



SECOND MEETING OF THE
WESTERN AFRICAN TALKS ON CETACEANS AND THEIR HABITATS
WATCH II

Lomé, Togo, 2-3 October 2008

Agenda Item 1: Opening Remarks

1. The second meeting of the Western African Talks on Cetaceans and their Habitats (WATCH II) was held at the Hotel Ibis, Lomé, Togo, on 2-3 October 2008.

2. A representative of the Executive Secretary for the Division of Fauna and Hunting of the Ministry of the Environment, Tourism and Forestry Resources of the Government of Togo welcomed participants to the meeting. He said that the rich aquatic and marine biodiversity of the region had to be preserved for future generations. It was essential that the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) finalized even non-binding agreements for the conservation and management of all migratory species. He hoped that the meeting would give new direction to the issues under discussion and that the governments represented would integrate the conclusions and recommendations into their policies for the management of natural resources.

3. The Agreements Officer, representing the CMS Secretariat, highlighted that the objective of the meeting was to finalize negotiations on a new instrument for the conservation of small cetaceans and manatees of western Africa and Macaronesia. He described the experience that had been accrued by the CMS in the negotiation of regional agreements for the conservation of aquatic mammals. The present meeting represented the culmination of 10 years of work on small cetaceans and their conservation; he was pleased to see some of the early pioneers among the participants. CMS sought to provide a suitable legal and institutional framework that could be used to further implementation of related initiatives in the region, thus optimizing use of resources. Collaboration with non-governmental organizations would also be sought, as their work was crucial for achieving the aims of the CMS and its agreements with regard to specific species. As cetaceans crossed national boundaries, Range States had to work together if conservation measures were to succeed. The draft Memorandum of Understanding and the associated action plans were designed as templates for activities that would result in conservation of these unique, highly valued and culturally significant animals and their habitats. He thanked the Government of Togo and the other sponsors (the Governments of France, Monaco and Spain and the international tour operator TUI) for their financial and in-kind support to the meeting.

3. A representative of the Minister of the Environment, Tourism and Forestry Resources of the Government of Togo said that the choice of his country for the present meeting was a sign of international recognition of the importance that Togo accorded to the conservation of cetacean species. Although biodiversity losses were increasing, the means to counteract those losses were inadequate or non-existent. It was therefore essential that the countries of the region worked closely together to improve cooperation and find ways of implementing and coordinating activities. To prevent biodiversity loss, his Government had prepared a number of plans, strategies and laws, which would significantly improve Togo's capacity for environmental management in the framework of the sustainable development of the country. Understanding of the biology, ecology, population dynamics, socio-economic aspects and



conservation status of manatees and small cetaceans was, however, inadequate. Methods and protocols were needed for monitoring and awareness-raising. That could be achieved only by international cooperation. He looked forward to the discussions over the next two days, which would include exchanges of scientific, technical and legal information. Action had to be taken rapidly; otherwise, small cetaceans and manatees would be threatened by extinction. He called on all the governments represented to ensure, at the highest level, the conservation of marine and aquatic mammals.

Agenda Item 2: Adoption of the Agenda

4. Referring to document UNEP/CMS-WATCH II-Doc.1, the Secretariat suggested several rearrangements of the agenda. On that understanding, the agenda was adopted (Annex 2 to this report).

Agenda Item 3: Election of Officers

5. The representative of the Secretariat informed the meeting that, after consultation with the heads of delegations, it was proposed that Mr Kotchikpa Okoumassou (Togo) act as Chairman of the meeting. It was so decided.

Agenda Item 4: Establishment of Credentials Committee

6. The CMS Agreements Officer explained that, in order to sign the Memorandum of Understanding, Range State representatives had to be accredited by their governments. At the meeting of the heads of delegations, it had been decided that the Credentials Committee would consist of three representatives, and those of Chad, Ghana and Morocco had been proposed.

7. The delegate from Mali proposed that the delegate from Burkina Faso also serve on the Committee. It was so decided.

Agenda Item 5: Outcome of the first WATCH Meeting (18-20 October 2007, Spain)

8. The Secretariat's representative recalled that the objective of the first meeting had been to identify the options available for the type of CMS instrument to be used for the agreement. The meeting had decided that a Memorandum of Understanding would be the most suitable one. The meeting had also identified the taxa that would be covered by the agreement, namely small cetaceans only, defined as all odontocetes with the exception of the sperm whale (*Physeter macrocephalus*). The geographical area was defined as the entire Atlantic coast of Africa, the Macaronesian archipelago and those inland countries within the range of the West African manatee. Draft action plans for both small cetaceans and the West African manatee had been considered in detail and the suggestions that had been made for their revision had been incorporated into the drafts that were before the meeting. The Secretariat had also prepared a revised draft Memorandum of Understanding based on the changes requested at the first WATCH meeting.

9. The representative of the Society for the Conservation of Marine Mammals remarked that, at a side event on the Macaronesia initiative held in the margins of WATCH I, it had been agreed not to exclude large whales in Macaronesia. The Secretariat explained that the meeting in plenary had decided to limit the taxonomic coverage of the Memorandum of Understanding to small cetaceans, which however would not obviate the inclusion of large whales in any initiative limited to Macaronesia.

Agenda Item 6: Final Negotiations of the MoU and Action Plans

6.1: Establishment of Working Groups

10. The Chairman proposed that two working groups be formed: one to discuss the two draft action plans and the other to revise the draft Memorandum of Understanding. It was so agreed.

6.2: Memorandum of Understanding concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia

11. The representative of the Secretariat recalled that the comments that had been received at the previous meeting had been incorporated into the draft document and distributed (UNEP/CMS-WATCH II-Doc.3). No further comments had been received before the deadline for inclusion in the revised draft prepared by the Secretariat; however, those that had been received subsequent to that date had been circulated to the participants of the present meeting for their information.

12. During the ensuing discussion, it became clear that the main concerns of delegates concerned the form, rather than the content of the document.

13. Reporting back to the plenary, the chairman of the working group to revise the text of the Memorandum of Understanding, the delegate from Côte d'Ivoire, described the working methods of the group, and the rapporteur, the delegate from Burkina Faso, indicated the main changes that were being proposed.

14. The delegate from Liberia said that international cooperation to improve knowledge of the biology, ecology, migration, population abundance and conservation status of manatees and small cetaceans was urgently needed. He therefore proposed that the relevant paragraph be changed.

15. The Memorandum of Understanding concerning the conservation of the manatee and small cetaceans of western Africa and Macaronesia was adopted by consensus, on the understanding that the amendment made orally during the meeting would be incorporated into the final version (Annex 4 of this report).

6.3: Action Plan for the Conservation of Small Cetaceans of Western Africa and Macaronesia

16. The CMS Agreements Officer said that numerous comments had been made on the document at the first meeting, and those had been incorporated into the version that was before the meeting (UNEP/CMS-WATCH II-Doc.4 Rev.1). Further, at the request of the Secretariat, Dr Koen Van Waerebeek had attempted to fill in the columns 'Lead' and 'Priority' of each action for the consideration of the meeting.

17. The Chairman noted that the draft action plan was a strategic, not an operational one. The actions proposed would not lead to concrete actions.

18. The Secretariat responded that the plan had indeed been drafted as a strategic guidance document, which would not quickly become outdated. In line with the practice for other Memoranda of Understanding under the CMS, once the strategic action plan was adopted, sub-regional implementation plans could be developed for concrete actions. The action plan would be valid for a long time, and the signatories would approve implementation plans with timetables at each meeting, depending on the available capacity.

19. In the subsequent discussion, as for the text of the Memorandum of Understanding, the meeting mainly proposed changes to the language rather than the content of the document.

20. One delegate said that the lead agencies should include academic and research institutions. He also noted that, although the legislation in each country was different, a number of commonalities could be identified. Another delegate looked forward to a discussion at the next Conference of the Parties on a strategy for coordinating all CMS initiatives. Another delegate said that emphasis should be placed on partnerships with sub-regional organizations for strong coordination in facilitating activities.

21. The Secretariat commented that the document to be discussed under item 9 of the agenda, 'Options for an interim secretariat arrangement', would cover coordination with respect to the Memorandum of Understanding. A decision was foreseen, not at the current meeting, but at the first Meeting of Signatories to the Memorandum of Understanding.

22. The chairman of the working group for the revision of the two action plans, the delegate from Guinea, reported that the working group had introduced some changes to both action plans, the majority of which related to changes and additions in the entries for the column 'Lead' found after each action. Numerous improvements had been made to the French version to bring it into line with the English.

23. The rapporteur of the working group, the delegate from Mali, pointed out the main changes that had been introduced into the draft action plan for the conservation of small cetaceans of western Africa and Macaronesia. Suggestions were made by the delegates of Mauritania, Niger and Sierra Leone and the CMS Scientific Councillor for Marine Mammals for new actions to be included.

24. The Chairman asked that the suggestions be submitted in writing. He assured the delegate from Mauritania that the Secretariat would examine the document carefully to ensure that the additions did not overlap with existing text.

6.4: Action Plan for the Conservation of the West African Manatee

25. The CMS Agreements Officer recalled that a draft list of actions had been prepared by a working group at the previous meeting, which had been welcomed by participants. Subsequently, Mr Tim Dodman, at the request of the Secretariat, had added an introductory section to the document and had included suggestions for an appropriate 'Lead' and 'Priority' for each activity. As Document UNEP/CMS-WATCH II-Doc.5 had been made available only recently, delegates had been asked to bring their comments with them.

26. The ensuing discussion showed that the delegates considered the draft to be well thought out and presented, although they suggested the introduction of some linguistic changes.

27. The chairman of the working group for the revision of the two action plans, the delegate from Guinea, explained that there had not been sufficient time to look at the appendix to the manatee action plan. Accordingly, they had agreed that each country would consider the text that related to it and determine whether the proposed actions were within its competence.

28. In the ensuing discussion of the changes proposed by the working group, the delegate from Ghana suggested that the word 'significantly' be deleted from the goal given at the beginning of the action plan, which read: "*To significantly improve the conservation status of the West African Manatee across its range through the implementation of strategic policy, research, conservation and awareness actions*". Other delegates disagreed, pointing out that the situation of the manatee was precarious. It was important that the goal of the action plan indicate that much was expected of it. The meeting eventually decided to retain the original wording.

Agenda Item 7: Options for an Interim Secretariat Arrangement

29. The representative of the Secretariat explained that document UNEP/CMS-WATCH II-Doc.6 was being submitted to stimulate reflection before the first meeting of Signatories of the Memorandum of Understanding concerning the provision of secretariat services and coordination of implementation of the Memorandum. The paper gave an overview of the various mechanisms that had been used by CMS for the purpose, including collaborative arrangements with non-governmental and inter-governmental agencies. Such external bodies had proved effective in supporting the implementation of Memoranda of Understanding, as they were usually closer to the work being performed. Organizations or countries that might be interested in acting in such a capacity could contact the CMS Secretariat before the first Meeting of Signatories.

Agenda Item 8: Adoption of the Action Plans

30. The action plans for the conservation of small cetaceans of western Africa and Macaronesia and for the conservation of the West African manatee were adopted by consensus, on the understanding that the amendments made orally during the meeting would be incorporated into the final versions (Annexes 5 and 6 of this report).

Agenda Item 9: Signing Ceremony of Memorandum of Understanding

31. The Chairman of the Credentials Committee, the delegate from Chad, reported that twenty-one countries had deposited their credentials with the CMS Secretariat. Fifteen countries would be permitted to sign the Memorandum of Understanding if they wished to do so.

32. The CMS Agreements Officer explained that the Memorandum could also be signed at any time in the future if the credentials of a delegate at the present meeting were not adequately specific to allow for signature immediately. Such opportunities could present themselves for instance at a meeting of the Conference of the Parties of CMS or in an embassy. He said that those delegates who signed in the names of their governments at the present meeting could receive an unofficial copy immediately if necessary, while certified copies would be sent from CMS headquarters. He said that the heads of delegations had agreed that partner organizations could also sign the Memorandum, as an indication of their commitment to the action plans. The Memorandum would nevertheless remain an agreement among the Range States.

33. The Chairman asked the representatives of governments to confirm their agreement that partner organizations could also sign the Memorandum of Understanding. It was so decided.

34. The representatives of Angola, Benin, Cape Verde, Chad, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea-Bissau, Liberia, Mali, Mauritania, Niger and Togo, the representative of the Executive Secretary of CMS, and representatives of the Society for the Conservation of Marine Mammals, Wetlands International Africa and the Wildlife Trust signed the Memorandum of Understanding concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia in a ceremony starting at 16:00h on 3 October 2008.

35. The Memorandum came into effect immediately.

Agenda Item 10: Date and Venue of the 1st Meeting of Signatories

36. The meeting agreed that the date and venue of the first Meeting of Signatories would be decided at a later date.

Agenda Item 11: Closing of the Meeting

37. After the customary exchange of courtesies, the meeting was closed by the representative of the Minister of the Environment and Forestry Resources of the Government of Togo at 17:50h on 3 October 2008.

LIST OF PARTICIPANTS

RANGE STATE DELEGATIONS:

Angola

Miguel XAVIER
Ministry of Urbanism and Environment
Avenida 4 de Fevereiro
Edifício Atlantico No30
Luanda
Tel. (+244) 923344060
Fax (+244) 222338919
Miguel_xavier2003@yahoo.com.br

Vanda MONTEIRO
Institut National de Développement de
Pêche (INDP)
Cova d'Inglesa
Mindelo BP 132
Cabo Verde
Tel. (+238) 2321373 / 4
Fax (+238) 2321616 / 1370
vanda.monteiro@indp.cv

Benin

Ferdinand Claude KIDJO
CENAGREF
Ministère de l'Environnement et de la
Protection de la Nature
04 BP 328 Cotonou
Tél: (+229) 21309070 / 95426810
fkidjo@yahoo.fr; cenagref@yahoo.fr

Chad / Tchad

Hassane Idriss MAHAMAT
Direction de Conservation de la Faune et
des Aires Protégées
Ministère de l'Environnement et de l'Eau et
des Ressources Halieutiques
BP 905
N'Djamena
Tel. (+235) 6219340
Fax (+235) 2524412
mhi1962@yahoo.fr

Burkina Faso

Mariam DOUAMBA
Ministère de l'Environnement et du Cadre
de Vie
BP 7044
Ougadougou 03
Tel. (+226) 50356971
douzoumar@yahoo.fr

Congo

Antoine MOUTSOUKA-MAMONA
Attaché à l'Environnement
Ministère du Tourisme et de
l'Environnement
46 rue oboli Talangai
Brazzaville
Tel. (+242) 5448574 / 6222023
moutsoukaa@yahoo.fr

Cape Verde / Cap-Vert

Maria Edelmira MONIZ CARVALHO
Direcção Geral das Pescas
Ministère de l'Environnement,
Développement Rural et Ressources
Marines
PB 206 Praia
Tel. (+238) 2613761 / 67
Fax (+238) 2613758
edelmira.carvalho@dgpescas.gov.cv;
edelmiramonz@hotmail.com

Côte d'Ivoire

Tano SOMBO
Direction de la Protection de la Nature
Ministère de l'Environnement, des Eaux et
Forêts
06 BP 6648
Abidjan 06
Tel. (+225) 20225366 / (+225) 07615712
Fax (+225) 20 225366
sombotano@yahoo.fr

Equatorial Guinea / Guinée équatoriale

Santiago BIYANG-MBA
Delegación Regional del Ministerio de
Pesca y Medio Ambiente
C/Santa Cruz II
Bata
Tel. (+240) 241417
santiagobiyang@yahoo.es

Gabon

Solange NGOUESSONO
Agence Nationale de Parcs Nationaux /
Ministère du Tourisme et des Parcs
Nationaux
BP 70 Mayumba
Tel. (+241) 07532788
ngouessono@yahoo.fr;
sngouessono@gabonparks.org

Gambia / Gambie

Abdoulie SAWO
Department of Parks and Wildlife
Management
Abuko Nature Reserve
Abuko
Tel. (+220) 6530860 / 4376937
Abdoulie_80@yahoo.com;
Papasawo1@gmail.com

Ghana

Ernest LAMPTEY
Wildlife Division
PO Box M239
Accra
Tel. (+233) 0243089465
elampzey@hq.fcghana.com;
ernestlampzey@yahoo.com

Guinea / Guinée

Idrissa Lamine BAMY
Centre National des Sciences Halieutiques
de Boussoura
Tel. (+224) 60592021 / (+224) 67592021
ibamy@caramail.com

Guinea-Bissau / Guinée-Bissau

Fai DJEDJO
Direction Générale des Forêts et Faune
Ministère de l'Agriculture et Développement
Rural
Tel. (+245) 722 2960 / 665 5003
Fax (+245) 322 1019
faidjedjo@yahoo.com.br

Liberia / Libéria

Ben Turtur DONNIE
Environmental Protection Agency
4th Street, Tubman Boulevard, Sinkor
PO Box 4024
Monrovia
Tel. (+231) 6511387
benturturdonnie@yahoo.com

