



Australian Government
**Department of the
Environment and Heritage**



Thai Government
**Department of Marine
and Coastal Resources**

Report of the Second Meeting on Dugong Conservation and Management

**15-18 May 2006
Eastin Hotel
Bangkok, Thailand**

Introduction

1. The Second Meeting on Dugong Conservation and Management under the auspices of the Convention on Migratory Species (CMS) was held at the Eastin Hotel, Bangkok Thailand from the 15th-18th May 2006. The meeting was co-organised and co-hosted by the Kingdom of Thailand and Government of Australia. An annotated Agenda of the meeting is provided as Annex 1. The list of participants is provided as Annex 2.

Welcoming Remarks

2. Mr. Douglas Hykle from the CMS Secretariat extended thanks to the Kingdom of Thailand and Government of Australia for organizing and preparing this second meeting on dugong conservation and management. Mr. Hykle welcomed the participation of a range of new countries in the process, including Mauritius, United Arab Emirates, Papua New Guinea, Solomon Islands, and New Caledonia and Vanuatu.

3. Dr. Maitree Duangsawasdi welcomed delegates on behalf of the Kingdom of Thailand and thanked the Government of Australia for its assistance. Dr. Duangsawasdi expressed his Government's desire to move forward with dugong conservation and see the development of the MoU.

4. Mr. Andrew McNee, welcomed delegates on behalf of the Government of Australia, expressed thanks to the Kingdom of Thailand and indicated that this second meeting provided an opportunity to renew efforts to progress cooperation on the conservation of dugong in a practical and meaningful way to achieve conservation aims.

5. The meeting elected Thailand (Ms. Kanjana Adulynukosol) and Australia (Mr. Andrew McNee) as Co-Chairs of the meeting.

Meeting Agenda

6. The Agenda for the meeting was adopted without amendment.

Review of Outcomes of First Meeting

7. Delegates reported on their respective countries' views on the reported outcomes of the First Meeting on Dugong Conservation and Management (Bangkok, 23-25 August 2005), which were circulated in September 2005.

8. The meeting extended thanks to the Kingdom of Thailand and Government of Australia for their efforts in organizing the second meeting to develop an MoU on Dugong Conservation and Management.

9. The meeting noted that the first meeting in August 2005 had led to a greater understanding of the threats facing the dugong throughout its range and the need for international and regional cooperation in addressing these threats.

10. The meeting strongly supported the continued development of an MoU and Conservation and Management Plan under the auspices of CMS. A lack of information on the distribution and abundance of dugongs throughout their range; the importance of identifying and protecting seagrass habitats; and a lack of capacity and resources including financial means to fund the actions, were all key issues identified in opening statements.

11. The meeting noted that most countries appear to already have a basic legislative framework for dugong conservation. Many countries have progressed to the next step of having national or regional action plans for dugong conservation and the strong connection between habitat protection and species conservation had already been identified. Countries are already working collaboratively on marine species conservation including marine mammals, turtles and in some parts dugongs.

12. The discussions on the CMS MoU are not isolated from the regional and international work already being undertaken, for example, by the Secretariat of the Pacific Regional Environment Programme (SPREP) and regional activities in the Western Indian Ocean.

13. The meeting considered the region for which the MoU on Dugong Conservation and Management would have effect and agreed on the following formulation:

Region means all of the waters, coastal and archipelagic States of the Indian Ocean, East Asia, and western Pacific Ocean as well as their adjacent seas, within the range of the dugong.

Draft MoU for Regional Cooperation

14. The meeting considered the revised draft text of the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range.

15. The meeting identified a range of critical issues that needed to be added to the MoU, including noting:

- Effective dugong conservation and management requires an integrated ecosystem approach.
- The specific impact of coastal trawling and driftnet fishing activities as examples of fishing equipment that can cause harm to dugongs.
- The importance of conservation and management of seagrass beds for dugong.

16. The meeting considered the issues around sustainable use and traditional harvest, in particular that some countries prohibit all take of dugong, while others permit some take for traditional and customary purposes. Those countries with national legislation permitting take of dugongs (Australia, Papua New Guinea, Solomon Islands, New Caledonia and Vanuatu) gave short explanations of their respective situations. The meeting recognized the need to take into account these circumstances.

Basic Principles

17. The meeting considered the issue of the legal status of the MoU. It was agreed that the MoU should explicitly state that the MoU was not legally binding.

18. The Delegate of France requested that the record reflect that under French law, France would be treating this MoU as a legally binding instrument as it fell under the auspices of CMS to which France is a Party.

19. The Delegate representing SPREP outlined its role as an intergovernmental organization charged with promoting cooperation, supporting protection and improvement of the Pacific Islands and Territory's environment, and ensuring its sustainable development. SPREP has 25 member countries. The 2003-2007 Dugong Action Plan that was developed by the member Countries and Territories and coordinated by SPREP to guide the conservation and management of dugongs.

20. Delegates agreed that the original text of the MoU should be deposited with the CMS Secretariat in the English, French, Arabic and Chinese languages, and agreed that the official working language of the MoU would be English (paragraph 19). The meeting encouraged potential signatories to the MoU to consider taking on the task of developing original texts in the agreed language.

