



# Convention on the Conservation of Migratory Species of Wild Animals

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## **WESTERN AFRICAN TALKS ON CETACEANS AND THEIR HABITATS**

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### **Draft Action Plan for the Conservation of Small Cetaceans of the African Eastern Atlantic Basin**

### **Note by the Secretariat**

Resolutions 7.7 and 8.5 and Recommendation 7.3, adopted by the CMS Conference of the Parties at its seventh and eighth meetings in 2002 and 2005, respectively, support the development of a CMS instrument on small cetaceans and sirenians in West Africa as well as the implementation of action plans.

Following this guidance, the CMS Secretariat prepared this draft Action Plan for the Conservation of Small Cetaceans for discussion and possible adoption by the Range States. The document is the result of the compilation of relevant information from a variety of documents, including peer-reviewed scientific papers and grey literature. The Secretariat wishes however to acknowledge the following as the main sources for this compilation:

- Draft outline of an Action Plan for the Conservation of Small Cetaceans in West Africa (2001 ScC.10/Doc.10 and related documents)
- WWF Action Plan for the WAMER Region (Plan Sous - Régional d'Action pour la Conservation des Cétacés en Afrique de L'Ouest)
- Whale and Dolphin Action Plan for SPREP and the CMS Pacific Cetaceans MoU

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# Draft Action Plan for the Conservation of Small Cetaceans of the African Eastern Atlantic Basin



## Goal

***To Conserve Small Cetaceans and their Habitats in the African Eastern Atlantic Basin by Reducing the Negative Impact of Human Activities on Cetaceans***

## Introduction

Small Cetaceans are an important component of the marine biological diversity of the Western African Region. Over one third of the world's known species of small cetaceans are found in the region.

In contrast to other regions in the world, the conservation situation of small cetaceans in Western Africa is not well known. Cetacean 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). At the same time, the coastal environment in Western Africa 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.<sup>1</sup>

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 for 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.<sup>2</sup>

Small cetaceans as migratory mammals represent a global natural heritage and are valued as a significant component of the world's biodiversity. Some indigenous people of the concerned African countries even hold them as sacred. Therefore the conservation of these species is a responsibility that needs to be shared, and knowledge on 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 needs to be maintained. Intact, healthy ecosystems benefit us all.

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

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<sup>1</sup> 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

<sup>2</sup> Animal Welfare Institute, available at [http://www.endangeredspecieshandbook.org/trade\\_dolphin.php](http://www.endangeredspecieshandbook.org/trade_dolphin.php)

## Species Distribution

The distribution of small cetaceans in the Western African Region is poorly known, but 26 or more different species may be found there, among them for example the endemic Atlantic humpback dolphin (*Sousa teuszii*) and largely isolated populations of long-beaked common dolphins (*Delphinus capensis*) and harbour porpoises.<sup>3 4</sup>

The coastline concerned covers Western Africa from Morocco in the north to South Africa, including the offshore Atlantic islands. It features a wide variety of habitats, from rocky cliffs, broad sandy beaches and extensive seagrass beds in the north to dense mangrove forests and 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.<sup>5</sup>

Due to a lack of information and research on small cetaceans in the Western African Region, no list is yet available which orders each species to the country-specific coastline where it occurs.

## Species Status

Only eleven of the 26 or more species of small cetaceans in Western Africa are listed in CMS Appendix II (November 2005)<sup>6</sup>. There is good knowledge only about 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.

Regarding the Appendices of CITES (May 2007), only the Atlantic humpback dolphin (*Sousa teuszii*) is listed in Appendix I<sup>7</sup>, all other species are listed in Appendix II.

In the 2006 IUCN Red List of Threatened Species, ten 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. In some traditions, they are viewed as incarnations of humans. According to the mythology of Ewe people (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 a taboo for Ewe people to consume dolphin meat.<sup>8</sup>

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<sup>3</sup> 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.

<sup>4</sup> 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).

<sup>5</sup> WWF – Conservation of Dolphins, available at

[http://www.panda.org/about\\_wwf/where\\_we\\_work/africa/where/senegal/index.cfm?uProjectID=9F0781](http://www.panda.org/about_wwf/where_we_work/africa/where/senegal/index.cfm?uProjectID=9F0781)

<sup>6</sup> CMS Appendix II lists migratory species that have an unfavourable conservation status or would benefit significantly from international co-operation organised by tailored agreements

<sup>7</sup> 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.

