plus suspension of the label for a period of 1-2 years according to the seriousness of the breach.
3 rd report contract	Staff who have undergone training	Training declared null and void.
	Structure (operator)	Label is cancelled, plus a ban on requesting another for a period of between 3 to 5 years. The person responsible for the structure must once again undergo training if he wishes to request a new attribution of the label at the end of the period of cancellation.

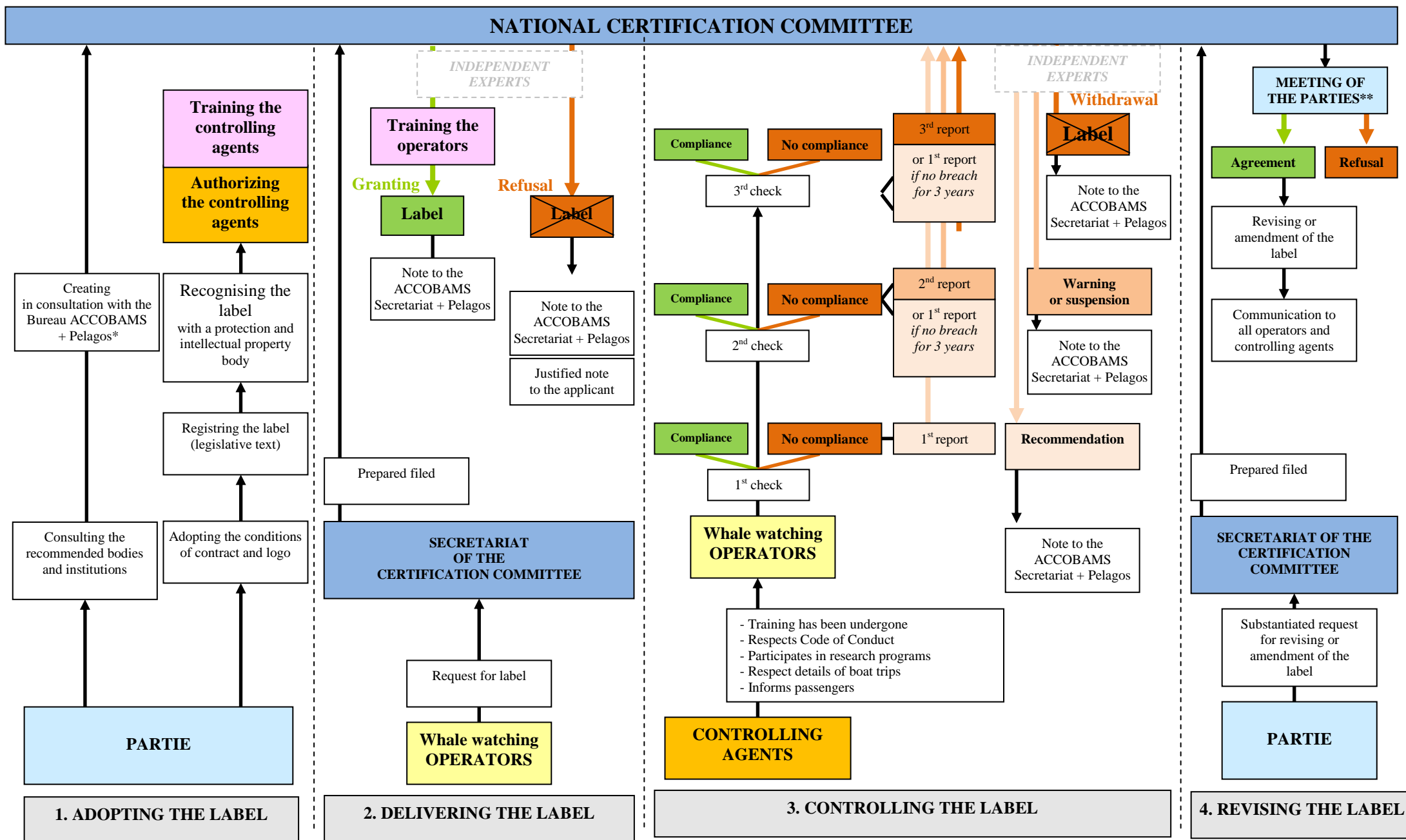
If, after a first or second report of a breach, the person (who has undergone training) and the (label-holding) structure have not committed a breach for three consecutive years, the slate is then wiped clean. According to the reports made by the controlling agents on the label users, the Certification Committee decides on the suspension or withdrawal of the label.

4.3.2 Withdrawing or suspending the label

The suspension or withdrawal of the label by the Certification Committee is provided for in the letter of intention signed by the operator when the label is granted.

4.4 Appeal

No appeal is provided in case of conflict about a refusal or a withdrawal of the label.



* In the Pelagos Sanctuary only

** Meeting of the ACCOBAMS Parties with, if it's necessary, a representative of Pelagos and a representative of the relevant Marine Protected Area

Figure 2 : Recapitulative flowchart for adopting, delivering, controlling and revising the label