21. The meeting concluded its consideration of the MoU and finalized the text which is attached as Annex 3. The meeting endorsed this text as the final draft proposal and recommended that it be forwarded to the relevant competent Government authorities in each Range State for consideration.

Conservation and Management Plan (CMP)

22. Delegates provided opening comments in relation to the draft CMP. All delegates stated their general support for the framework and focus of the CMP.

23. The meeting considered a revised framework for the CMP that focused on actions under the headings of Species Aspects; Habitat Aspects; Education and Awareness; Cooperative Aspects; and Crosscutting Issues.

24. In discussions on the CMP, the meeting highlighted the following important issues:

- That we still lack the information necessary to bridge the knowledge gaps and therefore need to improve our understanding of the species as a first step.
- The need to raise awareness of dugong conservation overall and not just limiting this to the threats facing the species.
- The need to ensure local communities are engaged in activities under the MoU.
- The need to rehabilitate areas of degraded seagrass and other dugong habitat as a matter of urgency, while also preventing future degradation of critical habitat sites.

25. The meeting reiterated that there was a critical need for seagrass habitat protection in dugong conservation and recognized that the CMP would need to have a strong focus on habitat protection and conservation.

26. The meeting concluded its consideration of the CMP and finalized the text. The meeting endorsed this text as the final draft proposal and recommended that it be forwarded, along with the MoU, to the relevant competent Government authorities in each range State for consideration. The CMP is attached as Annex 4.

27. The meeting urged timely consideration of the MoU and CMP and recommended that countries consider signing and adopting the MoU in the near future.

Discussion on proposed examples of specific actions that could be implemented to achieve the desired objectives

28. The meeting broke into four working groups to discuss examples of actions to achieve the conservation and management of dugong through the CMP. It was agreed that the examples would be incorporated as an annex to the CMP.

Next Steps for progressing regional cooperation

29. The meeting agreed the next steps to be undertaken to pursue the conservation of Dugongs and their habitats under an MoU.

30. The meeting recognized that there was a need to maintain momentum and urged all countries to continue inter-sessional cooperation to progress the conservation and management of dugong and their habitats.

31. SPREP highlighted that they would be undertaking a review of their Marine Mammal Action Plans, including the Dugong Action Plan 2003-2007, later in 2006.

32. The meeting agreed for the Co-Chairs of the meeting (Australia and Thailand) to work with the CMS Secretariat to explore potential options for Secretariat support for the MoU.

33. The Meeting agreed that the report and final proposal for the MoU and CMP would be circulated to concerned Governments for comment, together with a request for an official indication of the Governments' readiness to sign the instrument in the coming months. The texts would also be posted on the CMS website for ease of reference subject to the CMS Secretariat confirming that this is possible.

34. It was further agreed that, depending on the positive responses received, the Governments of Australia and Thailand would liaise with the CMS Secretariat to consider the convening of a meeting of interested Range States in 2007 for the purpose of formally signing the Memorandum of Understanding and discussing in more detail the implementation of its provisions.



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**ANNEX 1. Second Meeting on Dugong Conservation and Management
Annotated Agenda**

**15 –18 May 2006
Bangkok, Thailand**

Monday 15 May 2006

Schedule	Items
08.00-09.00	Registration
09.00-9.30	1. Welcoming remarks The meeting will be formally opened by the representative of the Secretariat of the Convention on Migratory Species (CMS), Mr Douglas Hykle. Dr Maitree Duangsawasdi (Thailand) will give a welcome address. An opening address will also be given by Mr Andrew McNee (Australia). Dr Maitree will invite the meeting to appoint co-Chairs, who will then also deliver opening statements.
09.30-09.40	2. Adopting the draft provisional agenda The meeting will be asked to review and, if satisfied, adopt the provisional agenda.
9.40-10.30	3. Workshop Mechanics The meeting will consider the format for discussions
10.30-11.00	Morning tea
11.00-12.30	4. Theme 1 – Review of outcomes of First Meeting Delegates will be asked to report on their respective State's views on the outcomes of the First Meeting
12.30-2.00	Lunch
2.00-3.30	Theme 1 – Review of outcomes of First Meeting (Continued) Delegates will be asked to report on their respective State's views on the outcomes of the First Meeting
3.30-4.00	Afternoon tea
4.00-5.00	Chair will summarise the key conclusions of Theme 1- Review of outcomes of First Meeting
5.00	Close of meeting for day 1
7.00-	Conference Dinner

Tuesday 16 May 2006

Schedule	Items
09.00-10.30	5. Theme 2 – Draft MoU for regional cooperation Delegates will be asked to report on their respective State's views on Draft MoU for regional cooperation
10.30-11.00	Morning tea

Schedule	Items
11.00-12.30	Theme 2 – Draft MoU for regional cooperation Delegates will be asked to report on their respective State's views on Draft MoU for regional cooperation.(Continued)
12.30-2.00	Lunch
2.00-3.30	Theme 2 – Draft MoU for regional cooperation (continued) Delegates will be asked to report on their respective State's views on Draft MoU for regional cooperation (
3.30-4.00	Afternoon tea
4.00-5.00	Chair to summarise the key conclusions of Theme 2
5.00	Close of meeting for day 2