<sup>8</sup> 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 some level of divinity with the whale. The people occasionally hold funerals for beached whales.<sup>9</sup>

In Mauritania, Imraguen tribesmen still maintain their age-old life styles, based almost exclusively on harvesting the migratory fish populations using traditional sailing boats. Fishing techniques include a unique symbiotic collaboration with wild dolphins to catch schools of grey mullet.<sup>10</sup>

### **Income-generating Opportunities through Tourism**

An up-to-date area-wide comprehensive review of the status of small cetacean tourism activities in the West African region does not exist. Examples of studies in several countries show that the industry experienced strong annual growth within the last few years. According to the IFAW whale watching report (2001) the fastest growing continental region for 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 development in Africa, with an estimated total economic value of almost US\$ 135,000,000 in the year 1998.<sup>11</sup>

### **Threats**

Small cetaceans in the Western African region face various threats, as follows:

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

Limited monitoring of cetaceans landed by artisanal fisheries started in Ghana circa 1998. These fisheries, employing mostly large-mesh drift gillnets but also small-scale purse-seines, target several species of tuna and shark amongst many other species, including small cetaceans. Photographic evidence demonstrated that clymene dolphins are taken frequently in these fisheries, especially in drift gillnets but possibly also in purse-seines.<sup>12</sup>

Based on specimens recovered and well-documented steep increases in artisanal fishing effort, incidental mortality may be the most important threat to some populations of small cetaceans. It is also one of the hardest threats to address.<sup>13</sup>

**Directed take:** Specific accounts of directed takes are scarce, but such takes are believed to occur with some regularity. People from 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.<sup>14</sup> Verbal information gathered in 1968 indicated that harpooning of dolphins was relatively frequent onboard fishing boats working in the waters of Senegal, Mauritania and Rio de Oro.<sup>15</sup> More recent surveys in Ghana indicated that unregulated directed catches were on the increase (Ofori-Danson *et al.* 2003). Pressure from rapid human population growth and declining fish catches have made dolphin and sea turtle meat, "marine bushmeat" (Clapham and Van Waerebeek 2007), a welcome alternative.<sup>16</sup>

<sup>9</sup> Sacred Whales and Dolphins, available at <http://www.ancientspiral.com/dolphin1.htm> (07/09/2007)

<sup>10</sup> 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](http://www.afrol.com/Countries/Mauritania/backgr_Imraguen.htm) (07/09/2007)

<sup>11</sup> 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](http://www.ifaw.org/ifaw/dfiles/file_106.pdf)

<sup>12</sup> 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.

<sup>13</sup> CMS/ScC14/Doc.6 Van Waerebeek, 2007. Conservation Status of the Atlantic Humpback Dolphin. A Compromised Future?  
<sup>14</sup> Ibid.

<sup>15</sup> CMS/ScC14/Doc.7 Van Waerebeek, 2007. Conservation Status of the Northwest African Population of the Harbour Porpoise

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

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

Another aspect of global environmental change is establishment of invasive alien species. Presently there is little knowledge on the potential threat posed to cetaceans in open ocean systems such as the African Eastern Atlantic Basin. In order to assess current or future impacts, research needs to be undertaken and monitoring must be designed and carried out with a view to detecting any potentially detrimental changes at an early stage.

**Tourism/human interaction:** Whale and dolphin watching is an economic opportunity of growing importance for many countries and territories in Western Africa. If managed according to responsible wildlife viewing practices it should not pose a threat to populations of small cetaceans. However, if not managed properly, this form of tourism could compromise the fitness of individual animals and potentially have serious impacts on 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 cause impacts upon the individuals and populations being watched.

**Habitat Degradation:** All possible forms of coastal development with accompanying disturbance and degradation known to occur in Western Africa could directly or indirectly affect small cetaceans. These include, but are not limited to, 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, increased shipping, tourism and effluents (domestic, agricultural, industrial).<sup>17</sup> Over-fishing of stocks and lack of management and enforcement are serious and widespread problems in most countries of western Africa. For instance, trawl surveys conducted in the Gulf of Guinea since 1977 and other regional stock assessments estimate that fish biomass in nearshore and offshore waters has declined by at least 50%.<sup>18</sup> Such dramatically reduced prey availability could have significant negative consequences on the average health of a population and its recruitment potential. Further, destruction of sea floor habitat and damage to bottom communities could have significant effects on certain prey species of small cetaceans.

**Pollution:** Little research has been initiated on toxic chemicals/heavy metal contamination in small cetaceans in the West African region and therefore no specific information is available on such threats. Wildlife in coastal areas of many Western African countries must nevertheless be considered as threatened by pollution from industrial developments. Mining activities also can result in the transfer of dust or waste water laden with a variety of trace elements, including heavy metals, which find their way into the marine food web. Small cetaceans as an upper trophic level predator will inevitably accumulate contaminants. The impacts of these anthropogenic chemicals to the health of small cetaceans are still little understood.<sup>19</sup>

**Ship strikes, acoustic/seismic disturbance, disease:** The population impact of ship strikes and acoustic/seismic disturbance on small cetaceans is largely unknown in the region, although it has been considered a low threat. Ship strikes however are of concern in areas with fast vessels, dense traffic and high small cetacean concentrations. The epidemiology of infectious diseases and possible mass mortality, such as caused by morbillivirus epizootics, have not been evaluated in western Africa.