Bibliography

- ACCOBAMS (2004) - *Guidelines for Commercial Cetacean-Watching Activities in the Black Sea, the Mediterranean Sea and Contiguous Atlantic Area*. 30 p.
- ACCOBAMS (2006) – Compte-rendu de la réunion “encadrement de l’activité de *whale watching*”. 3 p.
- ACCOBAMS (2007) – *Procès verbal de la réunion des opérateurs et prescripteurs français, italiens et monégasques de whale-watching. Le 23 avril 2007 à Monaco*. 10 p. + annexes.
- BEAUBRUN P.-C. (2002) - Disturbance to Mediterranean cetaceans caused by *whale watching*. In: G. Notarbartolo di Sciara (Ed.), *Cetaceans of the Mediterranean and Black Seas: state of knowledge and conservation strategies*. A report of the ACCOBAMS Secretariat, Monaco, February 2002. Section 12, 26 p.
- C.M.C. & N.M.F.S. (1988) - *Proceedings of the Workshop to Review and Evaluate Whale Watching Programs and Management Needs*. Nov. 14-16, Monterrey, California, 53 p.
- FORTUNA C., CANESE S., GIUSTI M., LAURIANO G., MACKELWORTH P. & GRECO S. (2004) – Review of Italian whale-watching: status, problems and prospective. SC/56/WW4, 56th International Whaling Commission Scientific Committee, Sorrento, Italy. 15 pp.
- HOYT E. (2001) - *Whale watching 2001: worldwide tourism numbers, expenditures, and expanding socioeconomic benefits*. A special report for the International Fund for Animal Welfare. 159 p. [En ligne] consulté le 13 septembre 2005. Adresse URL : <http://www.ifaw.org/ifaw/general/default.aspx?oid=35453>.
- HOYT E. (2004) - *Observer les Cétacés en Europe : Le guide complet des sites d'observation des baleines, dauphins et marsouins*. Editions Safran. 110 p.
- IFAW (1997) - *Report of the workshop on the legal aspects of whale watching*. Puentas Arenas, Chile, 17-20 November 1997. 48 p.
- IFAW, TETHYS RESEARCH INSTITUTE & EUROPE CONSERVATION (1995) - *Report of the Workshop on the Scientific Aspects of Managing Whale Watching*. Montecastello di Vibio, Italy. 40 p. [En ligne] consulté le 12 décembre 2005. Adresse URL : www.helsinki.fi/~lauhakan/whale/education/ifaw/vibio/content.html.
- IFAW, WWF & WDCS (1997) - *Report of the International Workshop on the Educational Values of Whale Watching, Provincetown, Massachusetts, USA*. 40 p. [En ligne] consulté le 13 septembre 2005. Adresse URL: <http://www.helsinki.fi/~lauhakan/whale/education/ifaw/values/e1.html>.
- IWC (2004) - *Report of the Workshop on the Science for Sustainable Whale Watching, Captown, South Africa, 6-9 march 2004*. Report of the IWC, 29 p. [En ligne] consulté le 14 septembre 2005. Adresse URL : http://www.iwcoffice.org/documents/sci_com/WW_Workshop.pdf.
- MALCOLM C. & DUFFUS D. (1998) - *Whale-watching research workshop report, Summary*. World Marine Mammal Science Conference, Monaco, January 18, 1998
- MAYOL P. & BEAUBRUN P. (2005) – *Le Whale Watching en Méditerranée française : Etat des lieux et perspectives. Recensement des opérateurs, diagnostic socio-économique et écologique de l’activité, propositions préliminaires de gestion*. Rapport réalisé pour le compte du Ministère de l’Ecologie et du Développement Durable. 104 p.
- MAYOL P. & FORTUNA C. (2007) - *Propositions de lignes directrices pour l'obtention d'un Label à destination des opérateurs de whale-watching de la zone Pelagos / ACCOBAMS*. Document ACCOBAMS-MOP3/2007/Doc59 (présenté par la France), Dubrovnik (Croatie), 22-25 octobre 2007, 12 p. + annexes.
- MAYOL P., FORTUNA C. & STURLESE A. (2009) – *Livret à destination des opérateurs de whale-watching*. Document réalisé dans le cadre de la collaboration PELAGOS (Sanctuaire pour les Mammifères marins) /ACCOBAMS (Accord sur la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la zone Atlantique adjacente).
- ONERC (2005) - *Un climat à la dérive : comment s'adapter ?* Rapport au Premier ministre et au Parlement, 24 juin 2005. 109 p. [En ligne] consulté le 24 octobre 2005. Adresse URL : http://www.ecologie.gouv.fr/article.php3?id_article=4311.

PELAGOS (2010) Compte-rendu de la 4^{ème} Conférence des Parties.

PETT S., MCKAY C.J. & ARCHER J.H. (1990) – *The Resources and Uses of Stellwagen Bank, Part I : Technical Report on the Resources and Uses of Stellwagen Bank and Part II : Proceedings of the Stellwagen Bank Conference*. Urban Harbors Institute, University of Massachusetts, Boston and Center for Marine Conservation, Washington, DC. [Two vols. bound together] 77 p et 134 p.

PIQUEMAL A. – DOLY C (2010) Etude sur la régularisation de la pratique du *whale watching* dans les zones maritimes couvertes par le sanctuaire Pelagos et l'ACCOBAMS. La mise en œuvre d'un label de *whale watching* et s'il y a lieu d'un mécanisme de permis.

SAMUELS A., BEJDER L. & HEINRICH S. (2000) - *A review of Literature Pertaining to Swimming with the Wild Dolphins*. Marine Mammal Commission, Maryland, 58 p. [En ligne] consulté le 12 septembre 2005. Adresse URL : <http://www.mmc.gov/reports/contract/pdf/samuelsreport.pdf>.

SEARS R. (1994) - Whale-watching and its impact on marine mammal research. *Proceedings of the 8th annual conference of the European Cetacean Society*, **8** : 30-31

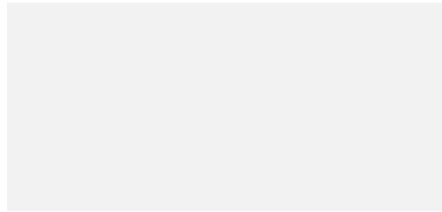
TILOT V. (2004) - *Plan de Gestion du Sanctuaire pour les mammifères marins en Méditerranée « PELAGOS »*. 111 p.

ANNEXES

ANNEX 1: THE LOGO OF THE WHALE WATCHING LABEL

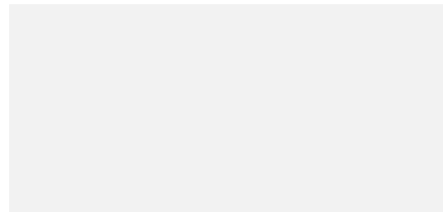
Any change in the logo (form, composition, colour) is strictly forbidden. Only the official version and its variations may be used by label users.

1. Official version

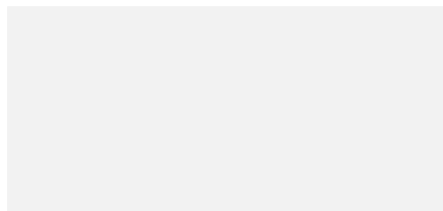


2. Variations

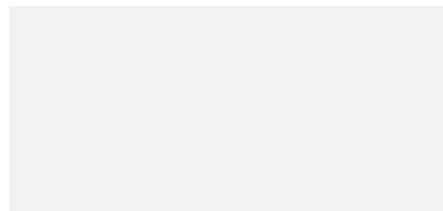
a. Colour on dark ground



b. Colour on light ground



c. Black and white



d. No-vector

No-vector logos are made for specific use; their size is defined according to the requirements of stationary, signposting, publication etc. They must not be used in larger size because of the risk of their being pixelled (bad graphic quality).

ANNEX 2: CONDITIONS OF CONTRACT OF THE WHALE WATCHING LABEL

The Certification Committee	<i>Between and</i>	The beneficiary
Represented by:		Represented by:
Name :		Name :
Forename :		Forename :
Profession :		Profession :
Address :		Address :
.....	
Tel :		Tel :
Fax :		Fax :
Internet site:		Internet site:
.....	
		SIRET :
<i>on the one hand,</i>		<i>on the other hand,</i>

*the following has been
agreed:*

Section 1. General arrangements

Article 1. Object

The Pelagos Agreement and ACCOBAMS work groups on cetaceans have highlighted a growth in whale watching in the Mediterranean. Without any management or regulation programme, this development may prove irrational and not in general meet the ecological, sociological and economic stakes borne by this activity.