Mali

Alfousseini SÉMÉGA
Ministère de l'Environnement et de
l'Assainissement (ABFN)
BP 275 Bamako
Tel. (+223) 645 77 59 / 5706047
Fax (+223) 2281992
foussemega@yahoo.fr

Mauritania / Mauritanie

Azza AHMED CHEIKH OULD JEDOU
Institut Mauritanien de Recherches
Océanographiques et des Pêches (IMROP)
BP 22 Nouadhibou
Tel. (+222) 574 51 24
Fax (+222) 574 50 81
azzajiddou@yahoo.fr

Morocco / Maroc

Youssef OUATI
Département de la Pêche Maritime
Ministère de l'Agriculture et de la Pêche
Maritime
Tel. (+212) 37688162
Fax (+212) 37688194
ouati@mpm.gov.ma

Niger

Mamoudou SALIFOU
Ministère de l'Environnement et de la lutte
contre la désertification
BP 721 Niamey
Tel. (+227) 96149072 / 21663744
Fax (+227) 20723763
faiza032006@yahoo.fr

Senegal / Sénégal

Djibril DIOUCK
Direction des Parcs Nationaux
Parc zoologique de Hann
BP 5135 Dakar Fann
Tel. (+221) 338322309 / 766992382
Fax (+221) 338322311
djibrildiouck@hotmail.com; dpn@orange.sn

OBSERVERS:

Paule ALAIN
Biologiste, Guide Naturaliste
Lomé
Togo
Tel. (+228) 9082256 / 3208367 / 9275203
africatoy1001pistes@yahoo.fr

Kossiawavi Ogoua ABAMY
Direction de la Faune et de la Chasse
B.P. 355 Lomé
Togo
Tel. (+228) 9922254
maoagnes@yahoo.fr

Amos Adeola AFOLABI
Federal Ministry of Environment
Plot 393/394, Augustus Aikhomu Way
Utako District
Abuja
Nigeria
amosafolabi44@yahoo.com

Sierra Leone

Ibrahim TURAY
Ministry of Fisheries and Marine Resources
Brookfields Hotel, Jomo Kenyatta Road
Brookfields
Freetown
Tel. (+232) 22 240828 / 242117 / 33454196
ibtee1264@yahoo.com

Togo

Kotchikpa OKOUMASSOU
Direction de la Faune et de la Chasse
Ministère de l'Environnement et des
Ressources Forestières
B.P. 355, Lomé
Tel. (+228) 9125405
Fax (+228) 2214029
okoumdfc@yahoo.fr

John H. MSHELBWALA
Federal Ministry of Environment
Plot 393/394, Augustus Aikhomu Way
Utako District
Abuja
Nigeria
Tel. (+234) 8033287039
johnmshelbwala2@yahoo.com

Koukoh NADA-ABI
Directeur Régional de l'Environnement et
des Ressources Forestières des Savanes
BP14 Mango
Togo
Tel. (+228) 9125478
Fax (+228) 7717128
nadasalif1964@yahoo.fr;
nadasalif1964@hotmail.com

Patrick Kwabena OFORI-DANSON
Dep. of Oceanography and Fisheries
University of Ghana
PO Box LG 99
Legon
Ghana
Tel. (+233) 020 8351477 / 021 512533
Fax: (+233) 021 500310
ofdan@ug.edu.gh

Hoinsoudé SEGNIAGBETO
Department of Zoology and Animal Biology
Faculté de Sciences, Université de Lomé
BP 6057 Lomé

Togo

Tel. (+228) 9099659
Fax (+228) 2218595
h_segniagbeto@yahoo.fr

Sévérin TCHIBOZO
Centre de Recherche pour la Gestion de la
Biodiversité et du Terroir (CERGET)
04 BP 0385 Cotonou

Benin

Tel. (+229) 95063950 / (+229) 21353095
tchisev@yahoo.fr

NON-GOVERNMENTAL ORGANIZATIONS:

**GSM - Society for the Conservation of
Marine Mammals**

Petra DEIMER-SCHÜTTE
Garstedterweg 4
25474 Hasloh
Germany
Tel. (+49) 4106 4712
Fax (+49) 4106 4775
pdeimer@gsm-ev.de

**IFAW– International Fund for Animal
Welfare**

Céline SISSLER-BIENVENU
4, Rue Edouard Mignot
51100 Reims
France
Tel. (+33) 0326480548
Fax (+33) 0326481435
csissler@ifaw.org

Wetlands International Africa

Emma GREATRIX
BP 25 581 Dakar-Fann
Sénégal
Tel. (+221) 33 869 16 81
Fax (+221) 33 825 92 12
emmawet@gmail.com;
egreatrix@wetlands.sn

Wildlife Conservation Society

Tim COLLINS
BP 7847 Libreville
Gabon
Tel. (+242) 7140631 / (+241) 7140038
tcollins@wcs.org

Akoi KOUADIO
04 BP 1240
Abidjan 04
Côte d'Ivoire
Tel. (+225) 23576182 / 07741929
akouadio@wcs.org; akoi_K@hotmail.com

Wildlife Trust

Lucy W. KEITH
Wildlife Trust
233 Third Street North, Suite 300
St. Petersburg
Florida 33701
USA
Tel. (+1) 727 895 7140
Fax (+1) 727 895 7150
keith@wildlifetrust.org

SCIENTIFIC ADVISORS TO THE SECRETARIAT:

Tim DODMAN
Hundland, Papa Westray
Orkney KW17 2BU
United Kingdom
(+44) 1857 644224
tim@timdodman.co.uk

Koen VAN WAEREBEEK
Centro Peruano de Estudios Cetológicos
(CEPEC)
Museo de Delfines
Pucusana
Lima 20
Peru
Tel. (+51) 1430 9406
etnunquam@yahoo.co.nz

William PERRIN
NOAA Fisheries
Southwest Fisheries Science Center
8604 La Jolla Shores Drive
La Jolla, CA 92037
USA
Tel. (+1) 858 546 7096
Fax (+1) 858 546 7003
william.perrin@noaa.gov

CMS SECRETARIAT:

UNEP/CMS Secretariat
UN Campus
Herrmann-Ehlers-Str. 10
53113 Bonn, Germany
Tel. (+49) 228 8152426
Fax (+49) 228 8152449
secretariat@cms.int

Marco BARBIERI
Agreement Developing and Servicing Officer
mbarbieri@cms.int

Heidrun FRISCH
Marine Mammals Officer
hfrisch@cms.int

Ana Berta GARCIA
agarcia@cms.int

Report Writer:
Elisabeth HESELTINE
heseltin@club-internet.fr

AGENDA

1. Opening Remarks
2. Adoption of the Agenda
3. Election of Officers
4. Establishment of Credentials Committee
5. Outcome of the first WATCH Meeting (18-20 October 2007, Spain)
6. Final Negotiations of the MoU and Action Plans
 - 6.1 Establishment of Working Groups (as needed)
 - 6.2 Memorandum of Understanding concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia
 - 6.3 Action Plan for the Conservation of Small Cetaceans of Western Africa and Macaronesia
 - 6.4 Action Plan for the Conservation of the West African Manatee
7. Options for an Interim Secretariat Arrangement
8. Adoption of the Action Plans
9. Signing Ceremony of Memorandum of Understanding
10. Date and Venue of the 1st Meeting of Signatories
11. Any other Business
12. Closing of the Meeting

LIST OF DOCUMENTS

Symbol	Title of Document
UNEP/CMS-WATCH II-Doc.1	Provisional Agenda
UNEP/CMS-WATCH II-Doc.2	List of Documents
UNEP/CMS-WATCH II-Doc.3	Draft Memorandum of Understanding concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia
UNEP/CMS-WATCH II-Doc.4 Rev.1	Draft Action Plan for the Conservation of Small Cetaceans of Western Africa and Macaronesia – Rev.1
UNEP/CMS-WATCH II-Doc.5	Draft Action Plan for the Conservation of the West African Manatee
UNEP/CMS-WATCH II-Doc.6	Options for MoU Coordination and Secretariat Services
UNEP/CMS-WATCH II-Doc.7	Report of the first WATCH Meeting, 18-20 October 2007
UNEP/CMS-WATCH II-Inf.1	List of Participants
UNEP/CMS-WATCH II-Inf.2	Contact Point Form
UNEP/CMS-WATCH II-Inf.3	CMS Resolution 8.5
UNEP/CMS-WATCH II-Inf.4	CMS Resolution 7.7
UNEP/CMS-WATCH II-Inf.5	CMS Recommendation 7.3
UNEP/CMS-WATCH II-Inf.6	Rules of Procedure for the Eighth Meeting of the Conference of the Parties to CMS

MEMORANDUM OF UNDERSTANDING CONCERNING THE CONSERVATION OF THE MANATEE AND SMALL CETACEANS OF WESTERN AFRICA AND MACARONESIA

Among the States of western Africa and Macaronesia:

The undersigned,

Acknowledging the role of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in the conservation and management of aquatic mammals;

Aware of international responsibilities to conserve the West African manatee and small cetaceans of the African Eastern Atlantic Basin and Macaronesia, in particular, pursuant to the Convention on Biological Diversity, for which CMS is the lead partner in the global conservation of migratory species over their entire range;

Recognising the need of aquatic mammal conservation at the global level as reflected, *inter alia*, in the United Nations Convention on the Law of the Sea, the International Convention for the Regulation of Whaling and the Convention on International Trade in Endangered Species (CITES);

Further recognising the importance of the instruments, policies and strategies specific to the region, in particular, the Convention for the Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention), as well as the CMS Memoranda of Understanding Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa and Concerning Conservation Measures for the Eastern Atlantic Populations of the Mediterranean Monk Seal;

Also aware of the region's exceptionally rich aquatic biodiversity, which, in addition to the West African manatee, harbours more than 30 species of small cetaceans;

Convinced of the need to ensure, for the benefit of present and future generations, the conservation of manatees and small cetaceans, which are part of the region's aquatic environments, where they constitute a link between the cultures and the ecosystems;

Conscious that manatees occur over vast areas, making their survival dependent on their conservation over the entire range of their coastal and inland water habitats;

Conscious too that small cetaceans migrate and disperse over vast distances, making their survival dependent on their conservation over a wide area and in a wide range of marine habitats;

Emphasising that knowledge of the biology, ecology, migration, population abundance and the conservation status of manatees and small cetaceans is insufficient and that international cooperation is urgently needed to facilitate research and monitoring of these species in order to develop and implement conservation measures;

Concerned that the existence of the manatees frequenting coastal and inland waters of the region's Western African Range States is threatened by by-catch, hunting and habitat destruction due to pollution, overexploitation and constructions;

Equally concerned that the conservation status of small cetacean populations frequenting the marine and coastal waters of the region's Range States, particularly populations that have been severely depleted, can be affected by factors such as directed take and by-catch, degradation, disturbance or destruction of their habitats, chemical and acoustic pollution, decline in food availability, climate change, use and abandonment of fishing gear and ship strikes;

Emphasising that many activities in the region, such as fishing, tourism and oil and gas exploration, extraction and other mining activities, while socially and economically important, should be conducted in a sustainable manner to minimise the threats to manatees and small cetaceans;

Emphasising further that the particular vulnerability of manatee and small cetacean populations warrants the implementation of conservation measures where they do not already exist;

Acknowledging further that the Range States have endeavoured individually to ensure conservation of manatees and small cetaceans; nevertheless, coordinated and concerted actions across the migratory range are still required to improve and ensure their conservation;

Noting that the CMS calls for international cooperation to conserve migratory species and encourages Contracting Parties to conclude agreements, including non-legally binding instruments, in respect of populations of migratory species;

Recalling that Resolutions 7.7 and 8.5, as well as Recommendation 7.3, of the CMS Conference of the Parties invite CMS Contracting Parties in the region to conclude a Memorandum of Understanding on manatees and small cetaceans and undertake collaborative actions through action plans;

Also recalling the recommendations for the conservation of small cetaceans and manatees formulated at the workshop on “The Conservation and Management of Small Cetaceans of the Coast of Africa”, held in Conakry, Guinea, in May 2000;

Encouraged by the efficacy of existing cetacean-related instruments negotiated under the auspices of CMS such as the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) and the Memorandum of Understanding Concerning the Conservation of Cetaceans and their Habitats in the Pacific Islands Region;

Recognising further that the scientific bodies of existing CMS instruments and the CMS Scientific Council have scientific and technical expertise that can be shared with the region to support the implementation of this Memorandum of Understanding;

Noting further that the region’s coastal communities, and those communities living along inland waters, value manatees and small cetaceans as part of their cultural heritage, and recognise that the species are significant components of the region’s biodiversity because of their particular ecological, economic, scientific, educational and tourism values;

Acknowledging the shared responsibility of the Range States, including all government agencies concerned with the environment, fisheries, development and extractive industries, intergovernmental organisations, the non-governmental sector, the private sector, including oil and mining companies, the fish and aquaculture industries, and tour operators, to work with local communities to achieve and maintain a favourable conservation status for the region’s manatees, small cetaceans and their habitats;

Confirming that the Signatories have the primary responsibility to implement this Memorandum of Understanding;

DECIDE to work closely together in the region and to foster cooperation, build capacity and ensure coordinated region-wide actions to achieve and maintain a favourable conservation status for manatees and small cetaceans and their habitats and to safeguard the associated values of these species for the people of the region. To this end and in the spirit of mutual understanding and cooperation, the Signatories record their understanding that their governments will individually or collectively:

1. Take steps as Range States for the respective species to conserve manatees and small cetaceans and fully protect those species listed in CMS Appendix I that occur in the region.

2. Consider, as appropriate, ratifying or acceding to those biodiversity-related international instruments that complement the intent of this Memorandum of Understanding, including in particular CMS, so as to enhance the legal protection of the region's manatees and small cetaceans.
3. Enact or update, as appropriate, legislation and enforce it to conserve the manatees and small cetaceans of the region.
4. Implement, in the case of a Range State for the respective species and subject to the availability of necessary resources, the provisions of the Action Plans attached as annexes to this Memorandum of Understanding as a basis to conserve populations of manatees and small cetaceans in the region.
5. Facilitate the rapid exchange of scientific, technical and legal information necessary to coordinate conservation measures, and cooperate with recognised experts and collaborating organisations to facilitate the work conducted in relation to the Action Plans.
6. Assess the implementation of this Memorandum of Understanding, including the Action Plans, at regular meetings to be attended by representatives of each of the signatories, and persons or organisations technically qualified in manatee and small cetacean conservation. Where appropriate, such meetings may be held back-to-back with other events, such as meetings of the Conference of Parties to CMS.
7. Designate a competent authority to serve as a focal point for communication between the Signatories and for implementing activities under this Memorandum of Understanding, and communicate the complete contact details of this authority (and any changes thereto) to the Secretariat.
8. Submit regularly to the Secretariat reports on implementation of this Memorandum of Understanding, the periodicity and format of which will be determined at the first Meeting of the Signatories. The Secretariat will transmit to each of the Signatories, non-signatories and any collaborating organisations all the reports received, together with an overview report that it will compile on the basis of the information at its disposal.
9. Agree at each Meeting of the Signatories:
 - (a) a budget to meet the expenses required for the operation of the secretariat and activities carried out under this Memorandum of Understanding and to assist the signatories in fulfilling their responsibilities; and
 - (b) mechanisms for the provision and use of the budget.

Further Understandings

10. This Memorandum of Understanding is an agreement under Article IV, paragraph 4, of CMS and is not legally binding.
11. The Action Plans in annex form an integral part of this Memorandum of Understanding.
12. Each Signatory, as appropriate, will implement the Memorandum of Understanding in the region with respect to:
 - (a) its nationals and vessels; and
 - (b) marine areas, inland waters and terrestrial areas under its jurisdiction.
13. This Memorandum of Understanding is open for signature by the Range States and will take effect with seven signatures. It will become effective for each subsequent Signatory on the date of signature.

14. This Memorandum of Understanding will remain open for signature indefinitely, and will remain in effect indefinitely subject to the right of any Signatory to terminate its participation by providing one year's written notice to all other Signatories.
15. This Memorandum of Understanding may be amended by consensus at a Meeting of the Signatories. The Action Plans may be amended by a two-thirds majority of the respective Range States at a Meeting of the Signatories. When appropriate, the Signatories will consider amending this Memorandum of Understanding to make it legally binding and to include other species.
16. Nothing in this Memorandum of Understanding precludes signatories from implementing stronger measures than those specified in the Action Plans, in accordance with international law.
17. The original texts of this Memorandum of Understanding in the English and French languages will be deposited with the CMS Secretariat, which will act as the depositary. In the event of any discrepancies, the English version will be considered definitive. Official translations of the text into Arabic, Portuguese and Spanish will be provided.
18. The CMS Secretariat will function as the Secretariat to this Memorandum of Understanding. It may use the services of any competent organisation to support the coordination of this Memorandum of Understanding. The Signatories will consider at their first meeting what further mechanisms are required to provide technical advice and secretariat services to support the implementation of this Memorandum of Understanding.