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<sup>17</sup> CMS/ScC14/Doc.6 Van Waerebeek, 2007. Conservation Status of the Atlantic Humpback Dolphin. A Compromised Future?

<sup>18</sup> CMS/ScC14/Doc.5 Van Waerebeek, 2007. Conservation Status of the Clymene Dolphin in West Africa

<sup>19</sup> CMS/ScC14/Doc.7 Van Waerebeek, 2007. Conservation Status of the Northwest African Population of the Harbour Porpoise

## Themes and Objectives

Theme	Objectives
<b>1. National, Regional and International Collaboration and Cooperation</b>	1.1: <i>Promote and enhance national, regional and international coordination and collaboration for the conservation of small cetaceans in Western Africa.</i>
<b>2. Legislation and Policy</b>	2.1: <i>Develop country-level legal, policy and institutional frameworks to support the effective implementation of the SCAP.</i> 2.2: <i>Ensure involvement of civil society and good governance.</i>
<b>3. Ecosystem/Habitat Protection</b>	3.1: <i>Identify key critical habitats, hotspots and migratory pathways that are candidates for improved conservation.</i> 3.2: <i>Support the designation and management of national and transboundary Marine Protected Areas.</i>
<b>4. Threat Reduction</b>	4.1: <i>To develop, test and disseminate effective mitigation techniques that reduce by-catch.</i> 4.2: <i>To record the impact of fisheries on small cetaceans in the Western African Region.</i> 4.3: <i>Limit any direct take to sustainable levels.</i> 4.4: <i>Promote reduction of pollution having an impact on small cetaceans.</i> 4.5: <i>Identify and mitigate any significant impact of tourism on small cetaceans.</i> 4.6: <i>Ensure coastal and offshore development takes account of impacts on small cetacean populations.</i> 4.7: <i>Identify and mitigate other potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear, acoustic/seismic disturbance or diseases.</i> 4.8: <i>Development and implementation of emergency measures for small cetaceans when exceptionally unfavourable or endangering conditions occur.</i>
<b>5. Research and Monitoring</b>	5.1: <i>Compile overview of existing knowledge, national species lists, specimen collections, research centres and protected areas.</i> 5.2: <i>Facilitate coordinated data collection to improve knowledge of abundance, distribution, migration routes, feeding and breeding areas and conservation status of small cetaceans.</i>

	<p>5.3: <i>Improve understanding of the causes, levels and impacts of by-catch.</i></p> <p>5.4: <i>Improve information received on stranding events in the Western African Region.</i></p> <p>5.5: <i>Identify significance of and priorities for toxicological research.</i></p> <p>5.6: <i>Improve understanding of the impacts of global environmental change on small cetaceans.</i></p> <p>5.7: <i>Improve understanding of unknown but potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear, acoustic/seismic disturbance or disease.</i></p>
<p><b>6. Capacity Building</b></p>	<p>6.1: <i>Increase in-country expertise and capacity.</i></p>
<p><b>7. Education and Awareness</b></p>	<p>7.1: <i>Develop communication strategies, education programmes and protocols for key issues within the Small Cetacean Action Plan.</i></p> <p>7.2: <i>Increase awareness and understanding of small cetaceans in the Western African Region.</i></p> <p>7.3: <i>Promote awareness of the value of traditional knowledge and practices in the management of small cetaceans.</i></p>
<p><b>8. Tourism Based on Small Cetaceans</b></p>	<p>8.1: <i>Ensure best practice management of tourism based on small cetaceans in the Western African Region.</i></p> <p>8.2: <i>Maximise educational and economic values of tourism based on small cetaceans.</i></p>