Thus, in compliance with their commitments, the Pelagos Agreement and ACCOBAMS have chosen to promote voluntary management of this activity in the shape of a label intended for whale watching operators who commit themselves to a quality, ecologically responsible approach. The label may be requested by all those whale watching operators who wish to commercially, educationally, socially or scientifically promote their activity with the public.

Article 2. Duration of engagement

The label may be used by the beneficiary from the moment the present conditions of contract have been signed by both parties, for an indeterminate period. The beneficiary's use of the label ends without notice when a breach on his part of the general and specific arrangements in these present conditions of contract has been reported.

Article 3. Expenses of preparation

The expenses involved in preparing requests for the label are borne by the beneficiary.

Article 4. Checking that the label is being respected

The state's controlling agents regularly check that the present conditions of contract are being respected by the label-holding operators. These checks, that may be carried out anonymously, are made at sea either at a distance or on board the operators' ships, according to assessment grids that have been established and revised by the Certification Committee.

All the label-holding operators will be visited at least once a year, more frequently if necessary (in case of breach, for example, or of a recurrent return of unsatisfactory assessment sheets).

Article 5. Penalties

When the commitments appertaining to the label have not been respected, penalties are provided for. They concern two levels: that of the trained staff on board (their training becomes null and void and must be undertaken anew), and/or that of the operator (the label may be suspended). The following Table summarizes this assessment system:

Breach	Level	Description of the penalty
1st report contract	Staff who have undergone training	Recommendation plus a reminder of the conditions of contract.
	Structure (operator)	Recommendation plus a reminder of the conditions of contract.
2nd report contract	Staff who have undergone training	Warning, possibly plus the training being declared null and void, according to the seriousness of the breach.
	Structure (operator)	Warning, possibly plus suspension of the label for a period of 1-2 years according to the seriousness of the breach.
3rd report contract	Staff who have undergone training	Training declared null and void.
	Structure (operator)	Label is cancelled, plus a ban on requesting another for a period of between 3 to 5 years. The person responsible for the structure must once again undergo training if he wishes to request a new attribution of the label at the end of the period of cancellation.

If, after a first or second report of a breach, the person (who has undergone training) and the (label-holding) structure have not committed a breach for three consecutive years, the slate is then wiped clean.

Article 6. Termination

Use of the label may be terminated on the initiative of the National Certification Committee when there has been a breach of the arrangements in the present conditions of contract by the beneficiary (Section 1, Article 5).

Article 7. Reviewing the conditions of contract

The conditions of contract must be evaluated by the Bureau of ACCOBAMS in consultation with a representative of the Pelagos Agreement, every two years after they enter into force for an eventual reviewing.

Section 2. Specific arrangements

Article 1. Undergoing training

High quality whale watching-linked activity requires a considerable level of skill. That is why compulsory training is given to staff on board. This training will aim at:

- giving added value to the concerned operators' trips;
- promoting quality service and an ecologically sensible approach with the public;
- restricting the impacts of the activity on cetaceans and helping protect them;
- thus ensuring that whale watching has a sustainable future.

This training will take at least one week, during which the following subjects will be addressed:

- introducing and identifying the main species of cetaceous population in the Mediterranean;
- ideas of the groups' and populations' physiology, biology and ecology;
- the special ecological features of cetaceans in the Mediterranean (especially degree of endemism), threats and conservation status;
- introducing and identifying other species that may be observed at sea (avifauna and ichthyofauna);
- the Mediterranean's special ecological features;
- the roles and importance of cetaceans in the Mediterranean ecosystem;
- rules and regulations specific to cetaceans that are applicable in the Mediterranean; introducing the Pelagos Agreement and ACCOBAMS;
- reminder of the stakes and values of whale watching;
- the Code of Good Conduct for whale watching and signs of disturbance that must be taken into consideration when approaching the animals (ideas of ethology);
- educating the public about the environment: information to be given out;
- interest of research, databases on cetaceans and teaching a procedure of scientific observations that can be applied by the operators;
- the practical side (sea trips as often as possible).

To hold the label, the beneficiary promises both that the person in charge of the structure has undergone this training and also that each trip will be accompanied by at least one trained person.

The only valid training is that given by a body that is authorized or recognised by the Certification Committee, that is undertaken in its entirety, and that has been validated by a final test. This training may be rendered null and void when there is a breach of the label's conditions of contract (Section 1, Article 5).

The captain of the ship or the helmsman will make sure that the person who has undergone training respects the recommendations, in particularly as regards approaching the cetaceans.

The initial training is free of charge. Training that follows suspension as a result of breach has to be paid for.

Article 2. Respecting the Code of Good Conduct

To hold the label, **the beneficiary promises to respect the Code of Good Conduct** appearing in Appendix 1.

Article 3. Respecting the details of the trips

The beneficiary promises to organise **nature-oriented trips** rather than excursions focusing solely on cetaceans, in compliance with the teaching of the above-mentioned training. The aim is to restrict the pressure on the animals while ensuring public awareness and satisfaction.

To limit fuel consumption and effectively raise public awareness, the trips must be sufficiently long (at least half a day, on average one day, ideally several days).

Coarse fishing combined with whale watching within a single package is not allowed (the fishing techniques are incompatible with the Code of Good Conduct). To qualify as a label-holder, structures which offer both activities must organise them separately, in distinct excursions.

Commercially offered swimming with cetaceans is not allowed at this stage in the context of the label. This point will be assessed at the regular updatings of the conditions of contract (Section 1, Article 7).

The beneficiary must provide his passengers with containers that allow **selective sorting of waste**. As far as possible, the boats must possess **waste water recycling** tanks.

Article 4. Information to be given to passengers

In compliance with the Code of Good Conduct, **the beneficiary promises to spread a quality message on board the ship** on a common basis, including:

- a description and identification of the cetacean and other species that can be watched;
- biological and ecological ideas on the cetaceans and ecosystems of the Mediterranean;
- an introduction to the Pelagos and ACCOBAMS Agreements;
- the main existing threats to cetaceans and those linked, in priority, to watching that does not respect the Code of Good Conduct.

The message must not focus only on cetaceans but should be widened to a nature-oriented approach.

At the end of the day, a standardised assessment sheet with contact details of the National Committee Certification will be distributed to the clients. These will be invited to send their observations to this Committee.

