



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



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

**First Meeting on Dugong Conservation  
in the Indian Ocean and South-east Asia Region**

**23-25 August 2005  
Chaophya Park Hotel  
Bangkok, Thailand**

**MEETING REPORT**

**Introduction**

1. The First Meeting on dugong conservation in the Indian Ocean and South-east Asian region under the auspices of the Convention on Migratory Species (CMS) was held at the Chaophya Park Hotel, Bangkok, Thailand from the 23-25 August 2005, co-hosted by the Governments of Thailand and Australia. The Annotated Agenda for the meeting is Annex 1. The List of Participants is Annex 2.

**Welcoming remarks**

2. The meeting was formally opened by the representative of the Secretariat of the Convention on Migratory Species (CMS), Mr Douglas Hykle. The representatives of the Governments of Australia and Thailand, Mr Andrew McNee and Dr Maitree Duangsawasdi, were appointed by the participants as co-chairs of the meeting. The co-chairs welcomed participants and noted the high level attendance of countries within the dugong's range. They stated they looked forward to the cooperation among countries at the meeting, with the aim to develop a draft text for regional dugong conservation.

**Meeting Agenda**

3. The agenda was adopted without amendments.

**Dugong biology, ecology, populations and behaviour (see Annex 7):**

4. Professor Helene Marsh, as an invited expert, delivered a presentation on dugong biology, ecology, populations and behaviour. The presentation showed that dugongs occupy a wide range, and due to their life characteristics (long lived, late sexual maturity between, having few young with high parental investment, and dependent on seagrass) are affected by human related mortality. There followed a general discussion and information sharing on circumstances within their countries jurisdiction.

5. The key points from Professor Marsh's presentation are:
- Dugongs have a huge range spanning some 140,000 km of coastline of almost 50 coastal and island states between East Africa and Vanuatu and the latitudes of about 27 degrees north and south of the equator.
  - The dugong has high conservation value as the only herbivorous mammal that is strictly marine, the only extant species in the family Dugongidae and one of only four extant species in the order Sirenia.
  - The dugong has extremely high cultural and dietary values throughout much of its range and is a flagship species for the conservation of coastal habitats throughout much of its range.
  - Dugongs are listed as vulnerable to extinction by the IUCN. Populations are believed to be depleted throughout much of the range; there is considerable uncertainty about their status in most of the remainder of their range.
  - Critical dugong habitats include seagrass beds, particularly seagrass occurring at depths of less than 10m deep and especially less than 3m deep, plus movement corridors which may span deeper waters including ocean trenches.
  - If dugongs become locally extinct in an area they may be slow to recolonise and the quality of the seagrass community may decline during the period of recolonisation.
  - Dugong habitats are subject to large scale diebacks associated with extreme weather events. If habitat is lost, dugongs postpone breeding or move.
  - Because dugongs are long-lived slow breeding animals, adult mortality is the most serious human impact.
  - Monitoring population trends is an insensitive trigger for management intervention, except over very long time frames, but estimates of population size are required to estimate sustainable levels of human mortality from all causes.
  - Sustainable dugong anthropogenic mortality targets must recognize variability in the size and potential rate of increase of target population and be calculated at ecologically relevant spatial (hundreds of kilometres) and temporal scales (decades)
  - In areas with small dugong populations (hundreds or less), management actions should aim to eliminate human mortality and conserve habitats.
  - As individual dugongs can move hundreds of kilometres in a few days, management needs to be implemented at regional scales if it is to be ecologically relevant to dugongs.
6. The meeting noted that dugong were known to move between jurisdictions and that any action to conserve and manage dugong populations would need to require cooperation at a regional scale.

### **Threats to dugong:**

7. Professor Helene Marsh gave a presentation on threats to dugong in the Indian Ocean and South-East Asian region. Delegates then discussed these threats, and began to identify a detailed list of threats to dugong populations in the Indian Ocean and South-East Asian region, as well as opportunities for mitigation and prevention. The meeting recognised that regional cooperation was needed to address threats to dugongs.