ACTION PLAN FOR THE CONSERVATION OF THE WEST AFRICAN MANATEE

(Annex I to the Memorandum of Understanding Concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia)

GOAL

TO SIGNIFICANTLY IMPROVE THE CONSERVATION STATUS OF THE WEST AFRICAN MANATEE ACROSS ITS RANGE THROUGH THE IMPLEMENTATION OF STRATEGIC POLICY, RESEARCH, CONSERVATION AND AWARENESS ACTIONS

Introduction

Manatees and Dugong

The West African Manatee (*Trichechus senegalensis*) is a member of the manatee or Trichechidae family, which belongs to the order Sirenia (or sea cows). Other members of the Sirenia order are the Dugong (*Dugong dugon*) and two other manatees, the Amazonian manatee (*Trichechus inunguis*) and the West Indian Manatee (*Trichechus manatus*). There are two subspecies of West Indian manatee: the Florida Manatee (*T. m. latirostris*) and the Antillean Manatee (*T. m. manatus*). Manatees and Dugong are aquatic herbivorous large mammals. Manatees inhabit coastal and inland waters on both sides of the Atlantic Ocean, whilst the Dugong is more strictly marine, found in coastal waters from the western Indian Ocean to Pacific waters of Asia and Australasia. Another sirenian, Steller's Sea Cow (*Hydrodamalis gigas*), lived in colder waters of the northern Pacific, but was hunted to extinction some 200 years ago. All three manatees and Dugong are classed as Vulnerable under the IUCN Red List of Threatened Species and in Appendix II of both the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

West African Manatee

The West African Manatee (*Trichechus senegalensis*) is a large aquatic mammal found in coastal and inland wetlands of Western Africa between Mauritania and Angola, and inland as far as Mali, Niger and Chad. It occurs in coastal and estuarine habitats, coastal lagoons and the lower reaches of most river systems from the Senegal River of Mauritania/Senegal to the Longa River in Angola. It has also found its way into the mid and upper reaches of several rivers in this region, notably the Senegal and Niger Rivers. In the Niger, it has reached far inland through Niger and Mali into northern Guinea, and eastwards into Cameroon and Chad along the Benue River.

The West African Manatee is the least studied of all sirenians, and its status across much of its range is only poorly known. However, despite a general lack of information, there is a growing body of evidence documenting the decline of the species, due mainly to habitat loss, accidental captures in fishing nets and hunting. There are currently no official regional mechanisms for the conservation of the West African Manatee, whilst national and local laws and customs across the many range states do not adequately cater for the species' conservation needs. Some efforts have been made by governments and civil society in the region to support the conservation of the species, but even in countries where it is protected by national law, enforcement is not widely applied.

A vulnerable and inoffensive species, the pressures on the manatee are manifold, and manatee populations across the range are impacted by capture in fishing nets, hunting, trading, modification of its habitat (including the cutting of mangroves) and through the impacts of development works, such as dams. The three main threats are:

- Loss of habitat, resulting from both climate change and human pressures;

- Incidental capture in fishing nets;
- Traditional hunting and commercial poaching activities.

These main threats are exacerbated by growing pressures on natural resources due largely to human population growth and resulting increased use and development of wetlands, along with the ever-expanding use of new technologies. Thus, fishing activities in the region are generally increasing, along with the demand for protein, whilst newer and more efficient nets replace more traditional methods.

Species Distribution and Movements

Distribution of the West African Manatee

The West African Manatee occurs in a wide range of wetlands and coastal ecosystems from the Senegal River at the Senegal-Mauritanian border to the Longa River in Angola, its presumed southern limit.¹ It lives in the middle and lower reaches of rivers that occur in this section of the Atlantic coast.² It is also found in adjacent seasonal floodplains, flooded forests, lakes and shallow coastal waters and around some offshore archipelagos and islands. It does not occur in deep marine waters however, and has not reached offshore island states, such as Cape Verde, though it is relatively numerous in the Bijagós Archipelago of Guinea-Bissau. Isolated populations occur a considerable distance upstream in many of the region's rivers, including the Niger, Bénoué, Oubangui and Chari. There are reported sightings as far as 2000km inland. Its preferred coastal habitat is undisturbed estuarine waters, coastal lagoons and the mouths of rivers, whilst inland it favours extensive wetland systems with lakes and floodplains.

Movements of the West African Manatee

The West African Manatee is widely distributed in western Africa, and historically occupied almost any wetland within its reach that provided appropriate food resources and other conditions necessary for its survival. Although it has been extirpated from some areas, it remains widely dispersed, and as such moves regularly between countries, along both rivers and coastlines. Some movements are regular and seasonal, but on the whole the manatee is more dispersed than strongly migratory. Within this wide range it indulges in some seasonal movements according to changes in water levels, salinity and access to food².

The main factors affecting movements in the Gambia River are currents, salinity variation and water level changes.³ Manatees are not able to live in some sections of rivers during the rainy season when currents or stream flows are too high. Thus, they are more frequently found in the lower reaches of the Gambia River during the rainy season and in middle sections of the river during the dry season. Manatees may move along the main channel of the Niger River between Mali, Niger and Nigeria, but such movements become impossible when river channels are blocked by dams. In Senegal, manatees certainly used to move regularly between Lac de Guiers and the Senegal River, favouring the lake during the rainy season⁴, but these movements were halted by construction of a dam.

Movements up and down rivers and between rivers and connected riverine wetlands, such as lakes and floodplains are reported from several range states, and are generally linked to rainfall seasons, river flows and availability of food. Manatees move up and down the

¹ Dodman, T., Ndiaye, M.D.D. & Sarr, K. (eds.) 2007. Conservation Strategy for the West African Manatee. *Wetlands International, Dakar, Senegal / UNEP-Abidjan Convention, Nairobi.*

² Powell J.A. 1996. The Distribution and Biology of the West African Manatee (*Trichechus senegalensis* Link,1795).United Nations Environmental Program, Regional Seas Program, Oceans and Coastal Areas, Nairobi, Kenya. 68p.

³ Powell, J.A. 1985. Manatees in the Gambia River Basin and potential impact of the Balingho antisalt dam with notes on Cote d'Ivoire, West Africa. Institute for Marine Studies, University of Washington. 57pp.

⁴ Bessac, H. & Villiers, A. 1948. Le lamantin du Sénégal. *La Nature* 3158:188-189.

Senegal River, and at times become trapped in dwindling tributary pools during the dry season⁵.

Manatees in the more static habitats of coastal lagoons tend to be more sedentary. Manatees studied in coastal lagoons of Côte d'Ivoire generally remained within a 10km range, though there were occasional movements between river systems². There do not appear to be regular seasonal coastal migrations between countries, but movements certainly occur.

An overview of the distribution and status by country is provided in Annex 1, which also highlights the main movements of manatees, especially between countries.

There is no evidence to support the occurrence of West African Manatee in Burkina Faso, although there are limited possibilities of their occurrence in tributaries of the Niger and Volta rivers. Overall, the manatee has a restricted distribution in Mauritania, Togo, Equatorial Guinea and Chad, whilst in most other range states it is fairly widespread in suitable wetland habitats, especially along the coast and in the lower reaches of the main rivers.

Species Status

Given its wide range across diverse coastal and inland wetland habitats, it is not surprising that the West African Manatee's conservation status is variable across this wide range. Its overall range does not seem to have diminished significantly since earlier assessments, although it appears to be absent from the Chari basin in Chad from where there are earlier reports⁶. However, in the majority of range states, manatees are in decline (see Annex 1 for details).

A key change in manatee status during the second half of the 20th Century is the fragmentation of populations through construction of dams and other developments. Whilst major dams such as the Akosombo in Ghana and Kainji in Nigeria may create new areas of suitable manatee habitat, they also lead to the genetic isolation of populations and prevent movement along traditional waterways. In many areas numbers have declined, and several localised sub-populations have been decimated. Such declines are largely attributed to hunting, incidental capture in fishing nets and habitat modifications. As with other aquatic mammals, it is very hard to estimate population size, and few attempts at quantifying populations in West Africa have been made. However, there is growing evidence to support a declining trend.

At the international level, the West African Manatee has been assigned the status of Vulnerable in the IUCN Red List of Threatened Species since 1986⁷. It was listed on Appendix II of the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) on 1st July 1975⁸, and on Appendix II of CMS at the 7th Conference of Parties (COP7) in September 2002.

At the national level, the West African Manatee is under some form of legal protection in all countries within its range¹, though the type of legislation varies between countries. However, in reality, there are limited resources to implement or enforce the associated laws and other legal instruments across most of its range. Some measures of protection are probably best afforded in the various protected areas in which the species lives.

⁵ Noé Conservation - Océanium. 2006. Sauvetage et suivi des lamantins (*Trichechus senegalensis*) au Sénégal. Contribution à la mise en oeuvre du Plan Sous-Régional d'Action pour la conservation et la gestion des populations des lamantins. Rapport sauvetage lamantin. In: PRCM. Regional Coastal and Marine Conservation Programme for West Africa. Annual Report 2006.

⁶ Salkind, J.H. 1998. Etude sur les lamantins au Tchad. In: Revue Scientifique du Tchad Vol. 5 No.1:41-49.

⁷ IUCN 2007. *2007 Red List of Threatened Species*. <www.iucnredlist.org>

⁸ UNEP-WCMC. 10 August, 2008. UNEP-WCMC Species Database: CITES-Listed Species

Values, Traditional Knowledge and Customs

The West African Manatee is valued widely in western Africa on an ecological, economic and cultural level, and as such is appreciated in many areas for diverse values. However, as some traditions become eroded and as threats increase along with modernisation, human population growth and habitat conversion, so there is a need for a wider appreciation of the manatee. The main recognised values are:

Ecological values

As a herbivore, the manatee contributes to the control of plant growth in rivers and other waterways, such as clearing channels of their overabundant vegetation⁹. It has also been proposed as a form of biological control against the proliferation of water hyacinth in West African rivers and streams, and this potential role has been considered in Niger¹⁰, although this aquatic weed does not appear to be one of the manatee's favoured food items in Africa. In some areas, there may be a positive relationship between the presence of manatees and an increase in fisheries productivity, due to the enrichment of water by manatee dung¹⁰. Certainly, manatees are established denizens of various different wetland types in western Africa, and no doubt form an integral part of the aquatic ecosystems in which they live.

Economic values

For a long time, the manatee has been valued economically for its meat and other products, including items used in traditional medicine. Manatee meat is widely prized in western Africa, and often carries strong cultural values as well. This has led in many areas to over-hunting, with populations declining across the range. The meat and oil are also subject to illegal trade, with trafficking taking place for instance between Chad and Cameroon. In Côte d'Ivoire, a freshly-killed manatee is valued at between 150,000 and 170,000 CFA francs (about €250). The meat is sold per portion of 400g at between 4500 and 5000 CFA francs (about €7.5).¹¹ In parts of Nigeria a male manatee may be exchanged for a 10 metre long boat and an outboard motor. In Guinea-Bissau a pair of manatees was sold to a Japanese aquarium in 1997, and they are even offered for sale on the internet from this country, as live animals. It is thus a highly valued species for local consumption and use and commercial trade.

Cultural values, traditional knowledge and customs

The West African Manatee is widely respected or venerated by many cultures and traditions across its range. It is an emblematic totem for the Mandé in Niger, whose name is even derived from the manatee (*ma* being 'manatee' and *ndé* meaning 'son of'). For the Diolas and Mandingos of Casamance, Senegal, it is forbidden to attack this inoffensive mammal. In some villages of the Congo, the manatee is known under the name 'Mami Watta' and is believed to be a spirit of the ancestors living in lagoons, its mythical appearance being that of a mermaid¹². The morphological resemblance between the woman and the female manatee raises veneration, respect and prohibition. Traditionally, the Peul believe that the ancestor of the manatee is a Peul woman, who transformed herself into a manatee while taking a bath in the river.⁴ In Guinea, the manatee marks the collective imagination of Baga and Soussou populations of the Dubreka and Sangareya region. In Togo, fishermen and hunters around Lake Togo place manatee skulls and other bones in special shrines which are visited before hunting. In some countries, manatee hunting is part of strong local rituals and traditional

⁹ Lowe, R.G. 1992. Book Review: Nigeria's Threatened Environment - a National Profile. NEST. *Niger. Flid.* 57:75-78.

¹⁰ Ciofolo, I. & Sadou, I. 1996. Le Lamantin du Niger (*Trichechus senegalensis*). Technical report 7 CACP/MIR/O82. Ministère des Finances et du Plan. Union Européenne. Genève. 48pp.

¹¹ Kouadio, A. 2007. Côte d'Ivoire / Cote d'Ivoire. In: Dodman, T., Ndiaye, M.D.D. & Sarr, K. (eds.) 2007. Conservation Strategy for the West African Manatee. Wetlands International, Dakar, Senegal / UNEP-Abidjan Convention, Nairobi.

¹² Akoi, K. 1994. Une enquête préliminaire sur les lamantins dans les eaux de la Réserve de la Conkouati au sud du Congo. *Canopée* 4:10.

practices. For example, in Niger, killing a manatee is an act of prestige among Sorkos populations.

Being a large animal, a manatee catch is invariably highly prized by local fishermen. The meat is widely considered as being delicious, whilst many other parts of the animal are used for consumption and traditional medicine, including the oil, skin and bones. In most areas of its distribution, the West African Manatee has a therapeutic mythical interest for various ethnic groups. In Mali, different parts of the manatee's body have different traditional medicinal uses, such as oil to treat anaemia and ear infections, bones to treat rheumatism and epilepsy and sexual organs to treat impotence and sterility.¹³ In some ethnic groups, the manatee is valued for its magical attributes known only to traditional healers.

Members of fishing communities especially know the manatees' habits quite well, including aspects such as seasonal occurrence, their need for freshwater and deeper pools as refuges, also their breeding behaviour, which may lead animals to congregate and relinquish caution. Fishing communities have used this knowledge to help them hunt manatees, and across the region there are specialist manatee hunters, who use learned and traditional experiences in their hunting techniques. Traditional hunting carried out for local consumption may have been largely sustainable, but nowadays manatees face many additional threats, whilst demand from urban centres provide incentives to trade meat and other products.

In some areas the manatee is perceived as a disruptive animal due to occasional accidents with pirogues and its habit of opportunistically feeding in flooded rice fields. Some riverine communities hold manatees responsible for the disappearance of catch from fishing nets. Such accounts can lead to resentment towards the manatee, and some local communities interviewed in Guinea wished that manatees would disappear from their waters.¹⁴

Overall, respect for the manatee is widespread across the region. Whilst in some areas, this respect prevents the intentional capture and consumption of manatees, in other areas the manatee is held as a symbolic and important catch, which may play a central role in local ceremonies or celebrations. The meat and body parts are widely considered as high value commodities. However, traditional cultures are becoming eroded in many areas, and respect for the manatee is in need of restoration.

Income-generating Opportunities through Tourism

Manatees have long been valued for their meat and other products, but can they also have economic value as living animals? Certainly, there is good potential for ecotourism, and many visitors to the region would be interested to see manatees. Across the Atlantic, the Florida Manatee, for instance, has proved to be highly popular and draws in international and resident visitors alike. A factor that poses an obstacle to ecotourism for the West African Manatee is the high turbidity of most wetlands within its range. The muddy rivers and estuaries of western Africa make manatee sightings extremely difficult, and even then it may only be possible to see the animal's nose or back when it surfaces occasionally to breathe. Further, as manatees are hunted widely in western Africa, they are also generally cautious and tend to avoid man if possible.

Nonetheless, there is potential for income-generation through tourism activities, and even occasional sightings might encourage visitors to spend time in particular areas. In reality, the manatee would be seen as a part of the overall attraction to an area, as most sites where they live will also support other wildlife and be considered as areas of beauty or interest. Sites such as the Sine-Saloum Delta in Senegal, Orango National Park in Guinea-Bissau, Fresco Lagoon in Côte d'Ivoire, Lake Pandam in Nigeria, Conkouati Lagoon in Congo, coastal lagoons of Gabon and favoured sites along the Cuanza River in Angola all hold promise for the development of manatee-based ecotourism initiatives.

¹³ Kone, B. & Diallo, M. 2002. Rapport d'étude sur le lamantin au Mali (*Trichechus senegalensis*). Initiatives du Bassin du Fleuve Niger. Wetlands International, Sévaré.

¹⁴ PRCM. 2005. Regional Coastal and Marine Conservation Programme for West Africa. Annual Report 2005.

Threats

Natural threats

The main natural threats to manatees are impacts from drought and climate change. There are numerous records of manatees becoming stranded in dwindling pools of tributaries of the Senegal River, notably in the Matam area. Manatees have been reported stranded in other lakes and wetlands of the region as well, particularly during extended drought years of the 1980s. Extensive sand deposition in tributaries of the Niger River can also lead to fragmentation and isolation of populations. In Sangaréyah in coastal Guinea, nine manatees beached themselves on banks after fluctuations in water level in 2004. Coastal manatee populations may also become isolated in lagoons, whose outlets to the sea close up. The current wave of climate change may well cause Sahelian wetlands to dry up and favoured coastal wetlands to disappear as water levels rise. However, the manatee is likely to survive such changes due to its adaptability and tolerance of different aquatic environments. Whilst not a threat *per se*, the West African Manatee is rendered vulnerable due to its low reproductive rate: its gestation period is thirteen months and a calf is only born every two to three years.

