



UNEP/CMS OFFICE – ABU DHABI
United Arab Emirates

Secretariat to the Memorandum of Understanding
on the Conservation and Management of Dugongs
and their Habitats throughout their Range

REPORT OF THE WORKSHOP ON
CONSERVATION OF MARINE TURTLES AND DUGONGS:
SHARED SYNERGIES AND OPPORTUNITIES

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1. Introduction

1.1. Background

Marine turtles and dugongs are the focus of two separate international conservation agreements under auspices of UNEP/CMS: the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats in the Indian Ocean and South East Asia (IOSEA Turtle MoU), which has been in effect since 2001 and encompasses some 44 range states; and the MoU on the Conservation and Management of Dugongs and their Habitats throughout their Range, which came into effect in 2007 and encompasses about 42 range states.

Strikingly, both agreements overlap in terms of the range states and approach to conservation in addressing both species and habitat specific impacts via their respective conservation and management plans. While this should not be surprising given the similarities in the ecology of each species (i.e. long-lived and slow breeding) and their reliance on similar coastal habitats, apart from some largely intuitive approaches to address the conservation of both species together, there has been little concerted effort to explore where those synergies, and thus opportunities, may lie in order to maximize conservation outcomes for these species. Such an approach may become increasingly important given the need to make the best use of limited resources, in terms of funding and other resources to build technical and often, community-based capacity, which can effectively and efficiently address conservation and management needs.

1.2. Workshop Objectives

The aim of the workshop was to explore the conservation synergies and to identify how researchers and managers with an interest in, or mandate to conserve marine turtles and/or dugong conservation can contribute in determining whether it is possible, and indicate how to:

- Align research objectives and set priorities (for instance, habitat studies or implementation of aerial and/or questionnaire-based surveys);
- Address conservation and management needs (where these overlap, such as habitat protection, by-catch reduction, or indigenous takes, amongst others);
- Build technical capacity (at government, NGO and community levels);
- Build and support community-based capacity (particularly where infrastructure for government-led initiatives is insufficient or inappropriate);
- Share resources (funding, technical, etc); and
- Influence policy development and implementation in a collaborative and cost-efficient manner (both at national and regional levels).

1.3. Workshop Outcomes

Ideas on possible conservation synergies among the two species were generated through discussions among the workshop participants. The UNEP/CMS Standardised Dugong

Catch/By-catch Questionnaire raised interest among the participants as it provides for data collection for both dugongs and marine turtles.

2. Workshop Record

Dr. Donna Kwan welcomed some 60 workshop participants from about 20 different countries, and explained why they, as the Dugong MoU Secretariat, were at the sea turtle symposium: the UNEP/CMS Abu Dhabi Office was keen to take the opportunity at this symposium to emphasize the synergy opportunities between marine turtle and dugong conservation.

A presentation was given on marine turtle and dugong “Shared Conservation Synergies and Opportunities“, which included information on the UNEP/CMS Office – Abu Dhabi, the Dugong MoU, as well as dugongs in general, since most of the workshop participants were turtle experts.

2.1. UNEP/CMS Office – Abu Dhabi

UNEP/CMS Abu Dhabi Office was established under the auspices of the United Nations Environment Programme (UNEP) and Convention of Migratory Species (CMS). Migratory species covered by CMS are defined as an entire population or any geographically separate part of the population of any species, significant number of whose members cyclically and predictably cross one or more national jurisdictional boundaries. There are two Appendices to the Convention: Appendix I covers migratory species threatened with extinction, and Appendix II covers migratory species whose conservation requires international Agreements. The operational tools of CMS are strict protection for endangered migratory species (concerted action), cooperative agreements to restore favourable conservation status, and cooperative research and conservation projects. In addition, CMS Conference of Parties mechanism reviews the status of Appendix I species. The *modus operandi* of CMS is the creation of legal and institutional frameworks such as Agreements and Memorandum of Understanding.