8. Professor Marsh provided the following information on threats: The anthropogenic threats to dugong populations are widespread and their relative importance differs in different regions. Causes of dugong mortality include legal subsistence harvest for food, medicine and materials, poaching, incidental capture in artisanal and commercial fisheries especially net and dynamite fisheries, and vessel strike. Threats to dugong habitats include coastal development, agricultural pollution exacerbated by poor catchment management and extreme weather events, damage to seagrass beds from fishing activities, oil spills, disturbance to dugongs from vessels including tourist vessels, and climate change.

### **Key elements and possible framework for regional cooperation**

9. The CMS representative, Mr Douglas Hykle, provided information on the CMS and conservation frameworks made under it, including legally binding agreements and non-legally binding Memoranda of Understanding (MoUs). The presentation included information on experience from the development and implementation of the Indian Ocean and South-East Asian Marine (IOSEA) Turtle MoU and the development of legally binding agreements and the positives and negatives of both approaches.
10. The meeting noted that regional frameworks provide an opportunity to cooperate to conserve species, to share information, and to seek financial and technical resources.
11. The meeting discussed which framework appeared to be the most appropriate, and agreed to begin work on a preliminary framework for the region. It was recognised that the IOSEA Turtle MoU was already operational in the region and provided an example of how regional cooperation under the CMS could be achieved through a regional conservation instrument.
12. The meeting identified and discussed the key objectives and elements for a regional dugong conservation arrangement, and requested the technical experts to examine the extent to which the approach to conservation and management actions under the IOSEA Turtle MoU which could inform the development of a regional conservation and management arrangement for dugong.
13. The meeting considered the nature of actions that could be pursued at a regional level and viewed a non-legally binding MoU framework as the most suitable approach to promote regional cooperation. The meeting identified the appropriate structure and format for a draft MoU.
14. The meeting divided into 3 working groups to discuss and identify priorities for conservation and management action under a regional arrangement. The outcome of those discussions is Annex 3.
15. Working groups reconvened to identify mechanisms to promote the conservation status and need of conservation actions in states, and to generate funding and capacity. The outcome of those discussions is Annex 4.

## Progressing Regional Dugong Conservation

16. The meeting invited comments on the sample draft text of a memorandum of understanding. It was agreed that all references in the text to “arrangement” would be amended to read “memorandum of understanding”, and that consideration be given to including some background information on the species, perhaps as an annex.
17. Questions were raised about the definition of the term “Range State” which, it was noted, had also arisen in the context of the IOSEA Marine Turtle MoU. It was pointed out that as there were only passing references in the text to the term “Range State” -- none of them substantive -- the term need not be defined explicitly in the text, and any existing references could be amended.
18. It was agreed to insert a reference to responsible fisheries in the sixth preambular paragraph of the draft MoU text.
19. There was a general discussion of the issue of subsistence and sustainable levels of harvest of dugong, and any references to this issue in the draft MoU. Concerns were raised about the implications of such references in relation to existing national legislation, which in some countries, prohibited any harvest of dugong. It was agreed that the text in 3a) could be clarified by adding, at the end, the words: “in those States where it is allowed”. The same clarification would be added after “management of subsistence harvesting” in 3b (and elsewhere in the text, where relevant).
20. The meeting sought to clarify the potential geographic scope of the memorandum of understanding, noting the importance of involving countries throughout the range of the species, as well as other countries that are relevant (eg. in terms of possible impacts). In particular, justification was given for extending the coverage eastward to include relevant Pacific Island States, whilst taking account of other initiatives being undertaken through SPREP. The representative of Papua New Guinea indicated that his country would be comfortable working through both instruments. Without wishing to preclude further discussion of the geographic scope, in the absence of some interested countries, two possible formulations for the geographic scope were suggested:
  - “Region means all of the waters and coastal States of the Indian Ocean, East Asia, Pacific Ocean, as well as their adjacent seas, [within the range of dugong] or [bounded by latitudes 27 degrees north and south of the equator].” (This issue remained unresolved and will require further consideration at the next meeting).
21. Questions were raised as to the implications for possible amendments needed to domestic legislation and regulations to be able to implement the MoU. It was noted that the draft MoU text provided for review, formulate, revise and harmonise national legislation, as necessary. In the course of the discussion, it was suggested that the Conservation and Management Plan reflect regional differences that clearly exist.