Habitat modifications, hydrological developments and genetic isolation

Manatees are capable of tolerating people, and have lived alongside man for thousands of years. However, some recent developments threaten manatees in western Africa, including large-scale conversion of wetlands to other land uses, usually for building or for agricultural developments. Pollution is another threat, from urban centres in the form of sewage, from agricultural run-off and notably from the oil industry. Some areas of the Niger Delta, for instance, can become heavily degraded by oil spills. Pollution in coastal lagoons can lead to eutrophication, which impacts all aquatic life. Destruction of mangroves is a threat in coastal areas, resulting in habitat loss and a reduction in food availability.

The construction of dams, barrages and other hydrological works is a specific threat to manatees, especially from structures that completely cross main river channels. There are numerous dams throughout western Africa. These include relatively small dams that control flow to/from lakes or irrigated areas, such as hydrological developments in the wetlands of the Senegal Delta and Lac de Guiers. There are anti-salt dams in coastal wetlands of Guinea-Bissau and other countries where rice is grown behind mangroves.¹⁵ There are also large dams along the main rivers of the region and their tributaries, such as the Kainji Dam in Nigeria, the Diama Dam in the lower Senegal River and the Selingué and Markala dams of the Niger River in Mali. Other planned dams in the Niger Basin include the Fomi in Guinea, and the Talo and Djenné on the Bani River in Mali. Dams and barrages can have both positive and negative impacts on manatees. Some reservoirs or lakes created behind dams can provide excellent habitat for manatees, such as Lake Volta in Ghana, formed by the Akosombo Dam. However, a key threat posed by such developments is genetic isolation of populations, as manatees lose the ability to move between different sections of rivers and their associated wetlands. This can lead to local extinctions as small isolated populations die out. The potential consequences of inbreeding are not well known.

Manatees may be killed in the turbines or control gates of dams, with reported cases from Kainji in Nigeria.² There are also reports of manatees caught in control sluice gates of dams, for instance in the Senegal Delta, whilst in Guinea, construction of the dam and ferry port at Fatala impacted manatee occurrence and movements in the Fatala estuary. The building of a dam in the Upper River Region Bank at Sami Wharf Town in The Gambia around 1993 is believed to have caused the death of many manatees.

¹⁵ Bos, D., Grigoras, I. & Ndiaye, A. 2006. Land cover and avian biodiversity in rice fields and mangroves of West Africa. A&W-report 824. Altenburg & Wymenga, ecological research, Veenwouden / Wetlands International, Dakar.

Hunting, capture and use of manatees

Across their range, wherever manatees are reasonably common, they tend to be hunted, sometimes by specialist manatee hunters, such as in the Bijagós Archipelago in Guinea-Bissau, or more opportunistic hunting by fishermen to supplement their main fishing activities. Harpoons are the most common weapons employed for hunting manatees, whilst in some areas platforms are built for the hunters, usually near popular feeding sites or close to freshwater seeps in salty / marine areas². A variety of traps are used in different countries, which are usually baited, as well as special manatee nets, large hooks and even poison.

In many countries, hunting practices have reduced the sizes of the populations. Even when carried out at low levels, hunting is a real threat to the animal given its low reproductive rate. Despite the progress made to discourage hunting in some countries (e.g. Cameroon), manatee products are still much coveted. Unregulated and unsustainable hunting is widely considered as the main threat to the survival of manatee populations across its range.

On rare occasions manatees are captured live for zoos or for wildlife collections. Captures have taken place recently in Guinea-Bissau and Côte d'Ivoire.

Incidental killing and capture

Incidental capture in fishing nets is one of the greatest threats faced by West African Manatee today. As fishing has increased and with the wider use of strong nets made of synthetic fibres, so the incidental capture of manatees has also increased. The practice of stringing nets right across the channels of rivers, streams and creeks, bank to bank, is particularly dangerous for manatees. In most cases captured manatees are consumed locally and treated as an additional bonus to the fish catch, although on occasion the catches are reported to appropriate authorities. Manatees are at times also caught in fishing weirs in Côte d'Ivoire.¹⁶ In Guinea, local communities of Dôbiret (Boffa area) reported five manatees caught in fishing nets in 2004, while in Sangaréyah, 34 had been captured.

In Senegal and Sierra Leone, manatees have been captured in fishing nets intended for sharks^{17,18}. They are also victims of industrial fishing where they end up in trawls or in monofilament nets.

There is no estimate of the effects of modern fishing materials on manatees, but incidental capture in fishing nets was the most frequently reported threat across its range in surveys carried out for preparation of the species conservation strategy.¹

¹⁶ Akoi, K. 1992. Education et sensibilisation des populations pour la conservation du lamantin ouest africain (*Trichechus senegalensis*) en Côte d'Ivoire. Wildlife Conservation Society, 31pp.

¹⁷ Cadenat, J. 1957. Observations de cétacés, siréniens, chéloniens et sauriens en 1955-1956. Bulletin de l'IFAN 19A:1358-1383.

¹⁸ Reeves, R.R., Tuboku-Metzger, D. & Kapindi, R.A. 1988. Distribution and exploitation of manatees in Sierra Leone. Oryx 22:75-84.

Themes, Objectives and Expected Outcomes

Objectives	Expected Outcomes
Theme 1: Policies and Legislation	
Objective 1: Improve policies and legislation for manatee protection, and strengthen their implementation	1.1: Effective policies are established for manatee conservation at regional and national levels, and mechanisms are in place for their implementation in all range states 1.2: Effective legislative frameworks are established for manatee conservation in all range states 1.3: Policies and legislation relating to manatee conservation are widely adopted and well known to stakeholders 1.4: Wide enforcement of legislation relating to manatee conservation
Theme 2: Applied Research, Monitoring and Networking	
Objective 2: Improve understanding of the West African Manatee and use information for its conservation management	2.1: Improved knowledge of the West African Manatee achieved through national and regional research initiatives 2.2: Successful management and conservation mechanisms are established for the West African Manatee 2.3: Establishment of a functioning regional manatee network strengthened through capacity development and exchange initiatives
Theme 3: Conservation, including Restoration and Safeguarding of Manatee Habitats	
Objective 3: Reduce pressures on the West African Manatee through the restoration and safeguarding of its habitats	3.1: Designation of sites providing key manatee habitats as sanctuaries and through national and regional initiatives 3.2: Rehabilitation of West African Manatee habitats 3.3: Reduced exploitation and capture of the West African Manatee
Theme 4: Awareness & Education / Information, Education & Communication	
Objective 4: Promote a wide appreciation of the West African Manatee and its ecological and cultural values through targeted communication, education and public awareness	4.1: Education and awareness materials relating to manatees, especially their values and threats, are developed and used widely 4.2: Attitudes and actions favourable to manatee conservation are encouraged through awareness campaigns 4.3: Manatee conservation is integrated into existing communication, education and awareness programmes

Themes and Priority Actions

Strategic Objective: Improve the conservation status of the West African Manatee across its range

Theme 1: Policies and Legislation		
Objective 1: Improve policies and legislation for manatee protection, and strengthen their implementation		
Expected Outcome 1.1: Effective policies are established for manatee conservation at regional and national levels, and mechanisms are in place for their implementation in all range states		
Actions	Lead	Priority
Conduct a critical review of existing regional and national policies related to manatee conservation.	CMS / States	Medium
Incorporate specific manatee conservation measures into relevant existing regional and national policies.	CMS / States	High
Establish strong regional policies for manatee conservation, and, where necessary, provide strategic support for strengthening of national policies.	CMS / States / NEPAD	High
Establish practical mechanisms that facilitate implementation of policies at the regional and national level.	CMS / States / NEPAD	High
List the West African Manatee on Appendix I of the CMS	Governments of Togo & Niger	Medium
Consider listing the West African Manatee on Appendix I of CITES	Range States	Medium
Expected Outcome 1.2: Effective legislative frameworks are established for manatee conservation in all range states		
Actions	Lead	Priority
Conduct a critical review of existing legislative instruments at national and local levels (e.g. codes of conduct).	States	Medium
Revise existing legislation and, where necessary, develop new specific legislative measures for manatee protection (e.g. incentives and sanctions).	States	High
Incorporate specific manatee conservation measures into relevant legislative instruments at the national and local level in cooperation with relevant stakeholders.	States / local communities	High

Expected Outcome 1.3: Policies and legislation relating to manatee conservation are widely adopted and well known to stakeholders

Actions	Lead	Priority
Sensitise decision makers, local authorities and local communities, about political and regulatory provisions for manatee conservation, and encourage their implementation.	NGOs / States	High
Develop capacity of agencies responsible for developing and implementing policies and legislation related to manatee conservation.	States	Medium
Build wide awareness of policies and legislation relevant to manatee conservation within all stakeholder groups.	States	High
Develop appropriate information and awareness tools to promote manatee conservation, especially for local use.	NGOs	Medium

Expected Outcome 1.4: Wide enforcement of legislation relating to manatee conservation

Actions	Lead	Priority
Promote application of legislation relating to manatee conservation at a regional level through implementation of international conventions (MEAs) and transboundary regulations.	CMS	High
Enforce legislation relating to manatee conservation at a national level, especially at unprotected sites.	States	Medium
Promote enforcement of legislation as widely as possible, especially in relation to manatee hunting and trade.	States/ CITES/CMS	High

Targets/Indicators:

Policy review completed and disseminated to all range states, and used to incorporate manatee conservation measures into existing policies.

Strong regional policies for manatee conservation established, as well as practical mechanisms for their implementation at national and regional level.

West African Manatee listed on Appendix I of CMS; report circulated with respect to CITES.

Legislative review completed and disseminated to all range states.

Manatee conservation measures incorporated into existing legislation.

Awareness raised in all range states about policies and legislation related to manatees.

Capacity of responsible agencies is strengthened to enable them to develop and/or implement policies and legislation related to manatee conservation.

Information tools developed and disseminated to all range states for raising awareness.

Measurable improvements in the implementation of relevant international conventions and transboundary regulations.

Reduction in manatee hunting and trade through wide enforcement of legislation.

Theme 2: Applied Research, Monitoring and Networking		
Objective 2: Improve understanding of the West African Manatee and use information for its conservation management		
<i>Expected Outcome 2.1: Improved knowledge of the West African Manatee achieved through national and regional research initiatives</i>		
Actions	Lead	Priority
Develop and harmonise methodologies and protocols for research and monitoring of the West African Manatee.	SOG	Medium
Conduct applied research programmes on the West African Manatee focusing on identified knowledge gaps, especially for enabling successful species conservation and management.	States & partners	High
Carry out regular monitoring of manatee populations, especially at key sites.	Site managers	High
Determine important areas for manatees, especially relating to movements, feeding and mating, and develop mechanisms to reduce manatee pressures in these areas.	States & partners	High
Establish, populate with data and maintain a scientific and socio-economic database on the West African Manatee.	NGOs / Wetlands International	Medium
<i>Expected Outcome 2.2: Successful management and conservation mechanisms are established for the West African Manatee</i>		
Actions	Lead	Priority
Establish site-based applied research and management programmes for the demonstration of appropriate conservation mechanisms.	States / NGOs	High
Evaluate and improve manatee conservation and management mechanisms at different levels (i.e. regional, catchment and community levels).	CMS / sub-regional orgs / NGOs	Medium
Identify key sites for manatee conservation, and develop proposals for their designation and management.	States / NGOs	High
Identify key habitat requirements for manatees in different areas, and establish mechanisms for preventing the destruction and degradation of these habitats.	States	High
Design and avail practical tools, such as monitoring manuals and standardised forms, for strengthening regional capacity in the monitoring and management of West African Manatee populations.	SOG / NGOs	Medium

Expected Outcome 2.3: Establishment of a functioning regional manatee network strengthened through capacity development and exchange initiatives

Actions	Lead	Priority
Establish a regional manatee network with active engagement of appropriate institutions and resource persons for information sharing and exchange at national, regional and international levels.	CMS / Abidjan Convention	High
Develop and run training and capacity building programmes for actors involved in the management and monitoring of the West African Manatee.	States & partners	High
Identify and resource a regional centre for provision of expert advice on the West African Manatee, capacity development and information exchange, with a regularly updated website, database and other facilities.	NGOs	Medium
Organise regional exchange specialist workshops on research outcomes.	NGOs	Medium
Develop and organise intra-state and community exchange visits.	NGOs	Medium

Targets/Indicators:

Methods and protocols for manatee research and monitoring developed and disseminated to all range states.

Applied manatee research and management programmes established and operational, and periodically evaluated.

West African Manatee trends established in all range states through regular monitoring.

A list of key sites and areas for the West African Manatee is drawn up, detailing mechanisms for manatee conservation at each site.

Scientific and socio-economic database on the West African Manatee established and operational.

Report produced and disseminated highlighting key habitat requirements for manatees and outlining habitat conservation measures.

Capacity strengthened in all range states for monitoring and managing manatee populations.

A regional network for the West African Manatee is established and operational.

Training and capacity building programmes for manatee network.

A regional centre and website for the West African Manatee established and operational.

Regional, intra-state and community exchange workshops and visits.

Theme 3: Conservation, including Restoration and Safeguarding of Manatee Habitats		
Objective 3: Reduce pressures on the West African Manatee through the restoration and safeguarding of its habitats		
<i>Expected Outcome 3.1: Designation of sites providing key manatee habitats as sanctuaries and through national and regional initiatives</i>		
Actions	Lead	Priority
Create networks of sanctuaries that provide excellent habitat and refuge areas for the West African Manatee (e.g. community based sanctuaries, Marine Protected Areas), both at the coast and in each river basin.	Regional institutions (e.g. NBA, OMVS)	High
Develop and implement conservation plans for the West African Manatee at an ecoregional level (e.g. PRCM, Niger Basin), national level and at specific key sites (e.g. protected areas).	States / regional institutions	Very high
<i>Expected Outcome 3.2: Rehabilitation of West African Manatee habitats</i>		
Actions	Lead	Priority
Develop and implement habitat restoration plans at degraded sites in important manatee zones, in collaboration with local stakeholders.	States & partners / local communities	High
Where feasible, rehabilitate obstructed waterways that currently prevent the free movement of manatees.	States	Medium
Promote management options at hydraulic works that enable the passage of manatees, at least seasonally.	River basin authorities / States	Medium
Ensure that key sites for manatees are protected from pollution.	States	High
Promote restoration of forests in basin headwaters in order to alleviate siltation of rivers and sand deposition.	River basin authorities / States	Medium
Develop long-term strategies to protect manatee habitats in relation to climatic changes.	CMS / CCD / NGOs	Medium
<i>Expected Outcome 3.3: Reduced exploitation and capture of the West African Manatee</i>		
Actions	Lead	Priority
Reinforce hunting control and surveillance measures.	States	High
Provide community-based incentive packages for communities that elect to refrain from manatee hunting.	Partners (NGOs)	High

In cooperation with local communities at sites where manatees are hunted, develop alternative income generation activities (e.g. livestock breeding, aquaculture, bee-keeping) and train hunters in such disciplines, to encourage a reduction in manatee hunting.	States / NGOs	High
Develop a regional ecotourism strategy for the West African Manatee and encourage its implementation at key sites.	NGOs / States	Medium
Encourage the use of manatee-friendly fishing techniques in order to reduce the incidental capture of manatees in fishing nets.	Site managers & basin authorities	High
In collaboration with local communities at key sites for manatees, establish no-fishing zones in particularly important areas, in order to reduce the incidental capture of manatees in fishing nets.	Site managers	High
<p>Targets/Indicators:</p> <p>Network of manatee sanctuaries created, including both inland and coastal sites.</p> <p>Number of regional, national and site conservation plans for West African Manatee developed and operational.</p> <p>Number of habitat restoration plans developed and underway at degraded sites, and blocked waterways freed.</p> <p>Manatee-sensitive procedures operational at a number of hydraulic works.</p> <p>Number of key manatee sites protected from pollution.</p> <p>A long-term strategy developed and disseminated that addresses manatees in relation to climate change and habitat restoration.</p> <p>Number of community-based income-generation projects established and operational.</p> <p>A regional ecotourism strategy developed, and implemented at a number of sites.</p> <p>Manatee hunting is reduced through community-based incentives.</p> <p>Measurable reduction in manatee capture in fishing nets; no-fishing zones designated.</p>		

Theme 4: Awareness & Education / Information, Education & Communication		
Objective 4: Promote a wide appreciation of the West African Manatee and its ecological and cultural values through targeted communication, education and public awareness		
<i>Expected Outcome 4.1: Education and awareness materials relating to manatees, especially their values and threats, are developed and used widely</i>		
Actions	Lead	Priority
Integrate manatee conservation into training / educational programmes of schools, universities and training centres.	NGOs / States	High
Develop training tools relating to manatees and wetlands for schools, universities and training centres.	NGOs	High