Article 5. Participation in research programmes

Observation sheets

Researcher/beneficiary collaboration is essential for designing a high quality activity. This contribution to research constitutes added value for the operators, a rich supplementary element for the passengers, a logistical aid for researchers and a real advantage for cetacean protection.

This cooperation takes the form of observation sheets filled in by the operators and intended to enrich databanks. It can also be intensified in the context of a precise research programme.

The beneficiary promises to participate in enriching the joint ACCOBAMS/CIESM/Pelagos database. For this purpose, a cetacean observation sheet is made available to whale watching operators (cf. Appendix 2).

The observation sheet requires elementary data such as the state of the sea, the GPS position, the concerned species and the number of individuals or direction taken by the animals. This data is gathered during an 'in transect' observation, according to the beneficiary's arrangements and in compliance with the teaching given in the above-mentioned training.

The beneficiary promises to fill in these sheets on each of his trips and to send them every month to the Certification Committee.

Work group on putting a scientist on board as part of the precise research programmes

In the context of precise research programmes, this will involve analysing the possibility of putting a scientist on board large capacity (more than twelve passengers) units. Such a step requires a good knowledge of the means available (boat speed, height of observer's eyes, sectors prospected and regularity of trips, possibility of having acoustic equipment, etc.). It thus automatically involves consultation between the operators and scientists within a work group who will have to decide on:

- the means provided by the operators for research;
- the contribution researchers will make in return (e.g. the scientist helps inform the passengers).

The results of this reflection should systematically be made available to the scientists who propose any new projects. These could then study the logistical possibilities offered by the operators and whether these are compatible with their programme, in order to cut, if need be, the budget devoted to boats.

Beneficiaries with units carrying more than twelve passengers promise to participate in this work group.

Direct issues, or issues related to whale watching, will arise from the work groups in which the operators are invited to participate. These work groups will in particular handle the following subjects:

- contributing to research programmes;
- research and development to limit the activity's dependence on fossil fuels;
- acoustic insulation of the hulls, shafts, and engines.

Article 6. Signing the letter of intention

The beneficiary promises to explicitly respect the obligations for which he is liable in the conditions of contract and possibly supplementary additions that may be necessary.

In, on

The Beneficiary
Read and approved

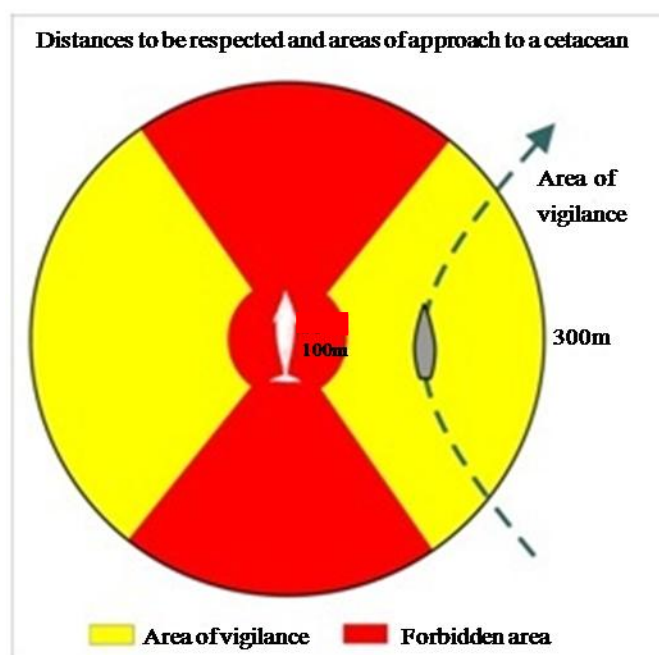
The Certification Committee
Read and approved

Appendix 1

Code of Good Conduct for whale watching in the Mediterranean

Whale watching can be a source of serious disturbance if badly done. The following rules allow our impacts on the vital behaviour of dolphins and whales (hunting, repose or inter-individual socialization) to be mitigated. Whether one is an amateur sailor, fisherman, whale watching operator or other user of the marine domain, these rules, set out below, apply equally inside and outside the Pelagos Sanctuary.

The pie chart defines two areas that are essential when approaching cetaceans: the area of vigilance (yellow) and the forbidden area (red).



1. Area of vigilance (yellow)

The area of vigilance (**300 m**) defines the sector in which the disturbance caused by your boat (presence, noise and exhaust fumes) is strongly felt by the animals. When you enter this area, your behaviour must respect strict rules to limit this disturbance:

- the boat's speed must be constant and attuned to the speed of the slowest animal. It must not be more than 5 knots;
- any approach must be made according to a trajectory that gradually draws parallel to the animal's path (green arrow in the pie chart). The boat thus positions itself alongside the cetaceans, moving in the same direction;
- any sudden change of speed or direction is forbidden;
- to mitigate acoustic disturbance, sounders and sonar must be switched off;
- be even more careful, and limit your distance of approach if you remark the presence of new-born animals;
- you must immediately leave the area of vigilance if the animals are disturbed: for example, flight behaviour (acceleration, changing direction, trying to get away from the observer) must be considered as a sign of disturbance;

- observation time is limited to half an hour;
- if many boats are present, only one is tolerated within the area of vigilance. Observation time is then shortened to a quarter of an hour and the other boats have to wait patiently 300 m away. Radio contact between the various boats will enable the watching to be coordinated;
- when the observation is over, the boat must gradually leave the site, taking a path that clearly signals that it is leaving. The speed will remain moderate for a distance that is sufficient to avoid the risk of collision.

2. Forbidden area (red)

The forbidden area defines the sector which your boat must never enter (except when the cetaceans approach the boat of their own accord). This distance is **100 m**. Any nearer than this and the cetaceans will see your presence as a danger or an intrusion into their vital space, and their behaviour will become greatly disturbed by it.

Also, the boat must not enter the sector in front of the animals (reduced field of vision). Neither must it approach them from behind, since the boat may then be seen as a pursuer.

When the boat reaches the outside limit of the forbidden area, its relative speed must be reduced to zero and its engine put into neutral gear.

It is forbidden to enter groups, for this will cause social disturbance.

3. Special case when the animals come to the boat of their own accord

When cetaceans voluntarily approach the boat, the passengers must not try to touch them directly or with an instrument, bathe near them or feed them. Most of the above rules also remain in force, particularly the ban on entering groups, and keeping to a slow, regular pace.

4. Generally speaking...

Once the cetaceans are spotted, or at 1,000 m distance, particular vigilance and a speed limited to 10 knots are compulsory: other animals may be present in the sector and the risk of collision cannot be ruled out. Furthermore, a greater speed would be likely to disturb the animals, even at this greater distance.