Wednesday 17 May 2006

Schedule	Items
9.00-10.30	6. Theme 3 – Conservation and Management Plan Delegates will be asked to report on their respective State's views on the Draft Conservation and Management Plan
10.30-11.00	Morning tea
11.00-12.30	Theme 3 – Conservation and Management Plan (continued) Delegates will be asked to report on their respective State's views on the Draft Conservation and Management Plan
12.30-2.00	Lunch
2.00-3.30	Theme 3 – Conservation and Management Plan (continued) Delegates will be asked to report on their respective State's views on the Draft Conservation and Management Plan
3.30-4.00	Afternoon tea
4.00-5.00	Chair to summarise the key conclusions of Theme 3
5.00	Close of meeting for day 3

Thursday 18 May 2006

Schedule	Items
9.00-10.30	7. Next steps for progressing regional cooperation The meeting will be invited to agree on the process to finalise the draft MoU text for to take back to capitals for consideration for making
10.30-11.00	Morning tea
11.00-12.30	8. Preparation of workshop final report and recommendations The meeting will be invited to contribute to the contents of the final report and make recommendations.
12.30-2.00	Lunch
2.00-3.30	Preparation of workshop final report and recommendations The meeting will be invited to contribute to the contents of the final report and make recommendations.
3.30-4.00	Afternoon tea
4.00-5.00	9. Other Business
5.00	Meeting Closed

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Eastin Bangkok Hotel, Thailand
15-18 May 2006

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ANNEX 3. Final Proposal

(version 20 October 2006)

MEMORANDUM OF UNDERSTANDING ON THE CONSERVATION AND MANAGEMENT OF DUGONGS (*Dugong dugon*) AND THEIR HABITATS THROUGHOUT THEIR RANGE

The Signatory States,

Aware that the populations of dugongs are seriously threatened throughout the range of the species and that effective conservation and management requires an integrated ecosystem approach;

Recognising that dugongs migrate and disperse over vast distances, which makes their survival dependent on their conservation and management over a wide area and in a wide range of marine and coastal habitats;

Acknowledging that human activities that may threaten dugong populations directly or indirectly include destruction or modification of habitat, coastal development, pollution, fishing activities, vessel strikes, unsustainable hunting or poaching, uncontrolled mariculture and tourism;

Concerned about the harm caused to dugongs by the gear used in some forms of fishing, such as coastal trawling and driftnet fishing, including activities by vessels of Distant-Water Fishing Nations, while recognizing that some fishing activities are conducted responsibly;

Acknowledging their shared responsibility for the conservation and management of dugong populations and their habitats highlighting the importance of seagrass beds;

Recognising the desirability of involving other States whose nationals or vessels conduct activities that may affect dugongs of the region, as well as States that may be in a position to contribute resources or expertise that may promote the implementation of this Memorandum of Understanding;

Noting that dugongs have a priority for conservation action through their listing in the respective appendices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

Noting that CMS calls for international cooperative action to conserve migratory species, and that CMS Article IV encourages CMS Contracting Parties to conclude Agreements, including non-legally binding agreements, in respect of any population of migratory species;

Recalling also Resolution 2.6 of the Second Meeting of the CMS Conference of the Parties which recommended that Parties implement where appropriate CMS Article IV, paragraph 4, within the spirit of the Convention through the use of instruments such as memoranda of understanding; and

Further noting recommendation 7.5 and resolution 8.5 of the Seventh and Eighth Meetings of the CMS Conference of the Parties called on Range States of dugongs to cooperate among themselves, as appropriate, and participate actively to develop and conclude a Memorandum of Understanding and a Conservation and Management Plan to conserve and manage dugongs throughout the species' range;

Express their desire to work closely together to improve the conservation status of dugongs and the habitats on which they depend. To this end, the Signatory States to this Memorandum of Understanding, in the spirit of co-operation, have reached the following understandings. They will:

1. Endeavour to co-operate closely in order to restore, or where appropriate maintain, a favourable conservation status for dugongs and the habitats on which they depend, taking into account, where appropriate, subsistence and customary use of dugongs in those States where it is permitted.
2. Consider joining those international instruments most relevant to the conservation and management of dugongs and their habitat, in order to enhance the legal protection of the species in the region.
3. Make every effort to review, formulate, revise and harmonise national legislation or regulations, as necessary, relevant to the conservation and management of dugongs and their habitats.
4. Implement, subject to the availability of necessary resources, the Conservation and Management Plan annexed to this Memorandum of Understanding. The Conservation and Management Plan will address:
 - (a) Direct and indirect causes of dugong mortality;
 - (b) Research and monitoring of dugong populations;
 - (c) Protection, conservation and management of habitats;
 - (d) Research into and monitoring of important dugong habitats;
 - (e) Awareness of dugong conservation;
 - (f) National, regional and international cooperation;
 - (g) Implementation of the MoU;
 - (h) Legal protection of dugong and their habitats; and
 - (i) Capacity building at all levels.
5. Establish a Secretariat, based in an appropriate organisation or institution, to be decided by consensus of the Signatory States, to assist in the administration and implementation of this Memorandum of Understanding by communicating with, reporting on and facilitating activities between and among Signatory States and performing such other functions as may be assigned by the Signatory States, such as convening meetings.
6. Assess the implementation of this Memorandum of Understanding, including the Conservation and Management Plan, at regular meetings to be attended by representatives of each of the Signatory States concerned, and persons or organisations technically qualified in dugong conservation and management.