**Themes and Priority Actions**

<b>Theme 1 – National, Regional and International Collaboration and Cooperation</b>		
<b>Objective 1.1: <i>Promote and enhance national, regional and international coordination and collaboration for the conservation of small cetaceans in Western Africa.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Encourage and support Western African countries to remove internal cross-sectoral barriers to effectively implement the Small Cetaceans Action Plan (SCAP) at the local and government level.</p> <p>Facilitate Western African countries’ involvement and participation in relevant international meetings and initiatives for the conservation of small cetaceans.</p> <p>Organise a community of Western African scientists, government officials, NGOs and other interested parties to exchange news and other public domain information on topics related to small cetaceans in the Western African Region.</p> <p>Promote cooperation and highlight achievements and lessons learnt in small cetacean conservation at regional and international conferences and fora.</p> <p>Ensure small cetacean conservation needs are integrated into the AMCEN Environment Ministers regional framework.</p> <p>Develop linkages with relevant regional organisations and processes (such as RFMOs, Regional MEAs).</p> <p>Develop linkages with relevant private sector organisations to reduce threats to small cetaceans caused by their activities.</p> <p>Create a regional network of experts and nominate national focal points for the implementation of the SCAP.</p> <p>Improve integration of small cetacean conservation into national, regional and international initiatives including: national - NBSAP, NSDS; regional - RFMOs, NBSAP Working Group.</p> <p>Promote the streamlining of conservation efforts through the international framework of the CMS.</p> <p>Decide on a coordination mechanism for this Small Cetaceans Action Plan (SCAP), in collaboration with and supported by CMS and other relevant international institutions and organisations, to ensure its progress and implementation.</p> <p>Identify funding sources and establish a mechanism for financial contributions from within the region and outside for the implementation of this Action Plan.</p>		
<b>Targets/Indicators:</b>		
<p>Number of national, regional and international organisations, processes and frameworks incorporating Western African small cetaceans’ needs.</p> <p>Number of national, regional and international partnerships created to support SCAP implementation.</p>		

Progress in development of and support to a regional CMS agreement.

**Theme 2 – Legislation and Policy**

**Objective 2.1: Develop country-level legal, policy and institutional frameworks to support the effective implementation of the SCAP.**

Actions:	Lead	Priority
<p>Undertake review of legislation and policy and disseminate the final report, including:</p> <ul style="list-style-type: none"> <li>• Legislative inconsistencies and gaps within the Range States</li> <li>• Country capacity to implement the Action Plan, the regional CMS Cetacean agreement and the CMS;</li> <li>• Country capacity to implement other relevant MEAs such as CITES and CBD;</li> <li>• Habitat and species protection measures;</li> <li>• Declaration of Marine Protected Areas;</li> <li>• Regulation of distant water and local fleets, including observer programme coverage to document commercial fishing impact on small cetaceans.</li> </ul> <p>Cooperate with Fishery Authorities to further develop 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:</p> <ul style="list-style-type: none"> <li>• Regulate possession, size and use of driftnets;</li> <li>• Prevent fishing gear from being discarded or left adrift at sea or in continental waters;</li> <li>• Require the immediate release of small cetaceans caught alive in commercial fisheries in conditions that assure their survival;</li> <li>• Monitor and maintain statistics for all ports on the landing, local trade and consumption of by-caught or stranded small cetaceans.</li> <li>• Require boat- and port-based fisheries observer schemes to actively seek data on by-caught small cetaceans;</li> <li>• Require fishermen to report cetacean by-catch;</li> <li>• Institute stricter standards for discharge at sea and in continental waters.</li> </ul> <p>Include cetaceans in any impact assessments of coastal development plans. Several species utilise nearshore habitat, and for one (the endangered <i>Sousa teuszii</i>) it is the only habitat.</p> <p>Identify and respond to country/territory legal and policy capacity needs.</p> <p>Assess processes and outcomes used for National Capacity Self-Assessments and other related biodiversity mechanisms, to address legal and policy capacity needs for small cetacean conservation.</p>		

<b>Targets/Indicators:</b>		
Regional legislative/management review completed and widely disseminated.		
Harmonisation of in-country/territory policy and legal instruments.		
Capacity strengthened to draft, manage and enforce legislation and policy in-country/territory.		
Number of NBSAPs or equivalent strategies integrating SCAP actions.		
<b>Objective 2.2: <i>Ensure involvement of civil society and good governance.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
Make community involvement in conservation measures a priority.		
Ensure transparent decision-making with accountability and community participation.		
Allow both national and international non-governmental organisations to support implementation of the SCAP.		

<b>Theme 3 – Ecosystem and Habitat Protection</b>		
<b>Objectives:</b>		
<b>3.1: <i>Identify key critical habitats, hotspots and migratory pathways that are candidates for improved conservation.</i></b>		
<b>3.2: <i>Support the designation and management of national and transboundary Marine Protected Areas.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
Establish a working group on ecosystem/habitat protection that will identify critical habitats, hotspots and migratory pathways and environmental linkages (spatial and temporal).		
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 the support of existing initiatives.		
Support these MPAs in developing and implementing management plans and strategies.		
Establish and manage networks of specially protected areas corresponding to the areas which serve as habitats and/or which provide important food resources for small cetaceans.		
Facilitate the conservation and restoration of critical ecosystem components such as mangroves or estuaries.		