Provide community based organizations (CBOs) with resources and practical training and animation tools for communicating the threats to and values of manatees.	NGOs	Medium
Develop communication media (including web-based resources) relating to manatees and wetlands, especially for use by national and local press.	NGOs & States	High
Encourage wide availability of all media and materials in appropriate local languages, and disseminate them in all range states.	NGOs	Medium
Expected Outcome 4.2: Attitudes and actions favourable to manatee conservation are encouraged through awareness campaigns		
Actions	Lead	Priority
Collaborate with radio and television stations to broadcast information about manatees and wetlands.	NGOs & national institutions	Medium
Produce reports and documentaries about community efforts to conserve manatees.	NGOs/ site managers	Medium
Organise special campaigns (such as 'Save the manatee' days and manatee clubs) to build awareness about issues important for manatee conservation.	NGOs	Medium
Collaborate with the press to foster public awareness of the values and threats to manatees.	NGOs	Medium
Organise seminars and other events to build awareness of decision makers about manatees and their conservation needs.	NGOs & States	High
Promote traditional values and cultures favourable to manatee conservation through appropriate awareness activities and outputs.	NGOs	Medium
Expected Outcome 4.3: Manatee conservation is integrated into existing communication, education and awareness programmes		
Actions	Lead	Priority
Build manatee communication, education and public awareness (CEPA) components into management plans for sites and catchments where the West African Manatee occurs.	Site managers & river basin authorities	High
Integrate the challenges facing the manatee and related conservation solutions into existing environmental awareness programmes at the national and catchment / basin level (e.g. the Niger Basin Authority).	Site managers & river basin authorities	High

Develop mechanisms to integrate the manatee into national environmental education programmes.	NGOs	Medium
<p>Targets/Indicators:</p> <p>Training tools relating to manatees and wetlands developed and disseminated, and integrated into a number of training / educational programmes.</p> <p>Number of CBOs equipped for communicating manatee conservation information.</p> <p>Communication media developed and consulted widely.</p> <p>Manatee media and materials available in local languages and disseminated.</p> <p>Number of awareness activities across the region, including radio/TV broadcasting, documentaries, campaigns and press events.</p> <p>Number of seminars held for decision makers to improve awareness of manatee conservation needs.</p> <p>Traditional values and customs favouring manatees are well known.</p> <p>Manatee CEPA activities built into number of site management plans.</p> <p>Manatee conservation is built into regional awareness programmes of the NBA, OMVS, CSRP and other regional authorities.</p> <p>Manatee conservation built into national environmental education programmes in number of countries.</p>		

All actions shall be updated and amended regularly by consensus to reflect progress, new situations and newly initiated activities, and to meet evolving conservation needs.

Acronyms

ABE	Agence Beninoise pour l'Environnement	MPA	Marine Protected Area
CBO	Community Based Organisation	NBA	Niger Basin Authority
CCD	Convention to Combat Desertification	NEPAD	New Partnership for Africa's Development
CEPA	Communication, Education and Public Awareness	NGO	Non Governmental Organization
CFA	Communauté financière d'Afrique	OMVS	Organisation pour la Mise en Valeur du fleuve Sénégal
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	PRCM	Regional Coastal and Marine Conservation Programme for West Africa
CMS	Convention on the Conservation of Migratory Species of Wild Animals	SIDA	Swedish International Development Cooperation Agency
COP	Conference of Parties	SSG	Sirenia Specialist Group
CSRP	Sub-regional Fisheries Commission	UNEP	United Nations Environment Programme
DRC	Democratic Republic of Congo	WATCH	Western African Talks on Cetaceans and their Habitats
IUCN	World Conservation Union	WCMC	World Conservation Monitoring Centre
MEA	Multilateral Environmental Agreement		

APPENDIX

Overview of distribution, regional status and movements of the West African Manatee by range state^{19,20}

Country	Distribution / Occurrence	Status	International Movements
Mauritania	Senegal River and associated wetlands. Has been recorded in the Diawling National Park.	Limited to Senegal River basin. Dams and locks in the lower Senegal River basin present obstacles to free movement.	Moves regularly between Mauritania and Senegal within the transboundary Senegal River.
Senegal	Senegal River and associated wetlands, including the Djoudj National Park and the Lac de Guiers. Also in the Sine Saloum Delta, the upper Gambia River (Niokolo-Koba) and the Casamance River system.	Widespread in main rivers and in coastal wetlands. Has probably decreased in Senegal River, where movement is impacted by dams and other obstacles. Hunting occurs in the Sine Saloum.	Moves between Senegal and: (a) Mauritania within the Senegal River; (b) Mali along the Senegal and Falémé rivers; (c) The Gambia along the Gambia River and at the coast; (d) Guinea-Bissau between the Casamance and Baía de Varela; and (e) Guinea along the Gambia River.
The Gambia	Gambia River (lower and middle sections), including the Gambia River National Park, with records also from coastal areas, creeks and bolons, including Bao Bolon, Tanbi Wetland and Niimi National Parks and the Allahein River.	Fairly widespread in the Gambia River, where threats include habitat modifications, impacts of drought, hunting and accidental capture in fishing nets.	Moves regularly between The Gambia and Senegal along the Gambia River and between Saloum and Niimi at the north coast, also at the south coast along the Allahein River.
Guinea-Bissau	Probably most numerous in the Bijagós Archipelago, which includes Orango National Park. Also in most continental watercourses, including Rio Cacheu, Rio Mansoa, Rio Gêba, Rio Grande de Buba, Rio Tombali and Rio Cacine; and in coastal creeks and bolons.	Widespread throughout coastal and riverine wetlands, and common in some areas ²¹ . Main threats are accidental captures in fishing nets, hunting, drought, and the impacts of (anti-salt) dams.	Moves regularly between Guinea-Bissau and Senegal in the Baía de Varela area, and Guinea in the area of Cacine / Tristao. There are probably no international movements inland, where its distribution is rather sparse.

¹⁹ Dodman, T., Ndiaye, M.D.D. & Sarr, K. (eds.) 2007. *Conservation Strategy for the West African Manatee*. Wetlands International, Dakar, Senegal / UNEP-Abidjan Convention, Nairobi.

²⁰ Powell J.A. 1996. The Distribution and Biology of the West African Manatee (*Trichechus senegalensis* Link,1795). United Nations Environmental Program, Regional Seas Program, Oceans and Coastal Areas, Nairobi, Kenya. 68p.

²¹ Silva, M.A., Araújo, A., Djedjô, F., Gomes, L. & Monteiro, H. 1999. Plano Nacional de Conservação do Manatim Africano (*Trichechus senegalensis*) na Guiné-Bissau. UICN-Bissau, Guiné-Bissau / Instituto da Conservação da Natureza, Lisboa, Portugal.

Country	Distribution / Occurrence	Status	International Movements
Guinea	Occurs in coastal wetlands and lower reaches of the main rivers, such as Rio Componi and the Cogon River in the northwest and the Baie de Sangareyah. It also occurs in the headwaters of the Niger River, such as the Tinkisso, as well as the Gambia River.	May be fairly common in some coastal wetlands, but probably declining in the upper reaches of the Niger River basin. Considered a pest by some coastal rice farmers. Main threats are capture in fishing nets, hunting and changing habitats.	Inland, areas of movement are probably only along the Gambia River between Guinea and Senegal, and the Niger River between Guinea and Mali. In coastal areas, manatees move between Guinea and Guinea-Bissau around Iles Tristao; and Sierra Leone south of Benti and along the Scarcies / Kolenté.
Sierra Leone	Occurs in most river systems, including the Sierra Leone River, Great Scarcies, Little Scarcies, Bunce, Sherbro, Malene and Waanje. Also present in lakes Mape and Mabesi. Found especially at the coast and in river mouths.	Fairly widespread in the main river systems, especially at the coast. Threats include hunting for meat and other products (also as pests of rice crops), and capture in nets.	Migratory movements up and down rivers, moving upstream during rains. Probably moves into Guinea at the coast along the transboundary Great Scarcies River and also at the coast between Sierra Leone and Liberia (Mano River).
Liberia	Found in Lake Piso, Cestos-Sankwehn and the main rivers, including Lofa, Mano, Mesurado, Cavalla, St. Paul, Morro, St. John and Cestos. However, distribution up most rivers is limited by rapids, so the main distribution is in estuaries, coastal lagoons and lower reaches of the main rivers.	Appears to be reasonably common in the lower courses of the main rivers and in coastal wetlands. Main threats are accidental capture, hunting and habitat modifications, and maybe wounding from boat engines.	Manatees occur along the Cavalla River, which is transboundary between Liberia and Côte d'Ivoire. Its status at the western coastal border with Sierra Leone and in the transboundary Mano River is uncertain.
Côte d'Ivoire	Occurs along entire coastline, especially in coastal lagoons, and some distance up the main rivers, including Cavally, Sassandra, Bandema, Comoé, Bia and Tano. Key areas include the lagoon complexes of Aby-Tendo-Ehy and Ebrié-Comoé, east of Abidjan, and to the west, west Ebrié-Agneby, Tagba-Makey-Tadio-Niouzoumou and N'Gni-Fresco.	Widespread in coastal areas, especially in lagoons and lower reaches of rivers, but not reported from upper reaches. The main threats are hunting and capture in fishing nets. Other threats include habitat modifications and pollution.	Manatees move between Côte d'Ivoire and Liberia along the transboundary Cavally River. In the east, they move between Côte d'Ivoire and Ghana at the lower reaches of the Tano River and associated coastal wetlands (Aby-Tendo-Ehy). Migration between river systems has been recorded.

Country	Distribution / Occurrence	Status	International Movements
Ghana	Found in coastal lagoons, such as Abi and Ehy in the southwest, and in major tributaries of Lake Volta such as Asukawkaw, Dayi, Sene, Oti and Afram. Manatees in Lake Volta are cut off from the lower Volta by the Akosombo and Kpong dams.	Lake Volta provides good manatee habitat, as well as certain coastal lagoons and mangrove estuaries. The main threat is hunting for meat, whilst capture in nets, loss of habitat and pollution are also of relevance.	Manatees in the Abi and Ehy lagoons and the Tano estuary form a transboundary population with Côte d'Ivoire. The coastal border with Togo offers less suitable habitat for transboundary movements.
Togo	There are manatee records from coastal areas of Togo, such as Lake Togo, where it is locally well-known, the Gbega Channel and in the Mono River.	It is fairly rare in coastal wetlands, where main threats are hunting for meat and other products, habitat modification and accidental capture.	Manatees occur in the transboundary Mono River between Togo and Benin, and there may be some movements along the coast between Ghana, Togo and Benin.
Benin	Found in coastal lagoons such as Nokoué and lower reaches of rivers, including the Ouémé and Mono. Occurs some distance upriver, especially in the Ouémé. Also in the Niger River and tributaries in northern Benin, such as Mékrou and Alibori, especially in the W Parc.	Probably most numerous in the Ouémé River and in coastal lagoons. 125 animals estimated to occur in the country in the 1990s ²² . Hunted especially for meat and for various body parts, which are used notably in traditional medicine.	Manatees migrate up and down rivers, seemingly moving downriver after rains into lagoons when they are less saline. Moves between Benin and Togo along the Mono River, and presumably between southern Benin and Nigeria at Porto Novo. In the north, moves between Benin and Niger along the Niger River, and thence into Nigeria.
Nigeria	Occurs in the Benue, Niger and Cross Rivers and their associated wetlands, also in Lake Kainji on the River Niger. It is well known from Lake Pandam, a sanctuary off the Benue River, which serves as a dry season refuge. It also occurs throughout much of the Niger Delta, and is reported from Lagos Lagoon.	Although widespread in rivers, lakes and coastal wetlands, conservation status is variable. Main threats are habitat destruction, accidental capture in fishing nets, illegal and seasonal hunting, wounds from boats, reduction of water volume in the Niger and isolation due to dam construction.	Manatees migrate along the main rivers, though some are now blocked by dams. Movements along the Benue are seasonal. Manatees move between Nigeria and (a) Benin most likely within coastal lagoons and along the Niger River, (b) Niger along the Niger River, and (c) Cameroon within coastal wetlands, the upper Cross River and the Benue River (and maybe some tributaries).

²² ABE (Agence Béninoise pour l'Environnement). 1999. Répertoire des Indicateurs Environnementaux de Développement durable et de Compendium Statistique du Bénin. Cotonou, Bénin.

Country	Distribution / Occurrence	Status	International Movements
Mali	Found throughout the Niger River system, including the Bani, except where access is halted by dams. Most numerous probably in the Inner Niger Delta, with its many lakes such as Lake Débo. It also occurs in the Senegal River, especially in the Kayes region.	Widespread in wetlands of the Niger River, notably the Inner Niger Delta, but has decreased as a result of direct threats (hunting, fishing) and indirect threats (low flood levels, drought, sand deposition, habitat loss).	There are seasonal movements within the Niger River, where manatees move to deeper pools when water levels decrease. Moves along the Niger between Mali and Guinea (Kangaba – Siguiiri) and Mali and Niger (Labezanga). Also moves between Mali and Senegal along the Senegal River.
Niger	Occurs in the Niger River and associated wetlands and lower reaches of tributaries. There are about ten key sites along the length of the Niger River in Niger.	Main threats are hunting, sand deposition in channels, and isolation by dams, whilst intense harvesting of <i>bourgou</i> grasses can reduce food availability.	Seasonal movements occur, and during the dry season manatees seek out areas of deeper water ²³ . Moves along the Niger River between Niger and (a) Mali, (b) Benin, where also moves along Mékrou, and (c) Nigeria.
Cameroon	Found throughout the coastal zone in suitable wetlands, especially where there are extensive creeks and estuary habitat, such as Rio del Rey, Baie de Cameroun and the River Sanaga (below Edea). Manatees also occur in the Upper Cross River and in the Bénoué River of northern Cameroon, including Lake Lagdo.	Widespread in coastal wetlands, perhaps fairly common at sites such as Douala-Edea. Pollution and impacts on mangrove areas are threats at coastal sites. Manatees are hunted in some areas, mainly for their meat.	At the coast, moves between Cameroon and (a) Nigeria, where there are extensive wetlands, also along the Akpa Yafé River; (b) Equatorial Guinea, in the Ntem (Campo) area. Inland, moves between Cameroon and Nigeria in the Upper Cross River. Further north, moves between Nigeria and Cameroon along the Bénoué and into Chad along the Mayo Kébi.
Chad	Present in the Mayo Kébi River and associated wetlands, notably lakes Léré and Tréné, but appears to be absent from the Chari River Basin.	Limited distribution in southwest Chad, where the main threat is from hunting. Apparently extirpated from Chari Basin.	Moves between wetlands of the Mayo Kébi River, which includes movements between Chad and Cameroon.
Equatorial Guinea	There is a general lack of information, but manatees occur in suitable coastal wetlands, notably the Rio Muni estuary.	Limited to a few coastal wetlands, where main threats are hunting, fishing and habitat changes.	Movements likely between Equatorial Guinea and (a) Cameroon (Ntem-Campo area) and Gabon (Rio Muni estuary).

²³ Ciofalo, I. & Sadou, I. 1996. Le Lamantin du Niger (*Trichechus senegalensis*). Technical report 7 CACP/MIR/O82. Ministère des Finances et du Plan. Union Européenne. Genève. 48pp.

Country	Distribution / Occurrence	Status	International Movements
Gabon	Found throughout the coastal region of Gabon, including all lagoons; particularly common in N'gowe and N'dogo lagoons. Also in the Ogooué and Gabon Rivers and Mondah Bay.	Widespread in coastal wetlands and in all rivers. It is hunted primarily in the Ogooué River and associated lakes.	Movements are likely between Gabon and (a) Equatorial Guinea in the Muni estuary, and (b) Congo at the coast, (between Mayumba and Conkouati-Douli National Parks).
Congo	Occurs in most coastal wetlands, notably Conkouati-Douli and in the Kouliou River and associated wetlands, including Lake Nanga. Also in the lower Loémé River.	Reasonably common in coastal wetlands, but under pressure in several areas, notably from direct hunting, capture in fishing nets and disturbance.	Movements are likely between Congo and Gabon at the coast, and between Congo and the Angolan territory of Cabinda.
Democratic Republic of Congo	Found in the lower reaches of the Congo River, including the Parc Marin des Mangroves.	Restricted to the lower Congo River (and river mouth), where the main threats are habitat destruction, hunting and pollution.	Only international movements are between DRC and Angola, mainly at the mouth of the Congo River.
Angola	Occurs in lower reaches of rivers as far south as the Cuanza and Longa rivers, including Mussulo Bay. Status in Cabinda is uncertain. Occurs in the transboundary Congo River.	Rather sparsely distributed in Angola, except for the Cuanza River and the Congo River mouth. Main threats are hunting, stranding in small pools, habitat destruction and capture in fishing nets.	Moves between Angola and DRC along the lower part of the Congo River and the river mouth. Probably also moves between Cabinda and Congo in coastal wetlands.