7. Facilitate the timely exchange of relevant information necessary to coordinate conservation and management measures and to cooperate with relevant organizations and recognized experts and so as to facilitate the work conducted in relation to the Conservation and Management Plan.
8. Designate a competent national authority to serve as a focal point for communication among Signatory States 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.
9. Provide to the Secretariat a regular report on their implementation of this Memorandum of Understanding, the frequency of which will be determined at the first meeting of the Signatory States. The Secretariat will make available to the Signatory States the national reports received and will prepare a periodic review of progress made to implement the Memorandum of Understanding and the Conservation and Management Plan.
10. Assess at the first meeting of Signatory States, and review periodically, the need for and possibilities of obtaining financial resources, as well as the establishment of a special fund for purposes such as:
 - a) Contributing towards any expenses required to operate the Secretariat and activities carried out under this Memorandum of Understanding; and
 - b) Assisting the Signatory States to carry out their responsibilities under this Memorandum of Understanding.

Basic Principles

11. This Memorandum of Understanding is an agreement under Article IV, paragraph 4, of CMS and is not legally binding.
12. The Conservation and Management Plan is an integral part of this Memorandum of Understanding.
13. This Memorandum of Understanding is open for signature by the Range States of the dugong. It will take effect with two 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 State to terminate its participation by providing one year's written notice to all other signatories.
15. The Memorandum of Understanding, including the Conservation and Management Plan, may be amended by a consensus of the Signatory States.
16. Signatory States acknowledge that they may implement more stringent measures domestically than those specified in the Conservation and Management Plan.

17. Signatory States may establish, by mutual agreement, bilateral, sub-regional or regional management plans that are consistent with this Memorandum of Understanding.
18. Actions under this Memorandum of Understanding will be coordinated with Signatory States, as well as with sub-regional institutions in the Region.
19. The original text of this Memorandum of Understanding, in the Arabic, English, French and Chinese languages shall 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. The working language for all matters related to this Memorandum of Understanding will be English.

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ANNEX 4. Final Proposal

(version 20 October 2006)

CONSERVATION AND MANAGEMENT PLAN FOR THE MEMORANDUM OF UNDERSTANDING ON THE CONSERVATION AND MANAGEMENT OF DUGONGS (*Dugong dugon*) AND THEIR HABITATS THROUGHOUT THEIR RANGE

Species Aspects

<i>Objective 1 – Reduce direct and indirect causes of dugong mortality</i>				
Action	Priority Level	Time-scale	Organizations	Target
1.1 Identify, assess and evaluate the threats to dugong populations and develop appropriate measures to address these threats	High (Across all of the range of dugong)	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	Threats to dugongs and their required conservation measures are identified assessed and evaluated
1.2 Reduce to the greatest extent practicable the incidental capture and mortality of dugongs in the course of fishing activities	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers, fishers and fishing communities	Incidental fishing mortality of dugongs is minimized
1.3 Reduce to the greatest extent practicable the incidental mortality of dugongs arising from other anthropogenic activities	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and other stakeholders (e.g., tourism operators, recreational fishers)	Mortality arising from other anthropogenic activities on dugong is minimized
1.4 Reduce to the greatest extent practicable the illegal take of dugong	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations and communities	Illegal take of dugong is minimized
1.5 Ensure that subsistence and customary use of dugong is sustainable in areas where it is permitted	High (In areas where subsistence and customary harvest is permitted)	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and community-based organizations	Subsistence and customary use is managed sustainably

<i>Objective 2 – Improve our understanding of dugong through research and monitoring</i>				
Action	Priority Level	Time-scale	Organizations	Target
2.1 Determine the distribution and abundance of dugong populations to provide a base for future conservation efforts and actions	High	Immediate	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	An understanding, across the range of dugong, of distribution and numbers
2.2 Conduct research and monitoring into dugong	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	Research and monitoring that promote dugong conservation are conducted
2.3 Collect and analyse data that supports the identification of sources of mortality, the mitigation of threats and improved approaches to conservation practices	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	Data are collected and analysed to improve conservation practices and are reported in national reports

Habitat Aspects

<i>Objective 3 – Protect, conserve and manage habitats for dugong</i>				
Action	Priority Level	Time-scale	Organizations	Target
3.1 Identify and map areas of important dugong habitat such as sea grass beds	High	Immediate	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	Important dugong habitat identified and mapped
3.2 Establish necessary measures to protect and conserve dugong habitats	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and local communities	Measures to protect dugong habitat are developed and implemented
3.3 Assess the risk of, and develop measures to mitigate against, the degradation of dugong habitats	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and local communities	Dugong habitats at risk are assessed and action to mitigate those risks are taken

Action	Priority Level	Time-scale	Organizations	Target
3.4 Identify and where appropriate, rehabilitate degraded dugong habitats	Medium	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and local communities	Degraded important habitats for dugong are identified and where appropriate remedial steps are taken

Objective 4 – Improve our understanding of dugong habitats through research and monitoring