Generally speaking, whale watching is not recommended within the 5-mile coastal strip, since the cetaceans there are already greatly disturbed by human activity.


An operator must accompany his trip with an educational talk on cetaceans and the marine environment. This must be given by a qualified, trained guide. He must be able to identify the species encountered, determine their activity phases and notice possible disturbance.

5. In short

- ✓ Slow pace and calm, constant advance the moment the cetaceans are spotted, especially within the 300 m area
- ✓ No approach closer than 100 m
- ✓ Length of observation limited to 30 minutes, 15 minutes if other boats are waiting
- ✓ Only one boat within the 300 m area
- ✓ Never try to touch, feed or swim with a cetacean.

Appendix 2

Observation sheet for whale watching operators



OBSERVER:

Name: _____

Tel: _____

Email: _____

Ship: _____

Valeur des jour: _____

INSTRUCTIONS:

1- **Important:** The information gathered will be stored in a database and will be used for diverse studies on the conservation of cetaceans. Thank you for respecting the following rules, which are necessary for a good exploitation of the data. Two observation methods (obs.) are detailed. Choose one or the other depending on your availability.

2- **"Random" Obs.:** Choose this method to complete the sheet arbitrarily through random encounters. Fill in one line at each encounter. This method is not restrictive and allows us to know if animals have been spotted in a specific area. The "transect" method (detailed here after) allows to determine abundances but it is more restrictive.

3- **"Transect" Obs.:** Choose this method only if you're able to wait up on a definite route. As soon as you start fill in the first line (time, position, ...) and add "start of the observations" in the Remarks column. Fill in one line for each of the following case: obs. of cetacean, change of bearing or weather and every 15 hour. Finally, fill in one last line when you leave your position (or if the environment does not enable correct observations) by writing "end of obs" in the remarks column (random obs. can be then performed).

4- **Weather:** Estimations or real values. Indicate the direction et strength of the wind (in knots or km/h, thank you for writing it down). The visibility (vis) is function of the rain and the haze. The box "weather state" gives information on the type of weather. Use the scales detailed at the bottom of the page.

5- **CETACEAN:** Boxes to fill in for each observation of cetaceans (an individual or a group). In the column "Species", write down the whole name in english or in latin. In case of a doubt, write down NI (Non Identified). Try to describe precisely the animal in the column "Remarks". In case of NI or rare species, photographs are recommended. The column "Nb of ind" reflects the number of individuals observed. "Bea" corresponds to the bearing of your observation (+ starboard and - port), and "Dist" corresponds to the precise distance (precise the unit: m. ou NM).

The column "Course" should be filled in only if the animals show a precise routen. Write down in "Behaviour" all observable ethological elements and in "Remarks" all other observations (presence of calves, injured animal, pollution, fishing boats...). If your remarks need to be more detailed, do not hesitate to use more than one line for one observation.

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ANNEX XII

STATEMENT OF HIS SERENE HIGHNESS PRINCE ALBERT II OF MONACO

*Discours de SAS Le Prince Albert II de Monaco
à la 4^{ème} Réunion des Parties contractantes
à l'ACCOBAMS
9 novembre 2010*

Madame la Présidente,

Mesdames et Messieurs les représentants des Parties,

Monsieur le Président du Comité Scientifique,

Mesdames et Messieurs,

Chers Amis,

Je suis particulièrement heureux de vous accueillir en Principauté à l'occasion de la 4^{ème} Réunion des Parties contractantes de l'Accord pour la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la Zone Atlantique Adjacente.

Les dauphins et les baleines sont des créatures qui, depuis des siècles, nous ont toujours fascinés et ont suscité tour à tour admiration, crainte, étonnement ou appât du gain. Ils ont grandement marqué nos civilisations et nos cultures, et nous avons tout naturellement développé envers elles une sympathie particulière. Mais vous le savez, de nombreuses activités humaines ont des impacts préjudiciables sur les cétacés entraînant le déclin rapide de leurs populations à travers les mers du globe.

Les mers de notre Région, si elles ne sont pas concernées par la chasse à la baleine, n'échappent cependant pas aux pratiques néfastes pour les populations de cétacés. C'est pourquoi il y a quatorze ans, des représentants de nos Pays se sont réunis, ici même en Principauté, pour adopter l'ACCOBAMS et l'ouvrir à la signature et à l'adhésion des Pays de la Mer Noire, de la Méditerranée et de la Zone Atlantique Adjacente.

Aujourd'hui, 23 Pays sont Parties à cet Accord, entré en vigueur depuis bientôt dix ans. Cette période de dix années a été consacrée à l'établissement de la structure de l'Accord et à l'élaboration de nombreux outils techniques nécessaires à la conservation des cétacés. Plusieurs lignes directrices, des plans d'action régionaux et nationaux ont été élaborés et adoptés. Les scientifiques, et en particuliers les membres du Comité Scientifique de l'ACCOBAMS, ont joué un rôle central dans ce processus, fournissant ainsi une base scientifique solide à la mise en œuvre de ce texte d'importance.

La dizaine d'années qui s'est écoulée a également été consacrée à mener des actions de conservation souvent dans un cadre de collaboration transfrontalière qui, avec l'assistance du Secrétariat de l'Accord, a bénéficié de l'appui technique et financier de plusieurs Pays.

Mais malgré tous ces efforts, l'état des populations de cétacés reste aujourd'hui préoccupant et nous avons encore des défis à relever ensemble, notamment en ce qui concerne les interactions entre certaines activités humaines et les espèces couvertes par l'Accord. Pour réussir à relever ces défis, il est important, comme le soulignent les scientifiques, de combler nos lacunes sur les connaissances scientifiques relatives à l'écologie et à la biologie des espèces des populations de cétacés, ainsi que sur l'impact des pressions et menaces qui pèsent sur elles.

Je voudrais à ce propos souligner l'importance de l'initiative soumise à cette Réunion concernant l'évaluation des populations de cétacés dans la zone de l'Accord. Cette initiative émane du besoin exprimé, à plusieurs reprises, par les scientifiques et par les instances responsables de la conservation des cétacés dans nos pays. Il est en effet essentiel de connaître les effectifs des populations de cétacés et leur répartition pour pouvoir mieux cibler les actions de conservation. Il s'agit d'un projet de grande envergure sur le plan scientifique et financier dont la mise en œuvre ne peut être retardée. Je saisi cette occasion pour lancer un appel aux Organisations Internationales et aux instances gouvernementales et non gouvernementales concernées pour qu'elles adhèrent à cette initiative et pour qu'elles y apportent l'appui financier nécessaire.