<p><b>Targets/Indicators:</b></p> <p>Range States designate national and transboundary small cetacean marine protected areas.</p> <p>Management strategies/plans developed, finalised and implemented for existing MPAs.</p> <p>Working group identifies potential areas for designation and management as specially protected areas.</p>
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Theme 4 – Threat Reduction		
<p><b>Objective: By-Catch Reduction</b></p> <p><b>4.1: To develop, test and disseminate effective mitigation techniques that reduce by-catch.</b></p> <p><b>4.2: To record the impact of fisheries on small cetaceans in the Western African Region.</b></p>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Require both port-based and ship-based fisheries observers to record and report all by-catch of small cetaceans.</p> <p>Collaborate with RFMOs and share information on interactions between fisheries and marine mammals, as well as tactics for mitigation.</p> <p>Encourage distant-water fishing nations to support Range States in ensuring sustainable and responsible fishing practices and to maintain the health of the ocean and range states' economies.</p> <p>Require proof of a credible strategy to minimise adverse effects of fishing operations from commercial fisheries.</p> <p>Foster industry/research institutions/governments partnerships to develop and test mitigation techniques to reduce by-catch and unsustainable takes.</p> <p>Implement available by-catch reduction measures, such as alternative fishing gear and methods, and make use of excluder devices.</p>		
<p><b>Targets/Indicators:</b></p> <p>Reports of by-catch become available for technical evaluation.</p> <p>Acceptance and use of successful by-catch mitigation techniques in the region.</p> <p>System of collecting data from fishing operations on by-catch and depredation developed and used.</p> <p>Reduction of by-catch of small cetaceans.</p>		
<p><b>Objective 4.3: Limit any direct take to sustainable levels.</b></p>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
Discourage targeted hunting of small cetaceans and promote alternatives.		
Ensure direct take of small cetaceans does not affect viability of local		

populations.		
Ensure any live capture activities in the region do not affect viability of local populations and comply with international regulations and agreements.		
<p><b>Targets/Indicators:</b></p> <p>Sustainable principles applied to any direct take and international regulations/agreements applied to capture activities.</p>		
<p><b>Objective 4.4: <i>Promote reduction of pollution having an impact on small cetaceans.</i></b></p>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Encourage improved waste management at community and national levels to reduce plastics and other debris in the marine environment.</p> <p>Develop and promote the use of guidelines for fishing operations related to eliminating the discard of waste.</p> <p>Collect information on the potential impact of plastics and fishing gear on small cetaceans, including from stranding networks.</p> <p>Prepare overview of particularly sensitive areas and map ocean areas according to pollution levels to identify hotspots.</p>		
<p><b>Targets/Indicators:</b></p> <p>Impacts of plastics and other debris on small cetaceans in the Western African Region documented and communicated to relevant bodies and conventions.</p> <p>Guidelines developed for proper waste management at all levels including fishing boats.</p> <p>Map of pollution levels in the region produced, particularly sensitive areas identified.</p> <p>Impacts of chemical pollution on small cetaceans documented and communicated to relevant bodies and conventions.</p>		
<p><b>Objective 4.5: <i>Identify and mitigate any significant impact of tourism on small cetaceans.</i></b></p>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Assess actual and potential impacts of tourism activities on the animals in e.g.</p> <ul style="list-style-type: none"> <li>• Whale and dolphin watching</li> <li>• Swim-with programmes</li> <li>• Nautical sports</li> <li>• Vessel interactions.</li> </ul> <p>Develop management and mitigation strategies to reduce identified impact.</p>		

<p><b>Targets/Indicators:</b></p> <p>Significant adverse effect of tourism on small cetaceans identified, threat mitigated, lessons learnt promoted and widely shared in the region.</p> <p>Number of studies on impacts of small cetacean watching completed.</p>		
<p><b>Objective 4.6: <i>Ensure coastal and offshore development takes account of impacts on small cetacean populations.</i></b></p>		
<p><b>Actions:</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Consider impacts on small cetaceans in national legislative and Environmental Impact Assessment (EIA) processes.</p> <p>Identify particular localised areas and populations and develop appropriate monitoring and mitigation of any significant impacts.</p> <p>Provide information on potential impacts of coastal development to small cetaceans to decision makers and the public.</p> <p>Promote best practice in oil and gas exploration to minimise disturbance of small cetaceans.</p>		
<p><b>Targets/Indicators:</b></p> <p>Consideration of impacts on small cetaceans incorporated in national legislation and other processes such as EIA and potential impact information made available.</p> <p>Monitoring of identified localised populations initiated.</p>		
<p><b>Objective 4.7: <i>Identify and mitigate other potential threats to small cetaceans, including ship strikes, entanglement in lost fishing gear, acoustic/seismic disturbance or diseases.</i></b></p>		
<p><b>Actions:</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Identify potential for significant impact/localised effects on small cetaceans.</p> <p>Develop management and mitigation strategies to reduce identified impact.</p> <p>Recover and eliminate lost or discarded fishing nets.</p>		
<p><b>Targets/Indicators:</b></p> <p>Consideration of impacts on small cetaceans incorporated in national legislation and other processes such as EIA and potential impact information made available.</p> <p>Monitoring of identified localised populations initiated.</p> <p>Lost fishing gear located and recovered.</p>		