Dr. Donna Kwan explained that, hosted by the Environment Agency - Abu Dhabi, the UNEP/CMS Office in Abu Dhabi is generously financed by the UAE Government in 2009–2011 (ongoing). The Office provides secretariat and technical support to the Dugong MoU, to the MoU on the Conservation of Migratory Birds of Prey in Africa and Eurasia, and to other regionally important species such as marine turtles.

The Secretariat can help the Signatory and other Range States of the Dugong MoU by:

- Providing funding: Small Grants Programme (direct, co-funding or leverage);
- Facilitating letters of support for funding applications;
- Providing a network (e.g. other dugong range states, liaising with other experts, IGOs and NGOs, cooperation, collaboration, learning);
- Awareness raising (e.g. promote and acknowledge good efforts);
- Sub-regional workshops and meetings (e.g. standardised methodology/protocols for fisheries by-catch surveys, habitat assessment and monitoring, education and awareness raising; *First Official Signatory State Meeting* on 4-6 October 2010 in Abu Dhabi).

2.2. Dugong MoU

The Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range (Dugong MoU) is non-legally binding and spans over 40 range states, of which 11 are current signatories: Australia, Comoros, Eritrea, France (New Caledonia, Mayotte and Reunion Island), India, Kenya, Madagascar, Myanmar, Philippines, Tanzania and the United Arab Emirates.

The Conservation and Management Plan (CMP) is the main platform for directing conservation, facilitating and coordinating national level and transboundary actions across migratory range of species populations and their habitats. CMPs are species-focused, contain habitat specific activities, and can be implemented nationally or regionally. Many conservation and management actions in the Dugong MoU can benefit other marine wildlife, including turtles.

Shared conservation and management objectives and their actions relevant to marine turtles in the dugong CMP, include:

- Reducing direct and indirect causes of mortality;
- Improving understanding (research and monitoring);
- Protecting, conserving and managing habitats;
- Raising awareness of conservation needs;
- Improving legal protection and habitats;
- Enhancing national, regional and international cooperation and cooperation on capacity building.

Shared challenges facing the conservation and management of marine turtles and dugongs include:

- Aspects of these species' biology (long-lived, slow breeding);
- Reliance on coastal habitats;
- Restricted coastal habitat subject to natural (e.g. large-scale diebacks) and anthropogenic impacts (e.g. habitat loss and degradation);
- Capable of moving across jurisdictions at local and regional scales;
- Lineages cross jurisdictions;
- Multiple threats (gill netting, commercial/fisheries by-catch, coastal development, boat strikes);
- Used for food/medicine/artefacts by coastal communities.

The UNEP/CMS Office is keen to explore shared conservation synergies between marine turtles and dugongs – and is in a position to support actions needed. For example with the assistance of technical experts a standardised methodology/protocols has been developed for fisheries by-catch surveys. For both marine turtles and dugongs, effective conservation and management actions must address the issues of conserving the quality of critical habitats and minimizing mortality which need to be co-ordinated across jurisdictions. Those actions can also benefit other marine wildlife.

2.3. Discussions

Dr. Nicolas Pilcher led discussions on the overlaps between marine turtles and dugongs in relation to policy implementation, research management, funding, technical capacity, education and awareness raising issues.

The participants were encouraged to share ideas about how to deal with two species that are very similar and how to best use the presented opportunities and maximize project investments. The participants were also asked to share their ideas based on their personal experiences in turtle research and conservation.

The section below encompasses the following issues and topics covered during this session: Overlaps, Funding, Networking, and Awareness Raising, Standardised Dugong Catch/By-catch Questionnaire.