Mesdames, Messieurs,

En 2002, lors du sommet de Johannesburg, les Pays se sont fixés comme objectif de réduire la perte de la biodiversité à l'horizon de 2010. Force est de constater aujourd'hui que cet objectif n'est pas atteint, au contraire, le rythme actuel de perte de la biodiversité est sans précédent. Ce déclin global s'accélère et le Monde ne parvient pas à freiner le rythme inquiétant auquel les espèces animales et végétales disparaissent. Ceci a été souligné de façon très préoccupante par le Secrétariat de la Convention sur la Diversité Biologique lors de la dixième conférence des Parties de la Convention, qui s'est tenue à Nagoya au mois d'octobre dernier et à laquelle j'ai participé.

Certes, des progrès ont été réalisés. J'en veux pour preuve l'adoption de deux traités internationaux d'importance majeure pour la protection de la biodiversité à l'issue de la Conférence de Nagoya.

Le premier texte est un nouveau plan stratégique pour lutter contre la perte de biodiversité d'ici à 2020. Il prévoit notamment d'augmenter la superficie des terres protégées et des parcs nationaux à 17% de la surface terrestre de la Terre, contre près de 12,5% aujourd'hui, et d'étendre les zones marines protégées à 10% de la surface maritime de la planète, contre moins de 1% actuellement.

Avec ce plan stratégique, les Etats entérinent le principe d'une « approche de précaution » dans l'exploitation des zones riches en biodiversité dans le cadre de la lutte contre le changement climatique et le développement des biocarburants de synthèse.

Le second traité majeur adopté à Nagoya est un protocole additionnel à la Convention sur la diversité biologique. Il est destiné à régir l'accès aux ressources génétiques et le partage des bénéfices de leur exploitation.

Ce nouveau protocole, après 18 ans de discussions internationales, fixe les règles de base sur la manière dont les nations peuvent collaborer, pour tirer des ressources génétiques de la recherche scientifique sur les animaux, les plantes et les champignons. Il crée également un régime international organisant l'accès et le partage des avantages tirés des ressources génétiques de la nature.

Ainsi, une révolution des consciences est en train de se faire quant au lien entre la diversité biologique et le destin de l'Humanité. Mais il est évident qu'une nouvelle approche de l'utilisation que nous faisons des éléments constitutifs de la diversité biologique est nécessaire ; approche qui permettra de mobiliser davantage les acteurs locaux, la société civile et les acteurs privés pour appuyer l'action du secteur public. Nous nous devons également d'ajuster nos modes de vie et d'y introduire plus d'harmonie avec la nature.

La préservation de la biodiversité n'est pas contraire au développement économique et social, elle est même la garantie de la durabilité du développement. Le rapport sur "L'économie de la biodiversité et des écosystèmes" (TEEB) a estimé que sans action, la perte de la biodiversité coûterait 7 % du PIB mondial d'ici à 2050.

A nous de nous engager dans les actions nécessaires. Car préserver les espèces et les écosystèmes de la planète de même que les bienfaits qu'ils apportent est crucial pour un développement durable.

Mesdames et Messieurs,

L'agenda de cette Quatrième Réunion des Parties de l'ACCOBAMS est particulièrement chargé. Comme le montrent les projets de Résolutions qui sont soumis à votre examen, il s'agit de faire passer notre collaboration à plus de réalisations concrètes et à une mise en œuvre plus active des outils techniques adoptés dans le cadre de l'ACCOBAMS. A cet effet, l'appui des Parties, des Organisations Internationales et des Partenaires de l'Accord est plus que jamais indispensable.

Mon Pays, qui a ardemment appuyé les phases de négociation et d'adoption de l'Accord, n'a eu de cesse, depuis lors, de lui apporter son soutien moral et financier. La signature de l'Accord de Siège qui aura lieu en marge de cette Réunion renforcera cet appui.

J'ai la solide conviction que l'action commune et concertée de tous les Pays est la seule voie pour assurer un état de conservation favorable pour les populations de cétacés, de leurs habitats et de la diversité de la vie sur notre Planète.

Je souhaite plein succès à vos travaux.

Je vous remercie.

OPENING STATEMENT
Elizabeth Maruma Mrema
Executive Secretary of the UNEP/CMS Secretariat

Your Serene Highness Prince Albert, Distinguished delegates and participants of the 4th Meeting of the Parties to ACCOBAMS, dear Marie-Christine,

As Executive Secretary of the joint Secretariat of the UNEP Convention on the Conservation of Migratory Species of Wild Animals, CMS, and the northern European small cetacean Agreement ASCOBANS, I am delighted to be able to participate in this important meeting.

Many of the species covered under this Agreement are also listed on the CMS Appendices, thus making them of immediate interest to the mother convention of ACCOBAMS. The ones listed on Appendix I, thus requiring strict protection from all CMS Parties, include the sperm whale, the Mediterranean population of the short-beaked common dolphin, on which a draft resolution is also tabled at this meeting, the Black Sea population of the bottlenose dolphin and the fin whale. Appendix II covers several more species found in the Agreement Area.

Distinguished delegates, you have a full agenda ahead of you and many important decisions to make. For example, the draft work programme presented for adoption, when approved and implemented, will make a real difference to the conservation status of cetaceans in the Mediterranean and Black Sea. CMS is looking forward to working with ACCOBAMS, both at Secretariat level and through our institutional bodies, in order to support the full implementation of this work plan. In all these endeavours, let us bear in mind the importance of synergies in order to reach our common goals as effectively as possible.

Two topics in particular lend themselves to closer collaboration between ACCOBAMS, CMS and ASCOBANS, namely bycatch and marine noise. All three bodies deal with these issues as priority items and much attention is rightly focused on them. CMS and ASCOBANS hope that from this meeting a strong signal will be sent towards direct cooperation not only at Secretariat level, where we've all been striving to achieve this and will continue to do so, but also between our scientific bodies.

Other issues of common interest include climate change, to which CMS has been paying increasing attention in recent years. The impacts of climate change on migratory species, including cetaceans, have been the focus of a study commissioned by CMS, which was presented at the Scientific Council meeting in June of this year. A workshop dealing with this issue is planned for the coming year. I will provide more information on these initiatives under the relevant agenda items.

At the recent 17th Meeting of the ASCOBANS Advisory Committee it was suggested that ASCOBANS and ACCOBAMS consider a joint workshop on pollutants and new compounds in the marine ecosystems and their effects on cetaceans to be held in the margins of the next Conference of the European Cetacean Society in March in Cadiz, Spain. This topic is of mutual concern for both

Agreements and would be another excellent opportunity for collaboration. We will discuss the details with the ACCOBAMS Secretariat shortly after this meeting and hope we have the endorsement also of the ACCOBAMS Parties for such a joint event.