<b>Objective 4.8: <i>Development and implementation of emergency measures for small cetaceans when exceptionally unfavourable or endangering conditions occur.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>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.</p> <p>Evaluate capacities necessary for rescue or euthanasing operations for wounded or sick aquatic mammals and prepare a code of conduct governing the function of centres or laboratories involved in this work.</p> <p>Collaborate closely with neighbouring countries in the event of an emergency situation requiring the adoption of immediate measures to avoid deterioration of the conservation status of one or more cetacean populations.</p>		
<p><b>Targets/Indicators:</b></p> <p>Emergency plans prepared and mechanism for cooperation between neighbouring countries established.</p> <p>Capacities for rescue or euthanasing operations established, code of conduct prepared.</p>		

<b>Theme 5 – Research and Monitoring</b>		
This Action Plan promotes only non-lethal research techniques!		
<b>Objective 5.1: <i>Compile overview of existing knowledge, national species lists, specimen collections, research centres and protected areas.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Catalogue of specimens held in study collections and museums.</p> <p>Directory of agencies, research groups and scientists involved with cetaceans.</p> <p>Review of national parks and reserves that include habitat for small cetaceans.</p>		
<p><b>Targets/Indicators:</b></p> <p>Relevant overviews compiled and maintained.</p>		
<b>Objective 5.2: <i>Facilitate coordinated data collection to improve knowledge of abundance, distribution, migration routes, feeding and breeding areas and conservation status of small cetaceans.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Identify priority topics and areas.</p> <p>Standardise data collection methods and records.</p>		

<p>Establish web-accessible sighting database.</p> <p>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).</p> <p>Carry out non-lethal research concerning small cetacean species:</p> <ul style="list-style-type: none"> <li>• Develop or facilitate the set-up of a dedicated research programme on dead, stranded, wounded or sick animals to determine the causes and dynamics of cetacean mortality and morbidity;</li> <li>• Conduct dedicated surveys and genetic studies to estimate abundance and trends of small cetacean species;</li> <li>• Determine the distribution, migration routes and the breeding and feeding areas of the species in order to define areas where human activities may need to be regulated as a consequence;</li> <li>• Increased use of remote sensing devices, especially acoustic.</li> </ul> <p>Improve species inventories for all Western African countries, prioritising those recognised as data deficient.</p> <p>Make available the 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..</p> <p>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.</p> <p>Provide adequate species identification and related information resources for all Western African countries, e.g. IFAW and SPC identification kit for observer programme.</p> <p>Develop training schemes for local researchers.</p>		
<p><b>Targets/Indicators:</b></p> <p>Standardised data collection form.</p> <p>Mechanism for reporting and recording of opportunistic data.</p> <p>List of priority topics and areas for research agreed.</p> <p>Regular contact, e.g. by means of an email discussion group, among scientists and agencies involved in small cetacean conservation and relevant other issues.</p> <p>Non-lethal research and abundance etc. carried out concerning small cetacean species targeted in subsistence hunting and live capture.</p> <p>Online regional sighting database established and operational.</p> <p>Knowledge of distribution and species inventories for range states improved in quality and by addition of further species.</p> <p>Number of cruises to estimate abundance of small cetacean species completed.</p> <p>Species information and ID kit assembled and distributed.</p> <p>Incorporation of small cetacean expertise to conduct sightings and research activities in</p>		