ACTION PLAN FOR THE CONSERVATION OF SMALL CETACEANS OF WESTERN AFRICA AND MACARONESIA

(Annex II to the Memorandum of Understanding Concerning the Conservation
of the Manatee and Small Cetaceans of Western Africa and Macaronesia)

GOAL

***TO CONSERVE SMALL CETACEANS AND THEIR HABITATS IN THE AFRICAN EASTERN ATLANTIC
BASIN AND MACARONESIA BY REDUCING THE NEGATIVE EFFECTS OF HUMAN ACTIVITIES ON
CETACEANS***

Introduction

Small cetaceans are defined as all species of toothed whales (*Odontoceti*), with the exception of the sperm whale (*Physeter macrocephalus*). They are an important component of the marine biological diversity of the western African and Macaronesian region. Over one third of the world's known species of small cetaceans are found in this region.

The conservation situation of small cetaceans in western Africa is not well known, in contrast to other regions of the world. Scientists have gathered more knowledge about the distribution, ecology and status of cetaceans in such hostile marine environments as the polar seas than about cetaceans in African coastal waters (excluding South Africa and parts of Macaronesia). At the same time, the coastal environment in western Africa and Macaronesia is undergoing rapid changes, with expanding human populations and overexploitation of resources, giving rise to multiple threats to the long-term survival of vulnerable marine life forms, including marine mammals.²⁴

Small cetaceans around the world have suffered major declines from direct and indirect killing. Dolphins and porpoises may have only one calf every few years, and in some species, a number of adults are non-breeding members of the herd. Unrestricted hunting has the potential to endanger many species, and international controls are needed.²⁵

Small cetaceans are migratory mammals, represent a global natural heritage and are valued as a significant component of the world's biodiversity. Some indigenous people of the African countries of the range even hold them sacred. Therefore, the conservation of these species is a shared responsibility, and knowledge about small cetaceans must be improved. It is incumbent on us to maintain the diversity, range and healthy numbers of these small cetaceans and prevent their decline to endangered status or extinction. This imperative comes, at least in part, from the recognition that these animals play a role in the ecosystem within which they exist, and that this function must be maintained. Intact, healthy ecosystems benefit us all.

This Action Plan seeks to balance the interests of local communities and fishermen and the socio-economic development of the region, with the need to reduce or eliminate threats to cetaceans and their habitats in order to ensure their conservation.

Species distribution

The distribution of small cetaceans in the western African region is not well known, but over 30 different species are found, including the endemic Atlantic humpback dolphin (*Sousa*

²⁴ WAF CET-2 Report, 2003. Conservation of cetaceans in The Gambia and Senegal, 1999-2001, and the Status of the Atlantic humpback dolphin in West Africa

²⁵ Animal Welfare Institute, available at http://www.endangeredspecieshandbook.org/trade_dolphin.php

teuszii) and largely isolated populations of long-beaked common dolphins (*Delphinus capensis*) and harbour porpoises.^{26 27}

The coastline included covers the African eastern Atlantic, from Morocco in the north to South Africa (hereinafter referred to as western Africa), including Macaronesia. It features a wide variety of habitats, from rocky cliffs, broad sandy beaches and extensive seagrass beds in the north to dense mangrove forests, large deltas and estuaries farther south. Among some of its most striking features are the unique coral reefs of Cape Verde and the powerful coastal upwellings of cold water that characterise the Canary and Benguela Current systems and which support some of the most diverse and economically important fishing zones in the world.²⁸

Owing to insufficiency of information and research on small cetaceans in the western African region (although to a much lesser degree in the northern part of Macaronesia), no list of the species in the country coastline where it occurs is yet available.

Species status

Only 11 of the over 30 species of small cetaceans in western Africa and Macaronesia are listed in CMS Appendix II (November 2005)²⁹. Good information is available only on the general biology of the following six species: the harbour porpoise, the striped dolphin, the short-beaked common dolphin, the long- and short-finned pilot whales and the killer whale.

In the appendices of CITES (May 2007), only the Atlantic humpback dolphin (*Sousa teuszii*) is listed in Appendix I³⁰, all other species are listed in Appendix II.

In the 2006 IUCN Red List of Threatened Species, 10 species found in the region are categorised as Data Deficient, and the natural history of not a single western African population of small cetacean is known in any detail.

Traditional knowledge and customs

Small cetaceans are important in the cultures, legends, traditions and heritage of many people living in western Africa and Macaronesia. In some traditions, they are viewed as incarnations of humans. According to the mythology of the Ewe people (in Ghana, Benin and Togo), embodied life begins in the ocean. The evolution of intelligence, the expansion of consciousness and the development of finer bodies through the species reached its peak in the dolphin. Out of the dolphin comes the human being. Therefore, it is taboo for Ewe people to consume dolphin meat.³¹

²⁶ CMS ScC10, 2001. Annex I ("List of small cetacean species encountered in West African waters") to the Draft Action Plan for the Conservation of Small Cetaceans and Manatees of Tropical West Africa counts 24 small cetacean species.

²⁷ Species identified for the region are: *Kogia breviceps*, *Kogia sima*, *Ziphius cavirostris*, *Cephalorhynchus heavisidii*, *Sousa teuszii*, *Tursiops truncatus*, *Steno bredanensis*, *Stenella attenuata*, *S. longirostris*, *S. coeruleoalba*, *S. frontalis*, *S. clymene*, *Delphinus delphis*, *D. capensis*, *Lagenodelphis hosei*, *Grampus griseus*, *Peponocephala electra*, *Feresa attenuate*, *Pseudorca crassidens*, *Orcinus orca*, *Globicephala macrorhynchus*, *G. melas*, *Phocoena phocoena*, *Mesoplodon densirostris*, *M. bidens*, *M. europaeus*; and possibly *Mesoplodon spp.* (Culik, B.M. 2004. Review of Small Cetaceans. Distribution, Behaviour, Migration and Threats. Marine Mammal Action Plan/Regional Seas Reports and Studies no. 177; MacLeod, C. D. et al. 2006. Known and inferred distributions of beaked whale species (Cetacea: Ziphiidae). J. Cetacean Res. Manage. 7:271-286). – please add, including references: *Mesoplodon mirus*, *M. layardii*, *M. grayi*, *Lissodelphis peronii*, *Hyperoodon ampullatus*, *Lagenorhynchus obscurus*

²⁸ WWF – Conservation of Dolphins, available at

http://www.panda.org/about_wwf/where_we_work/africa/where/senegal/index.cfm?uProjectID=9F0781

²⁹ CMS Appendix II lists migratory species that have an unfavourable conservation status or would benefit significantly from international co-operation organised by tailored agreements

³⁰ CITES Appendix I list species that are the most endangered among CITES-listed animals and plants, which are threatened with extinction and CITES prohibits international trade in specimens of these species except when the purpose of the import is not commercial, for instance for scientific research. In these exceptional cases, trade may take place provided it is authorised.

³¹ CMS/ScC14/Doc.5 Van Waerebeek, 2007. Conservation Status of the Clymene Dolphin in West Africa; see also Dr. Datey Kumodzei, 2006. Finding a Knowledge Foundation for Africa, in: Inter-generational Forum on Endogenous Governance in West Africa, Governance, Conflict Dynamics, Peace and Security, Sahel and West Africa Club/OECD

Some cultures in Ghana associate the whale with some level of divinity. The people occasionally hold ceremonies for beached whales.³²

In Mauritania, Imraguen tribesmen still maintain their age-old life styles, which are based almost exclusively on harvesting the migratory fish populations from traditional sailing boats. The fishing techniques include a unique symbiotic collaboration with wild dolphins to catch schools of grey mullet.³³

Income-generating opportunities through tourism

There is no up-to-date, area-wide, comprehensive review of the status of tourism activities based on small cetaceans in the western African region does, again with the exception of northern Macaronesia. Studies in several African countries show that the industry has experienced strong annual growth within the last few years. According to the IFAW whale watching report (2001), the continental region with the fastest growing whale watching is Africa, with an average 53.0% annual increase between 1994 and 1998. Whale and dolphin watching is becoming an increasingly important component of tourism in Africa, with an estimated total economic value of almost US\$ 135 billion in 1998.³⁴

Threats

Small cetaceans in the western African region face a number of threats.

By-catch: Only a few catches of small cetaceans have been reported in the literature, but it is assumed that the true extent of fisheries-related mortality in all Range States is substantial. Hardly any fisheries in western Africa are known to have been surveyed for small cetacean by-catch. (Possibly, the findings of fishery observers are simply not being published or otherwise made public).

Limited monitoring of cetaceans landed by artisanal fisheries started in Ghana in about 1998. These fisheries, in which mostly large-mesh drift gillnets are used but also small-scale purse-seines, target several species of tuna and shark and many other species, including small cetaceans. Photographic evidence demonstrates that Clymene dolphins are taken frequently in these fisheries, especially in drift gillnets but possibly also in purse-seines.³⁵

The specimens recovered and well-documented steep increases in artisanal fishing indicate that incidental mortality may be the most important threat to some populations of small cetaceans. It is also one of the hardest threats to address, especially in view of the widespread poverty in coastal communities.³⁶

Direct take: Specific accounts of directed takes are rare, but they are believed to occur with some regularity. People in the fishing communities of Joal, Fadiouth, M'Bour and some others along Senegal's Petite Côte, for example, have long been known to harpoon dolphins; this practice continued until at least 1996.³⁷ Verbal information gathered in 1968 indicated that harpooning of dolphins was relatively frequent on board fishing boats working in the waters of Senegal, Mauritania and Rio de Oro.³⁸ More recent surveys in Ghana indicated that unregulated directed catches were on the increase (Ofori-Danson *et al.* 2003). Poverty is often the root cause of targeted hunting. Pressure from rapid human population growth and

³² Sacred Whales and Dolphins, available at <http://www.ancientspiral.com/dolphin1.htm> (07/09/2007)

³³ Mauritanian World Heritage Site Banc d'Arguin: The Imraguen guards of culture and nature, available at: http://www.afrol.com/Countries/Mauritania/backgr_Imraguen.htm (07/09/2007)

³⁴ E. Hoyt, 2001. Whale Watching 2001: Worldwide tourism numbers, expenditures, and expanding socioeconomic benefits. International Fund for Animal Welfare, Yarmouth Port, MA, USA, available at http://www.ifaw.org/ifaw/dfiles/file_106.pdf

³⁵ CMS/ScC14/Doc.5 Van Waerebeek, 2007. Conservation Status of the Clymene Dolphin in West Africa.

Ofori-Danson, P.K., Van Waerebeek, K. and Debrah, S. 2003. A survey for the conservation of dolphins in Ghanaian coastal waters. *Journal of the Ghana Science Association* 5(2): 45-54.

³⁶ CMS/ScC14/Doc.6 Van Waerebeek, 2007. Conservation Status of the Atlantic Humpback Dolphin. A Compromised Future?

³⁷ Ibid.

³⁸ CMS/ScC14/Doc.7 Van Waerebeek, 2007. Conservation Status of the Northwest African Population of the Harbour Porpoise

declining fish catches have turned dolphin and sea turtle meat into 'marine bushmeat' (Clapham and Van Waerebeek 2007), as an alternative.³⁹

Global environmental change: Climate change is potentially a severe threat to small cetaceans and their habitats in the region due to potential disruption of ocean circulation or changes in the amount and distribution of prey due to such changes as in salinity, temperature and acidity. Current climate change models include a wide range of scenarios.

Another aspect of global environmental change is the establishment of invasive alien species. Presently, little is known about the potential threat to cetaceans in open ocean systems such as the African Eastern Atlantic Basin and Macaronesia. In order to assess current and future effects, research should be undertaken and monitoring designed and conducted to detect any potentially detrimental changes at an early stage.

Tourism and other human interaction: Whale and dolphin watching is an economic opportunity of growing importance for many countries and territories in western Africa and Macaronesia. If managed according to responsible wildlife viewing practices, it should not pose a threat to populations of small cetaceans. If not managed properly, however, this form of tourism could compromise the fitness of individual animals and seriously affect specific localised populations that depend, for example, on sheltered, undisturbed resting locations or on spatially or temporally constrained prey concentrations. Recent studies show that in some circumstances whale and dolphin watching can affect the individuals and populations being watched.

Habitat degradation and trophic interactions with fisheries: All possible forms of coastal development known to occur in western Africa and Macaronesia, with the accompanying disturbance and degradation, could directly or indirectly affect small cetaceans. These include over-exploitation and destruction of mangroves, construction (harbours, residences, refineries, shipyards), aquaculture, oil and gas exploration and extraction, accidental spills of oil and other toxic substances, and increased shipping, tourism and effluents (domestic, agricultural, industrial).⁴⁰ Over-fishing of stocks and inadequate management and enforcement, often due to or exacerbated by economic difficulties, are serious, widespread problems in most countries of the African Eastern Atlantic Basin and Macaronesia. For instance, trawl surveys conducted in the Gulf of Guinea since 1977 and other regional stock assessments indicate that the fish biomass in near-shore and offshore waters has declined by at least 50%.⁴¹ Such dramatically reduced prey availability could have significant negative consequences on the average health of a population and its recruitment potential. Further, destruction of the sea-floor habitat and damage to bottom communities could have significant effects on certain prey species of small cetaceans.

Pollution: Little research has been conducted on contamination of small cetaceans in the western African region and Macaronesia with toxic chemicals or heavy metals; therefore, no specific information is available on such threats. Wildlife in coastal areas of many western African countries must nevertheless be considered threatened by pollution from industrial development. Mining activities can result in the transfer of dust or wastewater laden with a variety of trace elements, including heavy metals, which find their way into the marine food web. Small cetaceans, which are upper trophic level predators, will inevitably accumulate contaminants. The effects of these anthropogenic chemicals on the health of small cetaceans are still little understood.⁴²

³⁹ Clapham, P. and Van Waerebeek, K. 2007. Bushmeat, the sum of the parts. *Molecular Ecology* 16: 2607-2609.

⁴⁰ CMS/ScC14/Doc.6 Van Waerebeek, 2007. Conservation Status of the Atlantic Humpback Dolphin. A Compromised Future?

⁴¹ CMS/ScC14/Doc.5 Van Waerebeek, 2007. Conservation Status of the Clymene Dolphin in West Africa

⁴² CMS/ScC14/Doc.7 Van Waerebeek, 2007. Conservation Status of the Northwest African Population of the Harbour Porpoise

Ship strikes, acoustic and seismic disturbance, disease: The effect on populations of small cetaceans in the region of ship strikes and acoustic or seismic disturbance is largely unknown, although this has been considered a small threat. Ship strikes are, however, a concern in areas where there are fast vessels, dense traffic and high concentrations of small cetaceans. The epidemiology of infectious diseases and possible mass mortality, caused for instance by morbillivirus epizootics, have not been evaluated in western Africa and parts of Macaronesia.

Coordination with activities under the Memorandum of Understanding Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa

The MoU and Action Plan for Marine Turtles (MTAP) of western Africa are similar in geographic scope to the Small Cetaceans Action Plan (SCAP). Moreover, sea turtles and small cetaceans within the same habitats share many of the same conservation threats resulting from the same human activities (for example, by-catch in the same fisheries). Where practical, coordinating efforts and activities under the SCAP with similar efforts under the MTAP may improve the efficiency with which resources are used for research, education, policy-making or other conservation activities, to the benefit of taxa in the combined scope of the two MoUs.

Coordination with the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention)

There are opportunities for synergy with the Abidjan Convention, which covers most of the coastal states included in the Small Cetaceans Action Plan. The Convention addresses threats to the marine and coastal environment that also have a direct or indirect bearing on the habitats of small cetaceans. The cooperative mechanisms under the Abidjan Convention provide a useful framework with which the activities under the SCAP should be linked, where practical. Coordination and collaboration between these two initiatives could improve resource efficiency and result in more effective implementation of conservation activities affecting the species and habitats covered by both instruments.

Note: In the following tables, western Africa is understood to refer to the entire area covered under this Action Plan, i.e. the countries of the Atlantic Coast of Africa from Morocco to South Africa and the islands of Macaronesia.

Themes and Objectives

Theme	Objectives
1. National, Regional and International Collaboration and Cooperation	1.1: Promote and enhance national, regional and international coordination and collaboration for the conservation of small cetaceans in western Africa.
2. Legislation and Policy	2.1: Promote country-level legal, policy and institutional frameworks to support effective implementation of the SCAP and to supply mechanisms for enforcing the regulations. 2.2: Ensure good governance and involvement of local communities and civil society.
3. Ecosystem and Habitat Protection	3.1: Minimise the ecological impact of fisheries on small cetaceans by using the ecosystem approach to fisheries. 3.2: Identify key critical habitats, hotspots and migratory pathways that are candidates for improved conservation. 3.3: Support the designation and management of national and transboundary marine protected areas.
4. Threat Reduction	By-catch Reduction 4.1: To develop, test and disseminate effective mitigation techniques and gear that reduce by-catch to sustainable levels. 4.2: Where it is legal, limit any direct take to sustainable levels. 4.3: Promote reduction and ultimate elimination of chemical pollution or debris that affect small cetaceans. 4.4: Promote reduction and elimination of acoustic pollution. 4.5: Identify and mitigate any significant impact of tourism on small cetaceans. 4.6: Ensure all littoral developments and activities take into account effects on small cetacean populations and the environment. 4.7: Identify and mitigate other potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear and diseases. 4.8: Development and implementation of emergency measures for small cetaceans in exceptionally unfavourable or endangering conditions.