Distinguished delegates, ACCOBAMS is not operating in a vacuum. There are a number of international processes ongoing that have a bearing on the future institutional set-up of all in the wider CMS Family and possibly even on all biodiversity-related multilateral environmental agreements.

One of the most relevant, in which the ACCOBAMS Parties have also been invited to contribute, is the Future Shape of CMS process initiated by the last Conference of the Parties to CMS. The second phase of the process, which is to “propose different options on the organisation and strategic activities that could improve current operations”, is almost coming to an end.

The Working Group on the Future Shape of CMS, with the assistance of the consultancy firm ERIC, has submitted a report to the next meeting of the CMS Standing Committee due to take place at the end of this month. It outlines some provisional ideas about organizational changes within the CMS Family. After review by the Standing Committee members, all CMS Parties will be requested to provide inputs to the report. You are invited and encouraged to continue to contribute to this process.

Distinguished delegates, you have an agenda full of important and interesting matters to go through in these coming days, so I will not take any more of your time at this juncture. Before closing, though, I would like to express my gratitude to Your Serene Highness Prince Albert and to the Executive Secretary of ACCOBAMS and to all who have contributed to the preparation of this meeting. May we all bear in mind why we are here: to improve the conservation status of cetaceans in the Region, and this simple idea should guide all of us in our deliberations.

Distinguished delegates, now I wish us all a pleasant and successful meeting and an enjoyable time here in Monaco!

STATEMENT OF THE REPUBLIC OF CROATIA

His Serene Highness The Sovereign Prince of Monaco
Mrs. Executive Secretary
Mr. Chairman

Honourable colleagues,
Distinguished delegates,
Ladies and Gentlemen,

Allow me to extend gratitude on behalf of the Government of Republic of Croatia to the Principality of Monaco for hosting the Fourth Meeting of Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS).

Cetaceans are an important element of marine ecosystems, playing a significant role in their functioning. At the same time, they are under significant pressure by anthropogenic activities; ranging from habitat degradation, pollution and overfishing, to incidental take and climate change. Preservation of cetaceans under such complex circumstances is one of the most challenging tasks in nature conservation.

The Republic of Croatia is a maritime country, with almost 6,000 km of coastline and more than 1,000 islands stretching along the Adriatic Sea. The rich natural and cultural heritage of this region has defined the Croatian identity.

Cetaceans represent a significant component of Croatian biological diversity. We are aware of the various anthropogenic impacts posing a threat to cetaceans in the Adriatic and the efforts needed to conserve these animals as an integral part of marine biodiversity.

Croatia already demonstrated its commitment to conserving cetaceans back in 1999, when the Croatian Parliament adopted the first National Strategy and Action Plan for the Protection of Biological and Landscape Diversity. This Strategy defined the action plan for the conservation of dolphins and marine biodiversity. The revised Strategy, adopted in 2008, also stipulates action plans for the conservation of these species.

Let us remind you that the Republic of Croatia is a signatory of all relevant international treaties in the area of conservation of biological diversity. Croatia has also been involved in the implementation of the ACCOBAMS Agreement since its inception, ratifying the Agreement in July 2000. As a candidate country for membership in the European Union, Croatia has focused its activities on aligning its nature protection standards with those of the environmental *acquis* of the European Union.

Provisions under international nature protection agreements and under the Birds and Habitats Directives are fully transposed in the 2005 and 2008 Nature Protection Act. A number of pieces of secondary legislation have been adopted, which ensure the conservation of endangered species and habitats listed in the Annexes of the said European Directives. The Ecological Network of the Republic of Croatia was designated in 2007 and an assessment mechanism for plans and projects in protected areas and areas of the ecological network was prescribed. In addition, Croatia is preparing a draft proposal of the NATURA 2000 network.

Although comprehensive information is still lacking on the abundance and distribution of cetaceans in the Adriatic Sea, research is underway. We would particularly like to stress that Croatian institutions and organisations have joined a project supported by Italian ministries and which includes an aerial survey of the Adriatic. The results of this survey will be the first to provide better insight into the presence of cetaceans in the Adriatic. This survey represents a valuable contribution to the future implementation of the ACCOBAMS Survey Initiative. Furthermore, due to its transboundary feature, it fully reflects the spirit of regional cooperation promoted through ACCOBAMS.

We would also like to point out the more than 20 years of research on the common bottlenose dolphin in the Cres-Lošinj archipelago. This area has been revealed as a critical habitat for the common bottlenose dolphin and other valuable marine species. The area was designated part of ecological network of the Republic of Croatia in 2007. After the expiry of preventive protection in 2009, the area has been proposed for protection in the category of regional park. The area has also been recognised as a potential NATURA

2000 site. In addition, seven additional sites with bottlenose dolphins as the conservation objective have been included in the ecological network.

These efforts are in compliance with one of the specific goals of the ACCOBAMS Agreement: creation of a network of specially protected areas to conserve critical cetacean habitats. We are pleased that the significance of this area was recognized by the ACCOBAMS Scientific Committee and that the Parties adopted the resolutions at the First and Third Meetings, identifying the Cres-Lošinj archipelago as an international priority area for the conservation of the common bottlenose dolphin.

Croatia also pursues the implementation of other cetacean conservation measures. We would particularly like to stress the adoption of secondary legislation in 2009, prohibiting the keeping of cetaceans in captivity for commercial purposes. Establishment of a coordinated national stranding network has also started.

Specific efforts will be directed at assessing the abundance and distribution of cetaceans, and protecting and managing areas representing critical habitats for bottlenose dolphins, in particular the area of the Cres-Lošinj archipelago. These challenging tasks will demand ongoing cooperation with other sectors and active involvement of local communities and other interested parties. We also expect that in course of further research within the framework of preparation of the NATURA 2000 network proposal, new areas significant for the conservation of these sea mammals will be identified and included in the protected marine areas system.

Once more, we would like to emphasise the commitment of the Republic of Croatia in continuing its efforts towards implementing the ACCOBAMS Agreement and to remind you of the contributions made by Croatian representatives in the work of the Scientific Committee and the Bureau of the Agreement, including Chairing the Agreement in the period 2007–2010.

We would also like to commend the work of all the bodies of the Agreement, which significantly contribute to its enforcement. Let us in particular extend our gratitude to the Principality of Monaco for lending its support to the Secretariat of the Agreement and to the Secretariat itself for the substantial accomplishments achieved thus far.