2.3.1. Overlaps

Dr. Nicolas Pilcher explained that in the process of developing *the Standardised Dugong Catch/By-catch Questionnaire*, the working group noted that there is much overlap between a number of species, particularly marine turtles and inshore cetaceans. Examples cited by Dr. Pilcher included trying to solve by-catch and targeted take issues which are common to both turtles and dugongs. In Australia, aerial surveys for dugongs have also been used to survey marine turtles simultaneously. These are only two of the many examples on synergies and opportunities of how the research efforts can be doubled-up. There are many opportunities where research efforts could be more cost-effective by combining projects with similar objectives for both species.

Similarities between the species in their biology including use of same coastal waters and habitats such as seagrasses and reefs was a potential area for addressing research, conservation and management synergies. Similarly, community-based approaches can be applicable to both species for example to monitor populations and for levels of (legal) take, for example by Traditional Owners in Australia. Should it be possible to collect data on multiple species simultaneously, the issue of who should it be reported to, was raised. It was noted that information could be lost if researchers do not know what to do with it.

Participants from Nigeria expressed interest in further exploring how they could address shared conservation issues for West African Manatee and coastal cetaceans. A possible starting point was to adapt the Standardised Dugong Catch/By-catch Questionnaire (see Section 2.3.5.) for manatees. The Questionnaire already includes survey questions for marine turtles (pages 5 and 6). There were also suggestions about similar approaches to satellite telemetry work used on marine turtles and dugongs, to be used for manatees in West Africa.

Suggestions on how to progress addressing shared research, conservation and management of marine turtles and dugongs included:

- Holding information sessions on shared research, conservation and management at appropriate events e.g. future Sea Turtle Symposiums, Marine Mammal Conferences.

- Have dedicated cross-over technical training workshops as part of appropriate conferences or events on common research methods e.g. surveys for population assessments or monitoring.
- Developing a list of potential research and management areas and distribute to appropriate dugong and turtle websites and listservers e.g. CTURTLE (<http://accstr.ufl.edu/cturtle.html>) and MARMAN (<http://whitelab.biology.dal.ca/marmam.htm>).
- The UNEP/CMS Office could also contact turtle conservationists to request information, for example if they had information on stranded dugongs and the status of seagrass beds.

2.3.2. Funding

In the discussion on funding, alternative methods of funding such as ones based on environmental mortgages schemes were discussed briefly. This scheme is being trialled for turtles and might be able to be applied to dugongs as well. There was wide agreement that this was a good idea and applicable to funding regional dugong conservation and management projects. The UNEP/CMS Abu Dhabi Office will further investigate the possibilities.

Questions on how to translate research and policy into action were also raised among the workshop participants. It was noted some NGOs, such as WWF Malaysia, are actively lobbying the Ministry on turtle issues.

2.3.3. Networking

Networking proved to be one of the big issues when it comes to research and conservation of the two species.

The marine turtle network is considered to be large in size; however there was general agreement that it could be more effective. Of mention was that the communication between the social scientists and biologists needs to be improved. A suggestion was also made for better communication with social scientists to use cultural, local and traditional knowledge in studies. This approach would match up two-way flow of information and recognising the importance of traditional knowledge in dugong and marine turtle research and conservation efforts.

In comparison to the marine turtle network, the dugong network is considered to be rather small. The advantage of a small group of researchers is that everyone knows each other and what they are working on. However, the dugong network is also more challenging because of the large number of developing range states who do not yet have capacity to do dugong research or conservation. Dr. Donna Kwan pointed out, that with regards to the range states included in the Dugong MoU, it was not easy to define all range states when the agreement was developed in intergovernmental meetings in Bangkok in 2006 and Abu Dhabi 2007. This is because the dugongs may still be found in areas where they have not been reported before. For example, in 2009 a large population of dugongs was “discovered“ in Punang-Sair-Lawas, Malaysia, during a research trip on marine turtles.

Dr. Kwan stated that CMS will take an active role in keeping in contact and creating a network. One opportunity to build networks will take place in the *First Official Signatory*

State Meeting of the Dugong MoU in Abu Dhabi, United Arab Emirates, scheduled for 4–6 October 2010.