Action	Priority Level	Time-scale	Organizations	Target
4.1 Conduct research into and monitoring of important dugong habitats	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and local communities	Research and monitoring that promote dugong conservation are conducted

Awareness and Education

<i>Objective 5 – Raise awareness of dugong conservation</i>				
Action	Priority Level	Time-scale	Organizations	Target
5.1 Establish education, awareness and information programmes	High	Ongoing	Relevant government agencies, Intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	Programmes are implemented and the conservation needs of dugong are widely understood by all stakeholders
5.2 Consult with local communities to encourage their active participation in conservation efforts	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, and local communities	Local communities are actively involved in dugong conservation

<i>Objective 6 – Enhance national, regional and international cooperation</i>				
Action	Priority Level	Time-scale	Organizations	Target
6.1 Collaborate with, and assist Signatory and non-Signatory States to combat illegal international and domestic trade, and to cooperate in enforcement activities relating to dugong products	Medium	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations	Illegal trade is controlled by cooperative action
6.2 Develop and implement mechanisms for effective exchange of information	High	Ongoing	Relevant government agencies, Intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers and local communities	Mechanisms for cooperation and information exchange are established and used by Signatory States
6.3 Improve coordination among government and non-government sectors and communities in the conservation of dugongs and their habitats	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions and local communities	Coordination amongst government and non-government and community sectors is established for the conservation of dugong and their habitats
6.4 Develop and implement a regional database of relevant information in relation to dugong conservation and management	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers	Important information in relation to dugong, across their range, is available to all parties to the MoU

<i>Objective 7 – Promote implementation of the MoU</i>				
Action	Priority Level	Time-scale	Organizations	Target
7.1 Encourage all Range States to participate in the MoU and its conservation and management activities	Medium	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations	The MoU encompasses all dugong Range States
7.2 Support the Secretariat of the MoU to ensure the objectives of the Conservation and Management Plan are met	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations	The Secretariat is established and is effective in implementation of the MoU and Conservation and Management Plan
7.3 Seek resources to support the implementation of the MoU	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, donor agencies and the private sector	Adequate resources are obtained to implement the MoU

Action	Priority Level	Time-scale	Organizations	Target
7.4 Create links and develop synergies with other relevant regional conservation conventions, MoUs and Agreements	Medium	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations and other agreement Secretariats	Potential complementarities between dugong and other marine wildlife species in conservation and management are identified and enhanced

Crosscutting Issues

<i>Objective 8 – Improve legal protection of dugongs and their habitats</i>				
Action	Priority Level	Time-scale	Organizations	Target
8.1 Encourage all Range States, and ensure Signatory states, incorporate dugong and habitat conservation and protection measures into national legislation	High	Immediate	Relevant government agencies	Dugongs and their habitats are given appropriate protection in the national legislation of all Range States
8.2 Review, and where necessary, strengthen national legal protection for dugongs and their habitats	Medium	Ongoing	Relevant government agencies and other stakeholders (e.g., consultation with non-governmental organizations, local communities and academic institutions)	Laws protecting dugong are reviewed, strengthened and where appropriate, enforced
<i>Objective 9 – Enhance national, regional and international cooperation on capacity building</i>				
Action	Priority Level	Time-scale	Organizations	Target
9.1 Promote capacity building at all levels to strengthen conservation measures	High	Ongoing	Relevant government agencies, intergovernmental and non-governmental organizations, universities and research institutions, scientists and researchers donor agencies, the private sector and philanthropic organizations	Mechanisms to support capacity building activities within Signatory States are established and used

ANNEX 1: EXAMPLES OF SPECIFIC ACTIONS THAT COULD BE IMPLEMENTED UNDER THE CMP

This annex provides a list of examples that are related to Conservation and Management Plan objectives. The examples provide an indication of the types of activities that could take place at local, national and regional scales. Some of the examples are only applicable to some areas and State Signatories to the Memorandum of Understanding will need to assess the relevance of particular approaches in the context of their own national circumstances.

Species Aspects

Objective 1 – Reduce direct and indirect causes of dugong mortality

1.1 Identify, assess and evaluate the threats to dugong populations and develop appropriate measures to address these threats

Examples of specific actions that could be implemented:

- a) Establish baseline data collection and monitoring programmes to gather information on the nature and magnitude of threats
- b) Regularly update existing data on threats to dugong populations and their habitats
- c) Determine those populations affected by traditional subsistence and customary use, incidental capture in fisheries, and other sources of mortality
- d) Conduct socio-economic studies among communities that interact with dugongs and their habitats
- e) Implement programmes to correct adverse social and economic incentives that threaten dugong populations
- f) Facilitate the development of means of subsistence to minimise resultant adverse social and economic impacts
- g) Enact, where not already in place, legislation and prohibit the direct use (capture or killing) of, and domestic trade in, dugongs their parts or products, whilst allowing exceptions for traditional subsistence or customary use
- h) Establish management programmes to enforce such legislation
- i) Negotiate, where appropriate, management agreements in consultation with other concerned States
- j) Identify resources and sources of funding for the above programmes

1.2 Reduce to the greatest extent practicable the incidental capture and mortality of dugongs in the course of fishing activities