Mr. Chairman, Ladies and Gentlemen,

We are aware of the general challenges the conservation of cetaceans and marine biodiversity places before us. There are many obstacles along the way—from insufficient administrative capacities, lack of cooperation among sectors to lack of financial support. Allow us to assure you that Croatia, within the scope of its possibilities, will continue to work towards cetacean conservation and will continue to cooperate with other countries in the region, stimulating new ideas and projects and using the best available expertise.

Allow us to conclude by stressing that we recognise the ACCOBAMS Agreement as the appropriate framework for joint efforts in achieving a common goal: the preservation of healthy cetacean populations for the benefit of future generations.

Thank you, Mr. Chairman.

STATEMENT OF THE REPUBLIC OF ITALIA

Madam Chairperson, distinguished Delegates, Ladies and Gentlemen,

Italy wishes to express its deepest gratitude to the Principality of Monaco and to the Government of His Serene Highness Prince Albert II for hosting this Fourth Meeting of the Parties, so giving further evidence of His steady support to ACCOBAMS Agreement.

Italy wishes also to congratulate the Executive Secretary, and the Permanent Secretariat staff, on the considerable work done for the arrangement of this Meeting; moreover, being aware of the essential role of the Scientific Committee within the Agreement, we also like to acknowledge the significant and high qualified efforts provided by its Chair and Members.

Three years ago, in Dubrovnik, Italy took part, as Member State, in his first ACCOBAMS Meeting of the Parties; even before become a contracting Party Italy was very proactive, both in ensuring a concrete support to the Secretariat and to the Agreement provisions.

During the last triennium 2008/2010, Italy has strongly contributed to the implementation of the Working Programme by means of several research field activities on the following subjects:

- Tissue Bank
- Strandings Data Bank
- Emergency Task Forces for mass strandings of large and small cetaceans
- Monitoring of Cetacean populations in national surrounding sea waters
- Collision between Cetaceans and vessels
- Interactions with Fisheries
- Ecotoxicology

Furthermore, Italy is currently involved in:

- Reorganization of National Strandings Network
- Emergency Task Force for live strandings
- Satellite Telemetry pilot project on large whales
- MPAs for cetacean conservation

Italy wants to confirm to all Participants its strong commitment, that it will continue to improve in the collaboration and coordination with all Member States and Riparian Countries to achieve sustainable living conditions for the Mediterranean's cetaceans.

In this context, Italy would like to make available its technical and scientific expertise and support to all Mediterranean Riparian neighbouring States for their operational implementation activities.

Finally, Italy is aware of the Agreement structure amendments that will have to discuss within the Agenda, and ensure its commitment in order to achieve profitable work of this IV Meeting of the Parties.

Thank you very much.

STATEMENT OF THE REPUBLIC OF SLOVENIA

Distinguished Chairperson,
Distinguished Delegates and Secretaries General
Ladies and Gentlemen,

Slovenia is pleased to participate at the 4th Meeting of Parties to ACCOBAMS, and is grateful for the hospitality extended by our hosts, the Principality of Monaco.

We appreciate the continuous efforts of the Principality of Monaco to improve the implementation of this Agreement through financing of marine conservation projects, and through continuous support of the Secretariat.

We would like to use this opportunity to thank the Secretariat for its devoted and engaged work on conservation of cetaceans in the past triennium. Further, Slovenia would like to thank to the Scientific Committee for its valuable inputs to the work of this Agreement, and last but not least to the Bureau, and especially its Chairperson, for the lead in the period from the last MOP.

We look forward to a successful meeting and progress that can be achieved through constructive deliberations on issues of importance to this Agreement.

STATEMENT OF IWC

With respect to the draft Resolution, the representative of the IWC made the following statement.

Whilst he was reluctant to comment on the internal organisation of another intergovernmental organisation, it may assist the discussion to receive some thoughts based on his long experience with scientific committees of a number of organisations including amongst others IWC, ACCOBAMS, ASCOBANS, ICES and CCAMLR.

Within ACCOBAMS, the recent discussions focussed on three main areas: the selection and composition of the Scientific Committee and especially the representation of scientists from the 'southern rim' of the Agreement area; the determination of the Rules of Procedure of the Scientific Committee and the selection of officers; and the incorporation of socio-economic advice into the decision-making process.

Within the IWC, the task of the Scientific Committee, a subsidiary body of the Commission, is to provide the best scientific advice to the Commission, taking into account scientific uncertainty where it exists. It is not the task of the Scientific Committee to supplant decision-makers but rather to assist them in reaching wise decisions. It is recognised that scientific advice is one of a number of important inputs to the decision-making process. It is also extremely important that the Committee not only is, but is also seen to be, objective and without political interference. The Committee elects its own officers, develops its own *modus operandii* and makes recommendations to the Commission for its Rules of Procedure.

Socio-economic factors are another important input for decision makers. However, there are a number of mechanisms for achieving this input and the choice must be made extremely carefully. It would be unfortunate if it is perceived as a filter of the scientific advice before that advice is presented to the decision makers. It is a separate discipline and the model that this input is also received separately by decision makers as a complementary input should be carefully considered. For example in the IWC, the Commission receives the report of the Scientific Committee and also comments on it in the report of by technical committees such as the Conservation Committee or the Aboriginal Whaling sub-committee.

The decision-making body correctly remains the Plenary whose responsibility it is to find an appropriate trade-off between the inputs from a variety of sources (e.g. scientific, social, economic and political).

Changing the selection methods, disciplines and *modus operandii* of the Scientific Committee is an important and far-reaching issue of fundamental importance to the ability of ACCOBAMS to meet its goals. I would suggest that it is important that this is not rushed into and that it is clear that any new mechanisms achieve the desired improvements and have no undesirable side effects.

STATEMENT OF DIFFERENT NGOs

We, the undersigned non governmental organisations, including Partner organisations of ACCOBAMS and the CMS, gathered today (10/11/2010) at the Fourth meeting of the Parties in Monaco, respectfully request that the Parties to the Agreement continue to strive to maintain the independence and expertise of the ACCOBAMS Scientific Committee, and also its transparency.

We believe that the current formulation of the Committee is effective and that this has been demonstrated in the many ways that it has already helped to progress the ACCOBAMS agenda. If Parties do seek to revise its composition, we ask that great care be taken to ensure that this is exclusively a body of scientists in the relevant fields of natural sciences. Parties are of course free to seek other expertise and establish other bodies to help them in their decision making, but we urge that this body, which sets a good example to others, be maintained.

WDCS, OceanCare, NRDC, Oceana, Morigenos, IFAW, S.O.S Grand Bleu, Souffleur d'Ecumes.