<p>5. Research and Monitoring</p>	<p>5.1: Compile overview of existing knowledge, national species lists, specimen collections, research centres and protected areas.</p> <p>5.2: Facilitate coordinated data collection to improve knowledge of abundance, distribution, migration routes, feeding and breeding areas and conservation status of small cetaceans.</p> <p>5.3: Improve understanding of the causes, scope and impacts of by-catch.</p> <p>5.4: Improve information received on stranding events in the western African Region.</p> <p>5.5: Identify significance of and priorities for toxicological and pathological research.</p> <p>5.6: Improve understanding of the effects of global environmental change on small cetaceans.</p> <p>5.7: Improve understanding of un-quantified but potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear, acoustic or seismic disturbance or disease.</p>
<p>6. Capacity Building</p>	<p>6.1: Increase in-country expertise and capacity.</p>
<p>7. Education and Awareness</p>	<p>7.1: Develop communication strategies, education programmes and protocols for key issues within the Small Cetacean Action Plan.</p> <p>7.2: Increase awareness, sensitivity and understanding of small cetaceans in the western African region.</p> <p>7.3: Promote awareness of the value of traditional knowledge and practices in the management of small cetaceans.</p>
<p>8. Tourism Based on Small Cetaceans</p>	<p>8.1: Ensure best practice management and maximise educational and economic values of tourism based on small cetaceans in the western African region.</p>

Themes and Priority Actions

Theme 1 – National, Regional and International Collaboration and Cooperation		
Objective 1.1: <i>Promote and enhance national, regional and international coordination and collaboration for the conservation of small cetaceans in western Africa.</i>		
Actions:	Lead	Priority
Encourage and support western African countries to remove internal cross-sectoral barriers to effectively implement the Small Cetaceans Action Plan (SCAP) at local and national level, fully engaging all sectors of government with responsibility for the environment, fisheries, development and extraction industries.	States	High
Facilitate western African countries' involvement and participation in relevant international meetings and initiatives for the conservation of small cetaceans.	States / UNEP	High
Organise a community of western African scientists, government officials, non-governmental organisations (NGOs) and other interested parties for the exchange of news and other information in the public domain on topics related to small cetaceans in the western African region.	States / NGOs	High
Promote cooperation and highlight achievements and experience gained in small cetacean conservation at regional and international conferences and fora.	States / NGOs	Medium
Ensure that small cetacean conservation needs are integrated into the AMCEN Environment Ministers regional framework.	AMCEN	Medium
Ensure that international bilateral or multilateral fishing access agreements incorporate all relevant aspects of small cetacean conservation and ensure the sustainability of critical fishery resources for western African countries.	States / RFMOs	Very High
Develop links with relevant regional organisations and processes (such as RFMOs, regional MEAs).	States / CMS	High
Develop links with relevant private sector organisations to reduce threats to small cetaceans caused by their activities.	States	High
Develop links with relevant non-governmental organisations.	States / NGOs	Medium
Create a regional network of experts and nominate national focal points for implementation of the SCAP.	States	Medium
Develop links and coordination with activities under the CMS MoU and Action Plan for Marine Turtles of the Atlantic Coast of Africa.	States / CMS	High
Improve integration of small cetacean conservation into national, regional and international initiatives, including national - NBSAP, NSDS; regional - RFMOs, NBSAP Working Group.	States	High
Promote the streamlining of conservation efforts through the international framework of the CMS.	CMS / States	Medium

Decide on a coordination mechanism for the SCAP, in collaboration with and supported by CMS and other relevant international institutions and organisations, to ensure its progress and implementation.	States / CMS	Very High
Identify funding sources and establish a mechanism for financial and other contributions from within and outside the region for implementation of this Action Plan.	States / CMS / NGOs	Very High
Targets/Indicators:		
Number of national, regional and international organisations, processes and frameworks incorporating the needs of western African small cetaceans.		
Number of national, regional and international partnerships created to support implementation of SCAP.		
Number of international fisheries access agreements and regulations for extraction industries specifically taking small cetacean conservation needs into account.		
Progress in development of and support to a regional CMS agreement.		

Theme 2 – Legislation and Policy

Objective 2.1: *Promote country-level legal, policy and institutional frameworks to support effective implementation of the SCAP and to supply mechanisms for enforcing the regulations.*

Actions:	Lead	Priority
Undertake review of existing legislation and policy and disseminate the final report, including: <ul style="list-style-type: none"> • Legislative inconsistencies and gaps within the Range States; • Country capacity to implement the Action Plan, the regional CMS Cetacean agreement and the CMS; • Country capacity to implement other relevant MEAs, such as CITES and CBD; • Habitat and species protection measures; • Declaration of marine protected areas; • Regulation of distant water and local fleets, including observer programme coverage to document effects of commercial fishing on small cetaceans. 	States	High
Cooperate with fishery authorities to draw up further policies, regulations and legislation for the effective conservation and management of small cetaceans, including measures to mitigate threats such as by-catch and ensure habitat protection: <ul style="list-style-type: none"> • Regulate possession, size and use of driftnets; • Prevent fishing gear from being discarded or left adrift at sea or in continental waters; • Require the immediate release of small cetaceans caught alive in commercial fisheries in conditions that assure their survival; 	States / Experts	High

<ul style="list-style-type: none"> • Monitor and maintain statistics for all ports on the landing, local trade and consumption of by-caught or stranded small cetaceans; • Require boat- and port-based fisheries observer schemes to actively seek data on by-caught small cetaceans; • Integrate fishermen in the monitoring system and require them to report cetacean by-catch; • Institute stricter standards for discharges at sea and in continental waters. <p>Include cetaceans in any impact assessment of coastal development plans. Several species use nearshore habitats, and for one (the endangered <i>Sousa teuszii</i>) these are the only habitat.</p> <p>Identify and respond to the legal and policy capacity needs of countries and territories.</p> <p>Harmonise and synergise with the Marine Turtle MoU.</p> <p>Assess the suitability of processes and outcomes used for national capacity self-assessments and other related biodiversity mechanisms (e.g. NBSAPs) to address legal and policy capacity needs for small cetacean conservation.</p>	<p>States / Experts</p> <p>States</p> <p>CMS</p> <p>States / Experts</p>	<p>Very High</p> <p>Medium</p> <p>High</p> <p>Medium</p>
<p>Targets/Indicators:</p> <p>Review of regional legislation and management completed and widely disseminated.</p> <p>Harmonisation of country and territory policy and legal instruments.</p> <p>Capacity strengthened to draft, manage and enforce country and territory legislation and policy.</p> <p>Number of NBSAPs or equivalent strategies integrating SCAP actions.</p>		
<p>Objective 2.2: <i>Ensure good governance and involvement of local communities and civil society.</i></p>		
<p>Actions:</p> <p>Make community involvement in conservation measures and their welfare a priority.</p> <p>Develop livelihood initiatives for vulnerable coastal communities that are compatible with cetacean conservation.</p> <p>Ensure transparent decision-making with accountability and community participation.</p> <p>Allow both national and international NGOs to support implementation of the SCAP.</p>	<p>Lead</p> <p>States / Communities</p> <p>States</p> <p>States</p> <p>NGOs</p>	<p>Priority</p> <p>High</p> <p>High</p> <p>High</p> <p>High</p>
<p>Targets/Indicators:</p> <p>Good governance at the national and regional level.</p>		

Theme 3 – Ecosystem and Habitat Protection		
Objective 3.1: <i>Minimise the ecological impact of fisheries on small cetaceans by using the ecosystem approach to fisheries.</i>		
Actions:	Lead	Priority
Convene a workshop on potential intergovernmental approaches to reducing effects of fisheries on small-cetacean populations of the African Eastern Atlantic Basin.	CMS / States	Very High
Promote responsible fishing practices, also taking into account food chain impacts and other fisheries interactions, and enforce existing regulations for sustainable ecosystem management.	States / Local authorities / RFMOs	Very High
Provide alternative livelihoods for fishing communities.	States / Local authorities / NGOs	Very High
Targets/Indicators:		
Workshop conducted and report available.		
Liaison with regional fishery bodies and NGOs.		
Objective 3.2: <i>Identify key critical habitats, hotspots and migratory pathways that are candidates for improved conservation.</i>		
Objective 3.3: <i>Support the designation and management of national and transboundary marine protected areas.</i>		
Actions:	Lead	Priority
Establish a working group on ecosystem and habitat protection that will identify critical habitats, hotspots and migratory pathways and environmental links (spatial and temporal).	Environment Agencies	Medium
Support the establishment of MPAs/MMAs covering important small cetacean habitats, where possible within the framework of appropriate national or international legal instruments. Priority should be given to support existing initiatives.	Environment Agencies	High
Support these MPAs in developing and implementing management plans and strategies.	Environment Agencies	High
Establish and manage networks of specially protected areas corresponding to the areas that serve as habitats and/or which provide important food resources for small cetaceans.	States / CMS	High
Facilitate the conservation and restoration of critical ecosystem components such as mangroves and estuaries.	Environment Agencies	Very High

Targets/Indicators:

Range States designate national and transboundary small cetacean MPAs.

Management strategies and plans developed, finalised and implemented for existing MPAs.

Working group identifies potential areas for designation and management as specially protected areas.

Theme 4 – Threat Reduction

Objective: By-catch Reduction

4.1: To develop, test and disseminate effective mitigation techniques and gear that reduce by-catch to sustainable levels.

Actions:	Lead	Priority
Design and implement adequate observer programmes to assess small-cetacean bycatch in relevant fisheries.	Fisheries authorities / Research institutions ⁴³	Very high
Establish by-catch quotas.	Fisheries authorities / Research institutions	Medium
Collaborate with RFMOs and share information on interactions between fisheries and marine mammals, as well as tactics for mitigation.	States	High
Request distant-water fishing nations to ensure sustainable and responsible fishing practices within the waters under the jurisdiction of the Range States and to maintain the health of the ocean and Range States' economies.	States	Very High
Require from commercial fisheries proof of a credible strategy to minimise adverse effects of fishing operations and its stringent implementation.	States	High
Foster partnerships between industry, research institutions, governments and coastal communities to develop and test mitigation techniques and gear to reduce by-catch and unsustainable takes.	States	Medium
Implement available by-catch reduction measures, such as alternative fishing gear and methods, and make use of excluder devices.	Fisheries Authorities	High

Targets/Indicators:

Reports of by-catch become available for technical evaluation.

Acceptance and use of successful by-catch mitigation techniques in the region.

System of collecting data on by-catch and depredation from fishing operations developed and used.

Reduction of by-catch of small cetaceans to sustainable levels.

⁴³ "Research institutions" as defined in this Action Plan include universities and other academic institutions.

Objective 4.2: Where it is legal, limit any direct take to sustainable levels.		
Actions:	Lead	Priority
Discourage targeted hunting of small cetaceans, and promote alternatives.	States / NGOs	Very High
Ensure that legal direct take of small cetaceans does not affect the viability of local populations. Enforce existing laws prohibiting or restricting direct take of small cetaceans.	States	Very High
Ensure that any live capture activities in the region do not affect the viability of local populations and comply with international regulations and agreements.	States / CITES / CMS	Very High
Targets/Indicators:		
Sustainable principles applied to any direct take, and international regulations and agreements applied to capture activities.		
Objective 4.3: Promote reduction and ultimate elimination of chemical pollution or debris that affect small cetaceans.		
Actions:	Lead	Priority
Undertake awareness campaigns and encourage improved waste management and reduction measures at community and national levels, including inland activities, to reduce non-biodegradable waste in the marine environment.	States / NGOs	Medium
Develop and promote the use of guidelines for eliminating the discard of waste for fishing operations.	Fisheries Authorities	Medium
Minimise chemical pollution of the marine environment. Promote best practice in accordance with global standards in relevant industries.	States / Abidjan Convention	High
Collect information on the potential impact of non-biodegradable waste and fishing gear on small cetaceans, including from stranding networks.	Research Institutions / NGOs	Medium
Prepare overview of particularly sensitive areas and map ocean areas according to pollution levels to identify hotspots.	Environment Agencies / Research Institutions	Medium
Ensure appropriate management of Particularly Sensitive Sea Areas (PSSAs).	States	High
Targets/Indicators:		
Effects of plastics, other debris and chemical pollution on small cetaceans in the western African Region documented and communicated to relevant bodies and conventions.		
Guidelines developed for proper waste management at all levels, including fishing boats.		
Map of pollution levels in the region produced, particularly sensitive areas identified.		

Objective 4.4: Promote reduction and elimination of acoustic pollution.		
Actions:	Lead	Priority
Minimise acoustic pollution of the marine environment.	States / IMO	High
Develop and promote the use of guidelines for ship-based operations, extraction industries, military and recreational activities in order to reducing the noise levels in the marine environment.	States / IMO	High
Collect information on the potential impact of noise on small cetaceans.	Research Institutions	High
Prepare overview of particularly sensitive areas and map ocean areas according to acoustic pollution levels to identify hotspots.	Research Institutions	Medium
Targets/Indicators:		
Effects of acoustic pollution on small cetaceans in the western African region documented and communicated to relevant bodies and conventions.		
Guidelines for noise reduction developed and communicated widely.		
Map of acoustic pollution levels in the region produced, particularly sensitive areas identified.		
Objective 4.5: Identify and mitigate any significant impact of tourism on small cetaceans.		
Actions:	Lead	Priority
Assess actual and potential impacts of tourism activities on the animals in e.g. <ul style="list-style-type: none"> • Whale and dolphin watching; • 'Swim-with' programmes; • Nautical sports; • Vessel interactions. 	States / Research Institutions / Companies / NGOs	Medium
In collaboration with the World Tourism Organisation, design management and mitigation strategies to reduce identified effects. Prevent negative effects of new developments.	WTO / States / NGOs	Medium
Targets/Indicators:		
Significant adverse effect of tourism on small cetaceans identified, threat mitigated, lessons learnt promoted and widely shared in the region.		
Monitoring programme for effects of small cetacean watching set up.		
Objective 4.6: Ensure all littoral developments and activities take into account effects on small cetacean populations and the environment.		
Actions:	Lead	Priority
Consider effects on small cetaceans in national legislative and Environmental Impact Assessment (EIA) processes.	States	Medium

<p>Identify particular localised areas and populations and set up appropriate monitoring and mitigation of any significant impacts.</p>	<p>States / Research Institutions / NGOs</p>	<p>Very High</p>
<p>Provide information on potential effects of coastal and offshore development on small cetaceans to decision-makers and the public.</p>	<p>Research Institutions / NGOs</p>	<p>High</p>
<p>Ensure best practice according to global standards in coastal and offshore activities, including those related to</p> <ul style="list-style-type: none"> • oil and gas exploration and exploitation • other extraction industries <p>to minimise disturbance of small cetaceans.</p>	<p>States / Stakeholders / NGOs</p>	<p>High</p>
<p>Targets/Indicators:</p> <p>Consideration of the specific effects on small cetaceans incorporated into national legislation and other processes such as EIAs. Information on potential effects made available.</p> <p>Monitoring of identified localised populations initiated.</p>		
<p>Objective 4.7: <i>Identify and mitigate other potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear and diseases.</i></p>		
<p>Actions:</p>	<p>Lead</p>	<p>Priority</p>
<p>Identify potential for significant or localised effects on small cetaceans.</p>	<p>States / Research Institutions</p>	<p>High</p>
<p>Develop management and mitigation strategies to reduce identified effect. Put appropriate legislation in place.</p>	<p>States / NGOs</p>	<p>Medium</p>
<p>Recover and eliminate lost or discarded fishing gear and other marine debris.</p>	<p>States / Stakeholders</p>	<p>High</p>
<p>Targets/Indicators:</p> <p>Consideration of the specific impacts on small cetaceans incorporated into national legislation and other processes such as EIAs. Information on potential effects made available.</p> <p>Monitoring of identified localised populations initiated.</p> <p>Lost fishing gear located and recovered.</p> <p>Marine debris regularly collected and disposed of.</p> <p>Regulations to minimise the risk of ship strikes in place and enforced.</p> <p>Other possible threats investigated.</p>		

Objective 4.8: Development and implementation of emergency measures for small cetaceans in exceptionally unfavourable or endangering conditions.

Actions:	Lead	Priority
Prepare, in collaboration with competent bodies, emergency plans to be implemented in case of threats to small cetaceans in western Africa, such as major pollution events, important mortality from by-catch, mass strandings or epizootics.	States / NGOs	High
Evaluate the capacity necessary for rescue or euthanasia operations for wounded or sick aquatic mammals and prepare a code of conduct governing the function of centres or laboratories involved in this work.	States	Medium
Establish trained rescue teams within the framework of existing institutions.	States	High
Collaborate closely with neighbouring countries in the event of an emergency requiring the adoption of immediate measures to avoid deterioration of the conservation status of one or more cetacean populations.	States / CMS	High
Targets/Indicators:		
Emergency plans prepared and mechanism for cooperation between neighbouring countries established.		
Capacity for rescue or euthanasia operations established, code of conduct prepared.		