22. The question was raised as to whether a Memorandum of Understanding should be developed with a view to stimulating national capacity and activities where few or none currently exist, or whether the starting point should be that countries first develop capacity at sub-regional levels. Views in favour of both approaches were expressed. Cambodia suggested that national representatives be called on to present their national perspectives, and that regional bodies be invited to future meetings to contribute their expertise and share valuable experience.
23. It was noted that various gatherings over the past three decades had not yielded much progress for dugong conservation in terms of international collaboration, and that a formal MoU might stimulate greater cooperation where other initiatives had not succeeded to date. It was noted also that resource limitations may lead to disappointment over differences between the aspirations of any instrument and delivery, in terms of actions on the ground. Nevertheless, it was pointed out that for any international instrument, a certain number of years are needed before they become fully operational.
24. It was recognised that MoUs reflect the aspirations of Signatory States. The meeting noted that sometimes these aspirations do not translate to effective on-ground actions. The meeting was of the view that there needed to be a strong focus on ensuring that MoUs deliver on-ground conservation actions.
25. The future status of the Memorandum of Understanding was raised, with reference to paragraph 4d) of the basic principles; with reservations raised about the possibility of the instrument being transformed at some point into a legally-binding instrument. It was agreed that the reference to possible replacement of the MoU by a legally-binding treaty be deleted.

### **Conservation and Management Actions**

26. The technical experts provided a summary of actions identified in the working groups, and developed a document which could provide guidance to potential signatories to an MOU and future meetings, on the nature and scope of potential conservation and management actions.
27. This document, *Analysis of elements from IOSEA Turtle MoU possibly relevant to dugong conservation* is as a non-paper as an aid to future discussions on conservation and management actions. In future it would be useful to undertake work and discussion to target actions that are high priority and remove unnecessary duplication.

### **Next Steps**

28. Thailand/Australia offered to disseminate outcomes of the meeting and to coordinate intercessional activity:
  - Identify relevant experts;
  - Seek support for process and for States (NGOs and IGOs).
  - Provide contact point to provide comments on future activities.

29. Participants were requested to provide to Australia and Thailand their views on the non-paper draft MoU text and on the document *Analysis Of Elements From IOSEA Turtle MoU Conservation Management Plan Possibly Relevant To Dugong Conservation* to serve as a basis for future negotiation.
30. The meeting expressed the view that it would be important to undertake research to provide additional information to fill in knowledge gaps. Participants requested that scientific and cultural information be shared among States within the dugong's range and to undertake joint research and provide some funding assistance.
31. It was proposed that a second meeting be held in 2006. The meeting agreed to undertake intersessional discussion with a view to identify a host for the meeting and agree on timing. Professor Marsh indicated that there may be a technical workshop on dugongs in United Arab Emirates in early 2006 which could be linked to the a future meeting.
32. The meeting expressed a benefit that, at future meetings, each delegation should comprise two delegates (one policy and one technical) to bring greater expertise to discussions. In addition, at future meetings, the agenda could provide an opportunity to discuss national actions and information on dugongs. There was also a request that the cultural value of dugongs be discussed.
33. Participants representing Contracting Parties of the CMS were requested to provide a report to the CMS Conference of the Parties on action to work toward implementation of Resolution 7.7 and Recommendation 7.5.
34. If participants are seeking information, they may contact Dr Hines who offered to provide the link to two listserves: Serinian listserv and Asian Marine Mammal listserv to provide an opportunity for States to seek information from dugong experts. The meeting expressed a desire for web- or email-based communication to increase knowledge among States where dugong occur.