<p>cruises dedicated to other purposes (e.g. Rapid Ecological Assessments).</p> <p>Increased reporting level for small cetaceans from opportunistic sightings.</p> <p>At least one remote sensing device deployed in the region for at least six months.</p>		
<p><b>Objective 5.3: <i>Improve understanding of the causes, levels and impacts of by-catch.</i></b></p>		
<p><b>Actions</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Analyse information gathered through both port-based and ship-based fisheries observer programmes, recording and reporting all by-catch of small cetaceans.</p> <p>Ensure 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.</p> <p>Design a common approach for data collection, storage, processing and distribution.</p> <p>Identify fisheries, gear types and areas with particularly high by-catch levels.</p> <p>Examine information on IUU fisheries to better understand potential impacts of IUU vessel by-catch on marine mammals.</p> <p>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.</p>		
<p><b>Targets/Indicators:</b></p> <p>Consistent and regular information on by-catch received from fisheries observers.</p> <p>Information stored, processed and made available for managers and researchers.</p> <p>Activities with high impacts identified.</p>		
<p><b>Objective 5.4: <i>Improve information received on stranding events in the Western African Region.</i></b></p>		
<p><b>Actions:</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Develop a web-accessible national/regional database on stranding, by-catch and collisions with ships with verification process for species identification.</p> <p>Collect community records and knowledge on small cetaceans and incorporate into the regional stranding database.</p> <p>Produce a regional booklet/stranding manual with species identification, forms and instructions in English and French.</p> <p>Identify appropriate laboratories for processing and storage of tissue samples for genetic work and encourage cooperation between them.</p> <p>Provide basic stranding kits (for genetic samples) to range states.</p>		

<p>Request that necropsies of stranded small cetaceans include examination for plastic ingestion and accumulation of toxins.</p> <p>Assist in funding for experts to attend national workshops in regions.</p>		
<p><b>Targets/Indicators:</b></p> <p>Stranding Database and network established and operational.</p> <p>Stranding manual produced in common and local languages and distributed.</p> <p>Tissue archive and protocols for deposition and access established.</p> <p>Kits for genetic sampling distributed and used.</p> <p>Improved information on strandings events in all Western African countries.</p>		
<p><b>Objective 5.5: <i>Identify significance of and priorities for toxicological research.</i></b></p>		
<p><b>Actions:</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Investigate need and opportunities for toxicological research.</p> <p>Identify suitable laboratories for toxicological analysis and facilitate exchange of information.</p>		
<p><b>Targets/Indicators:</b></p> <p>Regional expertise in, and laboratories for toxicological analysis identified.</p> <p>Areas in the region where toxicological analysis would be a high priority identified.</p>		
<p><b>Objective 5.6: <i>Improve understanding of the impacts of global environmental change on small cetaceans.</i></b></p>		
<p><b>Actions</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Facilitate the collation and dissemination of current knowledge on the impacts of climate change on marine mammals and their habitats.</p> <p>Carry out and support research and monitoring activities in order to detect any changes in impacts of climate change on the marine environment.</p> <p>Facilitate the collation and dissemination of current knowledge on the impacts of invasive alien species (IAS) on marine mammals and their habitats.</p> <p>Carry out and support research and monitoring activities in order to detect any changes in impacts of invasive alien species on small cetaceans.</p>		
<p><b>Targets/Indicators:</b></p> <p>Document/presentation on climate change impacts to small cetaceans provided to range states.</p> <p>Document/presentation on IAS impacts to small cetaceans provided to range states.</p>		

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

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

**Theme 6 – Capacity Building**

**Objective 6.1: *Increase in-country expertise and capacity.***

<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>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).</p> <p>Develop training packages on common priorities (e.g. stranding, data recording, legislation, communication etc.) based on regional priorities and convene workshops based on identified needs.</p> <p>Support internship training on small cetacean research and management in existing research centres.</p> <p>Build in-country capacity to prepare relevant regulation, legislation and policy.</p> <p>Conduct local and/or regional training workshops on necropsy including collection and storage of tissues, skeletal remains and analysis.</p> <p>Conduct training and verification of small cetacean sightings and reporting, and develop database.</p> <p>Conduct specialist regional workshops in abundance estimation techniques (sighting surveys) followed by field training cruise.</p> <p>Develop surveillance and enforcement capacity for implementation of national protection measures including wildlife watching tourism operations.</p> <p>Conduct industry training and certification programmes for wildlife watching operators and guides, which should be required to attain a whale and dolphin watching permit/license where applicable.</p>		