Examples of specific actions that could be implemented:

- a) Develop and use gear, devices and techniques to minimise incidental capture of dugongs in artisanal and commercial fisheries, such as the use of alternative gears and spatial closures or limit or control the use of gears known to be harmful to dugongs throughout the range of dugong

- b) Develop procedures and extension programmes to promote implementation of these measures
- c) Exchange information and, upon request, provide technical assistance to other Signatory and cooperating States to promote these activities
- d) Liaise and coordinate with fishing industries, fisheries management organisations and community groups to develop and implement these activities
- e) Develop and implement net retention and recycling schemes to minimise the disposal of fishing gear at sea and on beaches
- f) Provide and ensure the use of onshore facilities for the disposal of ship-borne waste

1.3 Reduce to the greatest extent practicable the incidental mortality of dugongs arising from other anthropogenic activities

Examples of specific actions that could be implemented:

- a) Assess the level, location and impact of anthropogenic impacts on dugongs at ecologically relevant scales
- b) Reduce as much as possible all other human impacts on dugongs and their habitats in areas that sustain subsistence and customary use
- c) Establish appropriate management programmes to ensure that anthropogenic impacts are addressed, taking account of the temporal and spatial variability of dugong reproductive rates and other impacts on the species in a precautionary manner

1.4 Reduce to the greatest extent practicable the illegal take of dugong

Examples of specific actions that could be implemented:

- a) Assess the level, location and impact of the illegal take of dugongs
- b) Establish appropriate management programmes to ensure that the illegal take of dugongs is addressed

1.5 Ensure that subsistence and customary use of dugong is sustainable in areas where it is permitted

Examples of specific actions that could be implemented:

- a) Assess the level, location and impact of subsistence and customary use on dugongs at ecologically relevant scales
- b) Reduce as much as possible all other human impacts on dugongs and their habitats in areas that sustain subsistence and customary use
- c) Determine the cultural and subsistence values and uses of dugongs (both consumptive and non-consumptive)
- d) Establish culturally appropriate management programmes to ensure that subsistence and customary use is sustainable, taking account of the temporal and spatial variability of dugong reproductive rates and other impacts on the species in a precautionary manner
- e) Ensure that such programmes do not have adverse unintended consequences (e.g., increase use of other threatened species such as marine turtles)
- f) Consider the development of alternative means of subsistence in areas where the subsistence and customary use of dugong is permitted to alleviate adverse social and cultural impacts
- g) Negotiate, where appropriate, management agreements on the sustainable level of subsistence and customary use where it is permitted, in consultation with other concerned States, to ensure that such use does not undermine conservation efforts
- h) Ensure that the management of other species (including fisheries) does not have adverse unintended consequences on the subsistence and customary use of dugongs where it is permitted

Objective 2 – Improve our understanding of dugong through research and monitoring

2.1 Determine the distribution and abundance of dugong populations to provide a base for future conservation efforts and actions

Examples of specific actions that could be implemented:

- a) *Conduct baseline studies or gather secondary information on dugong populations using cost effective techniques where possible, including community-based monitoring*

2.2 Conduct research and monitoring into dugong

Examples of specific actions that could be implemented:

- a) *Initiate and/or continue long-term monitoring of priority dugong populations at appropriate spatial scales in order to assess conservation status, using a combination of traditional, community-based and scientific techniques where appropriate*
- b) *Identify migratory routes through the use of techniques such as genetic studies and/or satellite tracking where appropriate*
- c) *Carry out studies on dugong population dynamics and survival rates*
- d) *Promote the use of traditional ecological knowledge in research and management studies, where possible*
- e) *Involve local communities in research and monitoring programmes with training as required*
- f) *Review periodically and evaluate research and monitoring activities*
- g) *Identify and include priority research and monitoring needs in regional and sub-regional action plans*
- h) *Conduct collaborative studies and monitoring of genetic identity, conservation status, migrations, and other biological and ecological aspects of dugongs*

2.3 Collect and analyse data that supports the identification of sources of mortality, the mitigation of threats and improved approaches to conservation practices

Examples of specific actions that could be implemented:

- a) *Identify and prioritise populations for conservation actions*
- b) *Identify population trends using local information where appropriate*
- c) *Use research results to improve management, mitigate threats and assess the efficacy of conservation activities (e.g., habitat loss, etc.)*
- d) *Involve local communities in research and monitoring programmes with training as required*
- e) *Develop and harmonise data collection and analysis protocols*
- f) *Where appropriate, develop and harmonise the reporting format that can be used for informing decision-making (local, national and regional)*

Habitat Aspects

Objectives 3 – Protect, conserve and manage habitats for dugong

3.1 Identify and map areas of important dugong habitat such as seagrass beds

Examples of specific actions that could be implemented:

Identify and map areas of critical habitat such as seagrass beds and migratory corridors, using rapid assessment techniques where appropriate

3.2 Establish necessary measures to protect and conserve dugong habitats

Examples of specific actions that could be implemented:

- a) *Designate and manage protected/conservation areas, sanctuaries or temporary exclusion zones in areas of critical habitat, or take other measures (e.g., modification of fishing gear, banning destructive fishing practices, restrictions on vessel traffic) to remove threats to such areas and involving the local community as much as possible*
- b) *Consider protecting dugong habitats as part of ecosystem based management (e.g., networks of marine protected areas)*
- c) *Develop incentives for adequate protection of areas of critical habitat outside protected areas*
- d) *Assess the environmental impact of marine and coastal development and other human activities on dugong populations and their habitats*
- e) *Monitor and promote the protection of water quality from land-based and maritime pollution, including marine debris, which may adversely affect dugongs and their habitats*
- f) *Strengthen the application of existing bans on the use of poisonous chemicals and explosives in the exploitation of marine resources*

3.3 Assess the risk of, and develop measures to mitigate against, the degradation of dugong habitats

Examples of specific actions that could be implemented:

- a) *Identify and enhance recovery of degraded seagrass habitats used by dugongs*
- b) *Identify and enhance recovery of degraded mangrove and coral reef habitats used by dugong*
- c) *Undertake measures to restore degraded habitats*

3.4 Identify and where appropriate, rehabilitate degraded dugong habitats

Examples of specific actions that could be implemented:

- a) *Identify and undertake measures where appropriate to enhance recovery of degraded seagrass habitats used by dugongs*

Objective 4 – Improve our understanding of dugong habitats through research and monitoring

4.1 Conduct research into and monitoring of important dugong habitats

Examples of specific actions that could be implemented:

- a) *Conduct baseline studies or gather secondary information on dugong habitats using cost effective techniques where possible, including community-based monitoring*
- b) *Initiate and/or continue long-term monitoring of priority dugong habitats*
- c) *Promote the use of traditional ecological knowledge in research and management studies, where possible*
- d) *Involve local communities in research and monitoring programmes with training as required*
- e) *Review periodically and evaluate research and monitoring activities*
- f) *Identify and include priority research and monitoring needs in regional and sub-regional action plans*

Awareness and Education

Objective 5 – Raise awareness of dugong conservation

5.1 Establish education, awareness and information programmes

Examples of specific actions that could be implemented:

- a) *Collect, develop, co-ordinate and disseminate education materials (e.g., dedicated regional web site)*
- b) *Identify key persons/champions to help disseminate messages about the need to conserve dugongs and their habitats*
- c) *Establish community learning/ information centres*
- d) *Develop and implement mass media information programmes*
- e) *Develop and conduct focused education and awareness programmes for target groups (e.g., policy makers, teachers, schools, fishing communities, subsistence and customary users, media)*
- f) *Encourage the incorporation of dugong biology and conservation issues into school curricula*
- g) *Organise special events related to dugong conservation and biology (e.g., Dugong Day, Year of the Dugong, symposia, community education workshops)*
- h) *Promote public participation in conservation activities*
- i) *Involve stakeholders, including key policymakers, subsistence and customary users, and local communities in particular, in planning and implementation of conservation and management measures*
- j) *Encourage the participation of government institutions, intergovernmental government organisations, non-governmental organisations, the private sector and the general community (e.g., students, volunteers, fishing communities, local communities) in research, conservation and management efforts*

k) Implement, where appropriate, incentive schemes to encourage public participation (e.g., T-shirts, public acknowledgement and certificates)

5.2 Consult with local communities to encourage their active participation in conservation efforts

Examples of specific actions that could be implemented:

Identify, develop and facilitate alternative programmes (including means of subsistence and incentives) that are not detrimental to dugongs and their habitats, in consultation with local communities and other stakeholders

Cooperative Aspects

Objective 6 –Enhance national, regional and international cooperation

6.1 Collaborate with and assist Signatory and non-Signatory States to combat illegal international and domestic trade, and to cooperate in enforcement activities relating to dugong products

Examples of specific actions that could be implemented:

- a) Encourage Signatory States that have not already done so to become Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*
- b) Review at a national level, compliance with obligations under CITES relating to illegal international trade in dugong parts or products*
- c) Facilitate better compliance with CITES through training of relevant authorities in cooperation with other Signatory States, the CITES Secretariat and other relevant organisations*
- d) Identify routes of international illegal trade through monitoring, and seeking cooperation to take action to prevent, deter and, where possible, eliminate i.t*
- e) Exchange and discuss information on compliance and illegal trade issues at regular intervals, such as through annual reporting to the MoU Secretariat and at meetings of the Signatory States*
- f) Identify, prevent, deter and, where possible, eliminate domestic illegal trade through monitoring, implementation of legislation, identification of gaps in enforcement capabilities in each country, and training of enforcement officers*

6.2 Develop and implement mechanisms for effective exchange of information

Examples of specific actions that could be implemented:

- a) Identify and strengthen existing mechanisms for cooperation at the regional and sub-regional level*
- b) Develop a website and/or newsletter to facilitate networking and exchange of information*