Theme 5 – Research and Monitoring

This Action Plan promotes only non-lethal research techniques!

Objective 5.1: Compile overview of existing knowledge, national species lists, specimen collections, research centres and protected areas.

Actions:	Lead	Priority
Catalogue of specimens held in study collections and museums.	Research institutions	Medium
Create and maintain a directory of agencies, research groups and scientists working on cetaceans.	States / NGOs	Medium
Review protected areas that include habitat for small cetaceans.	Research Institutions	Medium
Review existing scientific literature, updated and validated at international conferences and workshops.	Scientists	Medium
Targets/Indicators:		
Relevant overviews compiled and maintained.		

Objective 5.2: Facilitate coordinated data collection to improve knowledge of abundance, distribution, migration routes, feeding and breeding areas and conservation status of small cetaceans.

Actions:	Lead	Priority
Identify priority topics and areas.	Experts / States	High
Standardise data collection methods and records and produce manuals on available techniques.	Research institutions / NGOs	High
Identify repositories of cetacean data relevant to the region and their description. Facilitate the establishment of national databases and accessible (website) metadata.	States / NGOs	Medium
Establish a web-accessible regional sighting database, including a catalogue of reference photos.	Research institutions / NGOs	Low
Make full use of opportunistic data collection and platforms of opportunity (e.g. strandings, by-catch, fisheries patrols and observers, aerial surveillance of IUU vessels, ferries, naval and merchant shipping, other marine research programmes).	States	High
Carry out non-lethal research on small cetacean species: <ul style="list-style-type: none"> • Develop or facilitate a dedicated research programme on dead, stranded, wounded or sick animals to determine the causes and population dynamics of cetaceans (especially mortality and morbidity); • Conduct dedicated surveys and genetic studies to estimate the abundance and trends of small cetacean species; • Determine the distribution, migration routes and breeding and feeding areas of the species in order to define areas where human activities might have to be regulated; • Increased use of remote sensing devices, especially acoustic. 	States / Research Institutions	Very High
Improve species inventories for all western African countries, with priority for those recognised as data deficient.	Research Institutions	Very High
Make available information on local fisheries, including effort, landings and gear type, as collected by national port-based and boat-based fisheries observer schemes, or implement such schemes where they do not exist.	Fisheries Authorities	High
Ensure cooperation between Range States and non-bureaucratic granting of research permits as well as permission for research vessels to move between territorial waters of neighbouring countries to monitor shared populations of small cetaceans.	States	High
Provide adequate species identification and related information resources (species guides) for all western African countries, e.g. IFAW and SPC identification kit for observer programme.	NGOs / Research institutions	High

Targets/Indicators:

Standardised data collection form.

Mechanism for reporting and recording of opportunistic data.

List of priority topics and areas for research agreed.

Species guides developed or adapted and disseminated.

Regular contact, e.g. by means of an email discussion group, among scientists and agencies involved in small cetacean conservation and other relevant issues.

Non-lethal research on abundance etc. carried out concerning small cetacean species targeted in subsistence hunting and live capture.

Relevant cetacean datasets identified, national databases established and metadata accessible.

Online regional sighting database established and operational.

Knowledge of distribution and species inventories for Range States improved in quality and by addition of further species.

Number of cruises to estimate abundance of small cetacean species completed.

Species information and ID kit assembled and distributed.

Incorporation of small cetacean expertise to conduct sightings and research activities in cruises dedicated to other purposes (e.g. rapid ecological assessments).

Increased reporting level for small cetaceans from opportunistic sightings.

At least one remote sensing device deployed in the region for at least six months.

Objective 5.3: Improve understanding of the causes, scope and impacts of by-catch.

Actions	Lead	Priority
Collect and analyse information gathered through both port-based and ship-based fisheries observer programmes, recording and reporting all by-catch of small cetaceans.	States / Fisheries Authorities	Very High
Ensure that independent scientists have access to all available information and are given permission to carry out parallel research to estimate nature and scale of by-catch.	States	High
Design a common approach for data collection, storage, processing and distribution.	States / Research Institutions	High
Identify fisheries, gear types and areas with particularly high by-catch levels.	States / Fisheries Authorities	High
Examine information on IUU fisheries to better understand potential impacts of IUU vessel by-catch on marine mammals.	States	High
Initiate analyses to assess population impacts of by-catch, using approaches used in other CMS agreements.	Research Institutions	High
Undertake routine monitoring to collect and disseminate information on the scale of by-catch from fishing operations, to better assess level of priority and possible mitigation measures.	States / NGOs	High

<p>Coordinate efforts under this objective with related efforts conducted under the activities of the MoU and Action Plan for Marine Turtles of the Atlantic Coast of Africa and with efforts to study by-catch of other taxa.</p>	<p>States / CMS</p>	<p>High</p>
<p>Targets/Indicators: Consistent and regular information on by-catch received from fisheries observers. Information stored, processed and made available for managers and researchers. Activities with high impacts identified.</p>		
<p>Objective 5.4: Improve information received on stranding events in the western African region.</p>		
<p>Actions:</p>	<p>Lead</p>	<p>Priority</p>
<p>Develop a web-accessible national or regional database on stranding, by-catch and collisions with ships with verification for species identification.</p>	<p>CMS / States</p>	<p>Medium</p>
<p>Collect community records and knowledge on small cetaceans and incorporate into the regional stranding database.</p>	<p>Research Institutions</p>	<p>Medium</p>
<p>Produce a regional stranding booklet or manual with species identification, forms and instructions in English, French, Portuguese and Spanish.</p>	<p>NGOs</p>	<p>Medium</p>
<p>Identify appropriate pathological laboratories for processing and storage of tissue samples for genetic work, establish post mortem and ID benchmark and encourage cooperation.</p>	<p>States</p>	<p>High</p>
<p>Provide basic stranding kits (for genetic samples) to Range States.</p>	<p>Research Institutions / NGOs</p>	<p>High</p>
<p>Request that necropsies of stranded small cetaceans include examination for plastic ingestion, accumulation of toxins and viral infections.</p>	<p>States / Research Institutions</p>	<p>Medium</p>
<p>Assist in funding for experts to attend national workshops in regions.</p>	<p>States / NGOs / CMS</p>	<p>Very High</p>
<p>Targets/Indicators: Stranding database and network established and operational. Stranding manual produced in common and local languages and distributed. Tissue archive and protocols for deposition and access established. Kits for genetic sampling distributed and used. Improved information available on stranding events in all western African countries.</p>		

Objective 5.5: Identify significance of and priorities for toxicological and pathological research.

Actions:	Lead	Priority
Investigate need and opportunities for toxicological and pathological research.	States / Research Institutions	High
Identify suitable laboratories for toxicological pathological analysis and facilitate exchange of information.	States / Research Institutions	High
Put expertise and results of research at disposal of the region.	States	High

Targets/Indicators:
Regional expertise in and laboratories for toxicological and pathological analysis identified.
Areas in the region where toxicological and pathological analysis would be a high priority identified.

Objective 5.6: Improve understanding of the effects of global environmental change on small cetaceans.

Actions	Lead	Priority
Facilitate the collation and dissemination of current knowledge on the effects of climate change on small cetaceans and their habitats.	States / NGOs	Medium
Carry out and support standardised, long-term research and monitoring in order to detect any changes in effects of climate change on the marine environment.	Research Institutions / NGOs	Medium
Incorporate climate change considerations into conservation plans, assessments and strategies, and implement, where appropriate, adaptation strategies aiming to increase the resilience of marine ecosystems and species to climate change.	States	High
Facilitate the collation and dissemination of current knowledge on the impacts of invasive alien species (IAS) on small cetaceans and their habitats.	States / NGOs	Medium
Carry out and support research and monitoring to detect any changes in effects of IAS on small cetaceans.	States / Research Institutions	Medium

Targets/Indicators:
Document or presentation on the effects of climate change on small cetaceans provided to Range States.
Document or presentation on the effects of IAS on small cetaceans provided to Range States.

Objective 5.7: Improve understanding of un-quantified but potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear, acoustic or seismic disturbance or disease.

Actions:	Lead	Priority
Encourage anecdotal and opportunistic recording and documentation of ship strikes, entanglement and disease.	States / NGOs	Very High
Identify significant sources of acoustic pollution that could affect small cetaceans in the region.	States / Research Institutions	High
Investigate scale and effects of competition between fisheries and small cetaceans.	States / Research Institutions	High
<p>Targets/Indicators:</p> <p>System in place and operational to collect anecdotal opportunistic data and to be able to respond if one becomes a significant threat at local, national or regional level.</p>		

Theme 6 – Capacity Building

Objective 6.1: Increase in-country expertise and capacity.

Actions:	Lead	Priority
Identify training needs and support proposal writing to implement the SCAP at the country and regional level, using existing processes such as national capacity self-assessments (NCSA).	States / NGOs	High
Develop training packages on common priorities (e.g. stranding, data recording, legislation, communication) based on regional priorities, and convene workshops based on identified needs.	States / NGOs	High
Support internship training on small cetacean research and management in existing research centres.	NGOs / IGOs	Very High
Build in-country capacity to prepare relevant regulation, legislation and policy.	States / NGOs	High
Conduct local and/or regional training workshops on necropsy including collection and storage of tissues, skeletal remains and analysis.	States / NGOs	High
Conduct training and verification of small cetacean sightings and reporting, and develop database. Enhance capacity for monitoring and evaluation.	States / NGOs	High
Support the acquisition of basic scientific knowledge to include study design, software, data analysis, report writing, public speaking.	States / NGOs	Medium
Conduct specialist regional workshops in abundance estimation techniques (sighting surveys), followed by field training cruise.	States / Research Institutions	High

Develop surveillance and enforcement capacity for implementation of national protection measures including wildlife watching tourism operations.	States / NGOs	Very High
Conduct training and certification programmes for wildlife watching operators and guides, which should be required to attain a whale and dolphin watching permit or license where applicable.	States / NGOs	High
<p>Targets/Indicators:</p> <p>Training needs identified and addressed.</p> <p>Training packages prepared and made available.</p> <p>Number of training workshops held, number of participants.</p> <p>Number of successfully completed internships in research centres.</p> <p>Increased technical capacity to obtain information and assist in the conservation of small cetaceans in the region.</p> <p>Improved capacity to develop and implement policies and legislation.</p> <p>Tour operator training and certification programmes are implemented in western African countries.</p>		

Theme 7 – Education and Awareness

Objective 7.1: *Develop communication strategies, education programmes and protocols for key issues within the Small Cetacean Action Plan.*

Actions:	Lead	Priority
Identify key issues for each Range State and support development of appropriate education strategies and programmes (e.g. known threats, species ID and status).	States / NGOs	High
Develop appropriate educational and awareness tools for different target audiences, ranging from children to decision-makers, at a regional and national level, including producing a template to facilitate production in local dialects.	States / NGOs	High
Transfer capacity to government agencies and community trainers to facilitate stewardship and to develop and deliver outreach programmes.	States / NGOs	High
Make scientific papers available in e-format, without cost, from one or more information centres or electronic libraries	Research Institutions / NGOs	High
<p>Targets/Indicators:</p> <p>Community and school education programmes implemented.</p> <p>Regionally relevant fact sheets in commonly used languages to inform governments and industry on key issues are produced (e.g. fisheries interactions, cultural practices, regulations, biology and natural history). Made available online and as printed material.</p> <p>Training programmes carried out in-country for key government agencies and identified local community stewards.</p>		

Awareness raising events organised, e.g. an annual international cetacean day.		
Objective 7.2: Increase awareness, sensitivity and understanding of small cetaceans in the western African region.		
Actions:	Lead	Priority
Use existing community networks and venues to deliver public presentations.	States / Communities / NGOs	High
Ensure community participation and support in all conservation projects and other relevant activities.	States / Communities / NGOs	Very High
Provide materials and information to local and national media (TV and radio stations, plays) to inform public.	NGOs	High
Disseminate educational materials targeted at recreational or private boaters to minimise the number of collisions.	NGOs	High
Integrate the concept of conservation programmes into school curricula.	States	Very High
Make targeted efforts to seek funding and in-kind support for educational and awareness-raising activities and material from private companies and foundations.	States / NGOs / CMS	High
Targets/Indicators:		
Sponsors to support educational activities and production of information material found.		
Education programmes implemented and presentations given in schools, education centres, village halls, museums and during annual festivities.		
Small cetaceans profiled through documentaries, interviews and regular spots in local media.		
Public sensitised to the needs of small cetaceans.		
ID guides, fact sheets and guidelines brochures distributed to boaters, marinas, yacht clubs, through government agencies and NGOs.		
Objective 7.3: Promote awareness of the value of traditional knowledge and practices in the management of small cetaceans.		
Actions:	Lead	Priority
Integrate traditional knowledge, tales, customs and practices into education and awareness-raising activities.	Local Authorities / NGOs	High
Encourage the use of informal or traditional methods of education in villages, e.g. using elders as resource people.	Local Authorities / NGOs	High

Document and incorporate traditional knowledge and other customary practices and values where relevant.	Local Authorities / NGOs	High
Ensure that appropriate cultural knowledge, practices and values underpin management measures.	Local Authorities / NGOs	High
Targets/Indicators:		
Informal or traditional methods of education used at community level.		
Traditional knowledge and other customary practices and values documented and incorporated where relevant.		
Relevant small cetacean traditional knowledge and cultural values used and acknowledged in scientific survey design and execution and formulation of national management policies.		

Theme 8 – Tourism Based on Small Cetaceans

To ensure that tourism based on small cetaceans is sustainable and conducted responsibly throughout the western African region.

Objective 8.1: *Ensure best practice management and maximise educational and economic values of tourism based on small cetaceans in the western African region.*

Actions:	Lead	Priority
Evaluate biological and infrastructure potential for commercial whale and dolphin watching through feasibility studies and establish or facilitate contacts with possible investors.	States / Stakeholders / Experts / NGOs	High
Develop a mechanism to document industry growth (building on western African tourism organisations/IFAW etc. work).	Private Sector / States / NGOs	Medium
Foster communication between key in-country stakeholders, in particular industry and government, to promote understanding and assist in management of the industry.	Stakeholders / NGOs	High
Monitor, document and support western African countries with whale and dolphin watching activities in addressing licensing, regulation and management issues.	Experts / NGOs	High
Ensure socio-economic benefits of whale and dolphin watching reach local communities.	States / Stakeholders	Very High
Develop region-wide whale and dolphin watching guidelines or a code of conduct. Adapt to local circumstances where needed.	States	High
Hold regional whale and dolphin watching workshops to promote best practice management and endorse regional guidelines. Promote low-impact activities, such as land-based cetacean watching.	States / NGOs	Medium
Support collaborative and best practice management of whale and dolphin watching activities involving all stakeholders.	Stakeholders / NGOs	Medium
Develop education kit for on-board operations at regional level.	NGOs	Medium

Develop programmes for small cetacean watching operators to collect useful data.	Research Institutions	High
<p>Targets/Indicators:</p> <p>Feasibility studies conducted in relevant Range States.</p> <p>Reporting system available to gather information on growth of the industry.</p> <p>Regional whale and dolphin watching report updated and disseminated to relevant management bodies, industry, media and community.</p> <p>Industry, Government and key stakeholders (NGOs, researchers, community groups) meet in-country as required to discuss issues and actions.</p> <p>Regional guidelines developed, accepted, published and utilised by Range States and industry.</p> <p>Stakeholders consulted in the development of management measures.</p> <p>Licensing schemes implemented in Range States where small cetacean-based tourism exists.</p> <p>Management agencies have on-water presence to monitor and enforce in-country licensing and permitting conditions.</p> <p>Tour boats in the region operate according to responsible wildlife viewing practices.</p> <p>Data sheet developed, disseminated to operators and reported annually in line with the coordination mechanism agreed for this Action Plan.</p> <p>Educational kits developed and disseminated in Range States.</p> <p>Community outreach programme conducted in-country targeted at local media, villages and community groups.</p>		

All actions shall be updated and amended regularly by consensus to reflect progress, new situations and newly initiated activities, and to meet evolving conservation needs.

Acronyms

AMCEN	African Ministerial Conference on the Environment	IUU	illegal, unreported and unregulated fishing
CBD	Convention on Biological Diversity	MEA	multilateral environmental agreements
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	MMA	marine managed area
CMS	Convention on the Conservation of Migratory Species of Wild Animals	MPA	marine protected area
EIA	environmental impact assessment	NBSAPs	national biodiversity strategies and action plans
IAS	invasive alien species	NCSA	national capacity self-assessment
IFAW	International Fund for Animal Welfare	NSDS	national sustainable development strategy
IGO	Intergovernmental Organisation	RFMO	regional fisheries management organisations
IMO	International Maritime Organisation	SCAP	Small Cetaceans Action Plan
IUCN	International Union for Conservation of Nature	WTO	World Tourism Organisation