The following suggestions were made to improve communications between turtle and dugong biologists:

- Have sessions at key conferences on shared conservation, research and management issues
- Encourage discussions about hot issues at key fora such as the IUCN specialist groups for marine turtles and sirenians. Addressing by-catch of marine turtles may be a good starting point. A further issue may be the emerging threat of marine debris.

2.3.4. Awareness Raising

Awareness raising is considered to be very important when it comes to obtaining community support in species conservation.

Workshop participants agreed that by-catch is one of the biggest issues for both dugongs and marine turtles. Fishermen are using gillnets, which are very hazardous (also known as ghost fishing). However, fishermen do not usually know this, and therefore better education and awareness outreach is needed.

As a part of awareness raising, it was suggested that people could send dugong photographs to the UNEP/CMS Abu Dhabi Office for them to post some on their website http://www.cms.int/secretariat/abu_dhabi_intro.htm > Dugong MoU. The Office will explore this possibility.

2.3.5. Standardised Dugong Catch/By-catch Questionnaire

Dr. Pilcher presented the UNEP/CMS Standardised Dugong Catch/By-catch Questionnaire in the workshop, which raised a wide interest among the workshop participants.

Dr. Pilcher explained the interview takes about 1h 15min and interviewing sample depends on areas – however, rough guide is to have 200 interviews per country. The Questionnaire is currently being implemented in Cambodia, Malaysia, Myanmar, New Caledonia, Palau, Papua New Guinea, Solomon Islands, Thailand, Vanuatu and Vietnam. The Questionnaire will be available for free download on the website of the UNEP/CMS Secretariat for Dugong MoU – the Secretariat only asks for countries to share the regional results.¹

While the focus of the surveys is for dugongs, the questionnaire also contains questions for marine turtles and cetaceans. It can also be easily adapted for other species, including manatees.

¹ This has already been done and the survey can be found at http://www.cms.int/species/dugong/dugong_noticeboard.htm > Standardised Dugong Catch/By-catch Questionnaire Available Now.

3. Conclusions

There was considerable interest to know more about dugongs and to explore how to address mutual research and monitoring objectives. It was noted that similarities in the biology and habitats of dugongs and marine turtles create many conservation and management synergies between the species. There are many opportunities where research efforts could be more cost-effective by combining projects with similar objectives for both species.

In dugong and marine turtle conservation work, alternative methods of funding may provide important opportunities to address livelihood and species conservation needs. It was found that schemes based on environment lending, for example, were a good idea and may be applicable to funding regional dugong conservation and management projects.

Network-building and sharing of data was seen as one of the issues affecting a successful conservation policy application regarding dugongs and marine turtles. The marine turtle network was perceived large in size, whereas the dugong network was considered to be rather small – both of which with encouraging and challenging characteristics. All in all, a two-way flow of information between dugong and marine turtle research experts and different scientific fields was considered valuable in the species conservation efforts.

Community support was envisaged as important in species conservation work. With regards to obtaining that support, awareness-raising was considered to be very important. Thus, better education and awareness outreach on dugong and marine turtle conservation and management efforts was believed necessary.

The UNEP/CMS Standardised Dugong Catch/By-catch Questionnaire is a tool developed to ease the difficulties on the way of a successful implementation of the conservation management plan, data collection, tighter network building and synergy sharing. Due to the large interest, the UNEP/CMS Secretariat for Dugong MoU posts the Standardised Dugong Catch/By-catch Questionnaire form to their website http://www.cms.int/species/dugong/dugong_noticeboard.htm and informs all the workshop participants when this is done. UNEP/CMS Office – Abu Dhabi will also take the role of keeping contact and making a network within dugong experts.

Participants at the workshop strongly supported the need for more dialogue between marine turtle and dugong researchers, managers and interested parties to further explore the opportunities to address conservation and management issues shared by these species.

ANNEX: Organising Committee

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