- c) Develop a web-based information resource for dugong conservation (including data on populations, migration, on-going projects) based on IUCN website
- d) Regularly update a directory of experts and organisations concerned with dugong conservation
- e) Develop networks for cooperative management of shared populations, within or across sub-regions, and, where appropriate, formalise cooperative management arrangements
- f) Cooperate where possible in the establishment of transboundary marine protected areas using ecological rather than political boundaries
- g) Develop a streamlined format for reporting and exchanging information (through the MoU Secretariat and among Signatory States) on the state of dugong conservation at the national level
- h) Encourage MoU Signatory States that have not already done so to become Parties to the Convention on Migratory Species (CMS)
- i) Encourage Signatory States to become contracting parties to global fisheries agreements such as the UN Fish Stocks Agreement (1995) and the FAO Compliance Agreement (1993) and implement the FAO Code of Conduct for Responsible Fisheries (1995)
- j) Establish relationships with regional fisheries bodies with a view to obtaining data on incidental capture and encourage them to adopt dugong conservation measures within Exclusive Economic Zones (EEZ) and territorial waters
- k) Determine the most appropriate methods for information dissemination e.g., internet and community forums
- l) Exchange at regular intervals scientific and technical information and expertise among nations, scientific institutions, non-governmental and international organisations, in order to develop and implement best practice approaches to conservation of dugongs and their habitats
- m) Disseminate traditional knowledge on dugongs, their habitats and traditional practices for conservation and management in a culturally appropriate manner
- n) Update data on dugong populations of regional interest on a regular basis (e.g., country status reports).

6.3 Improve coordination among government and non-government sectors and communities in the conservation of dugongs and their habitats

Examples of specific actions that could be implemented:

- a) Review the roles and responsibilities of government agencies related to the conservation and management of dugongs and their habitats
- b) Designate a lead agency responsible for coordinating national dugong conservation and management policy
- c) Identify non-governmental organisation with an interest in dugong conservation and management
- d) Encourage cooperation within and among government and non-government sectors, including through the development and/or strengthening of national networks

6.4 Develop and implement a regional database of relevant information in relation to dugong conservation and management

Examples of specific actions that could be implemented:

Collate and manage information relevant for dugong conservation and management in a regional database that is easily accessible to all interested parties

Objective 7 – Promote implementation of the MoU

7.1 Encourage all Range States to participate in the MoU and its conservation and management activities

Examples of specific actions that could be implemented:

- a) Encourage non-Signatory States to sign the MoU
- b) Arrange regional and sub-regional workshops involving non-Signatory States to raise awareness of the MoU
- c) Consider at the first meeting of the Signatory States the development of a timetable for regular review of implementation the MoU

7.2 Support the Secretariat of the MoU to ensure the objectives of the Conservation and Management Plan are met

Examples of specific actions that could be implemented:

Secure reliable sources of funding to support the MoU Secretariat.

7.3 Seek resources to support the implementation of the MoU

Examples of specific actions that could be implemented:

- a) Prioritise conservation and management activities for funding
- b) Explore funding options with governments and other donors such as the Asian Development Bank, World Bank, UNDP, European Union, UNEP, GEF, etc.
- c) Solicit funding and other contributions from industries that have impacts on dugongs and their habitats (e.g., fisheries, tourism, oil industry, real estate)
- d) Explore international funding support and other incentives for Signatory States that effectively manage populations

7.4 Create links and develop synergies with other relevant regional conservation conventions, MoUs and Agreements

Examples of specific actions that could be implemented:

Identify, facilitate and explore links to other international, regional, sub-regional fora, conventions, agreements and MoUs

Cross-cutting Issues

Objective 8 – Improve legal protection of dugongs and their habitats

8.1 Encourage all Range States, and ensure Signatory States incorporate dugong and habitat conservation and protection measures into national legislation

Examples of specific actions that could be implemented:

- a) Encourage MoU Signatory States that have not already done so to become Parties to the Convention on Migratory Species (CMS)
- b) Encourage the establishment of legislation to protect dugongs and their habitats while recognising existing traditional management systems
- c) Review domestic policies and laws to address gaps or impediments to dugong conservation
- d) Ensuring appropriate sanctions for harming dugongs or destroying habitat, training law enforcement authorities, raising public awareness to boost surveillance for reporting of illegal activities

8.2 Review, and where necessary, strengthen legal protection for dugongs and their habitats.

Examples of specific actions that could be implemented:

Cooperate in law enforcement to ensure compatible application of laws across and between jurisdictions (including through bilateral/multilateral agreements and intelligence sharing)

Objective 9 – Enhance national, regional and international cooperation on capacity building

9.1 Promote capacity building at all levels to strengthen conservation measures

Examples of specific actions that could be implemented:

- a) Identify needs for capacity-building in terms of human resources, knowledge and facilities
- b) Provide training (e.g., through workshops) in conservation and management techniques for dugongs and their habitats to relevant agencies, individuals and local communities
- c) Coordinate training programmes and workshops
- d) Develop partnerships with universities, research institutions, NGOs, training bodies and other relevant organizations to support capacity building initiatives

- e) Identify assess, develop and implement training programmes for local communities, NGOs, community-based organisations, media, enforcement officers, policy makers, law makers and decision makers
- f) Enhance capacity at all levels to develop and undertake joint research programmes on dugong and their habitats
- g) Organise forums (local, national and regional as appropriate) with the involvement of all relevant stakeholders to enable knowledge sharing and capacity building
- h) Provide training on development, implementation and monitoring of community rehabilitation programmes
- i) Support local communities and relevant national organizations with necessary basic equipment and facilities to enable protection, conservation and management of dugong and their habitats

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