<p><b>Targets/Indicators:</b></p> <p>Training needs identified and addressed.</p> <p>Training packages prepared and made available.</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 nations.</p>
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<b>Theme 7 – Education and Awareness</b>		
<b>Objective 7.1: <i>Develop communication strategies, education programmes and protocols for key issues within the Small Cetacean Action Plan.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Identify key issues for each range state and support development of appropriate education strategies and programmes (e.g. known threats, species ID and status).</p> <p>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 dialect.</p> <p>Implement transfer of capacity to government agencies and community trainers to facilitate stewardship, and to develop and deliver outreach programmes.</p> <p>Make scientific papers available in e-format, without cost, from one or more information centres or electronic libraries</p>		
<p><b>Targets/Indicators:</b></p> <p>Community and school education programmes implemented.</p> <p>Regionally relevant facts sheets to inform governments and industry on key issues are produced (e.g. fisheries interactions, cultural practices, regulations, biology and natural history).</p> <p>Training programmes carried out in-country for key government agencies and identified local community stewards.</p>		
<b>Objective 7.2: <i>Increase awareness and understanding of small cetaceans in the Western African Region.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Utilise existing community networks and venues to deliver public presentations.</p> <p>Ensure community participation and support in all conservation projects and</p>		

other relevant activities.		
<p>Provide materials and information to community media (TV and radio stations) in-country to inform public.</p> <p>Disseminate educational materials targeted at recreational/private boaters to ensure minimum impact.</p> <p>Integrate elements of conservation programmes in school curricula</p>		
<p><b>Targets/Indicators:</b></p> <p>Education programmes implemented and presentations given in schools, education centres, village halls, museums and during annual festivities.</p> <p>Small cetaceans are profiled through documentaries, interviews and regular spots in local media.</p> <p>ID guides, fact sheets and guidelines brochures are distributed to boaters, marinas, yacht clubs, through government agencies and NGO's.</p>		
<p><b>Objective 7.3: Promote awareness of the value of traditional knowledge and practices in the management of small cetaceans.</b></p>		
<p><b>Actions:</b></p>	<p><b>Lead</b></p>	<p><b>Priority</b></p>
<p>Integrate traditional knowledge, stories and customs into education and awareness developed.</p> <p>Encourage the use of informal/traditional methods of education within villages, e.g. utilising elders as resource people.</p> <p>Document and incorporate traditional knowledge and other customary practices and values where relevant.</p> <p>Ensure appropriate cultural knowledge, practices, and values inform and underpin management measures.</p>		
<p><b>Targets/Indicators:</b></p> <p>Informal/traditional methods of education are employed at community level.</p> <p>Traditional knowledge and other customary practices and values documented and incorporated where relevant.</p> <p>Relevant small cetacean traditional knowledge and cultural values are utilised and acknowledged in scientific survey design and execution and formulation of national management policies.</p>		

<b>Theme 8 – Tourism Based on Small Cetaceans</b>		
To ensure that the development of tourism based on small cetaceans is sustainable and conducted responsibly throughout the Western African Region		
<b>Objective 8.1: <i>Ensure best practice management of tourism based on small cetaceans in the Western African Region.</i></b>		
<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Evaluate biological and infrastructure potential for commercial whale and dolphin watching.</p> <p>Develop region-wide whale and dolphin watching guidelines.</p> <p>Hold regional whale and dolphin watching workshops to promote best practice management and endorse regional guidelines.</p> <p>Support collaborative and best practice management of whale and dolphin watching activities involving all stakeholders.</p> <p>Develop a mechanism to document industry growth (building on Western African tourism organisations/IFAW etc. work).</p> <p>Foster communication between key in-country stakeholders, in particular industry and government, to promote understanding and assist in the management of the industry.</p> <p>Monitor, document and support Western African countries where whale and dolphin watching activities occur in addressing licensing, regulation and management issues.</p>		
<b>Targets/Indicators:</b>		
<p>Reporting system developed 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 (NGO's, 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 are consulted in the development of management measures.</p> <p>Licensing schemes are implemented in Range States where small cetacean-based tourism occurs.</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>		

**Objective 8.2: Maximise educational and economic values of tourism based on small cetaceans.**

<b>Actions:</b>	<b>Lead</b>	<b>Priority</b>
<p>Establish or facilitate contacts with possible investors.</p> <p>Develop programmes for small cetacean watching operators to collect useful data.</p> <p>Develop education kit for on-board operations at regional level.</p> <p>Ensure socio-economic benefits of whale and dolphin watching reach local communities.</p> <p>Promote certified eco-tourism.</p> <p>Assist countries to explore the potential for whale and dolphin watching through feasibility studies.</p>		
<p><b>Targets/Indicators:</b></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, community groups.</p> <p>Feasibility studies conducted in relevant Range States.</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	The African Ministerial Conference of the Environment	MMA	Marine Managed Area
EEZ	Exclusive Economic Zone	MPA	Marine Protected Area
EIA	Environmental Impact Assessment	NBSAPs	National Biodiversity Strategies and Action Plans
IFAW	International Fund for Animal Welfare	RFMO	Regional Fisheries Management Organisations
IUU	Illegal, Unreported and Unregulated fishing	SCAP	Small Cetacean Action Plan
NCSA	National Capacity Self-Assessment		