**MEETING OF THE TECHNICAL ADVISORY GROUP TO THE DUGONG MOU**

*(Online, 3rd April 2023)*

UNEP/CMS/DUGONG/TAG1-2023/Report

**MEETING REPORT**

*(Prepared by the Dugong MOU Secretariat)*

1. **Welcome and Introductions**

Mr Gabriel Grimsditch (CMS Dugong MOU Coordinator) opened the meeting by welcoming all participants and thanked the Environment Agency Abu Dhabi as the hosts of the Dugong MOU.

All Technical Advisory Group (TAG) members introduced themselves (see Annex 1 for full list of participants).

1. **Adoption of Agenda**

All participants agreed to the proposed agenda for the meeting.

1. **Chair Nomination and Voting Process**

A Chair is required for the TAG, and no nominations have yet been received.

Mr Grimsditch explained that the position is voluntary with the primary responsibilities of chairing meetings and co-developing/approving meeting agendas and minutes over the three-year term of the TAG.

Prof. Helene Marsh suggested to nominate a TAG Chair from a developing nation where dugong populations are under greater strain, rather than from an industrialized nation with large dugong populations and larger resources available for conservation (e.g. Australia).

Prof. Marsh offered to act as Interim Chair following the meeting and to mentor someone to take over from her.

Mr Grimsditch will discuss nominations for the position bilaterally with interested candidates following this meeting.

1. **TAG Terms of Reference**

The TAG Terms of Reference (TORs) were provided to participants for review in advance.

As TAG members are volunteering their time pro bono, the aim of the TORs is to ensure that the TAG provides strategic and technical support to the Dugong MOU without imposing onerous workloads or excessive time commitments. The main responsibilities of the TAG are laid out in the ToRs and the primary tasks have been identified as:

* To provide expert advice and recommendations to CMS Dugong MOU and signatory states;
* Respond to technical requests from signatory states relating to dugong or seagrass;
* Help identify experts to prepare best practice and technical guidelines;
* Peer review reports and publications;
* Review and identify Conservation Management Plan (CMP) priorities;
* Suggest amendments to the CMS Dugong MOU CMP;
* Analyse scientific data or status reports on dugong and seagrass;
* Provide technical support and/or attend Dugong MOU webinars and workshops.

It was agreed to schedule meetings twice a year/every 6 months with potential to hold ad hoc meetings if needed to prepare for important events or conferences. It was noted that this year there are several Conference of Parties (COPs) and Standing Committee meetings happening which might require ad-hoc meetings of the TAG.

Prof Marsh suggested the timing of the meeting could alternate to cater for participants in various time zones. Meetings would ideally start at 9am/10am (UAE time).

Mr Grimsditch asked if any additional members were needed on the TAG, acknowledging that there is currently no representation from the Southeast Asia region. Dr Patricia Davis has requested to join. Dr Maria Potouroglou has requested to join as a seagrass expert. Dr Louisa Ponnampalam was invited but declined due to time constraints.

Prof JK Patterson suggested requesting Dr Kongkiat (Director, Phuket Marine Biological Centre, Thailand) to join the TAG, and Dr Amanda Hodgson suggested canvassing nominations from the IKI Seagrass Ecosystem Services Project partners.

Dr Christophe Cleguer suggested reaching out to contacts in Japan who also have experience in Thailand and with dugong acoustics. Dr Hodgson agreed that it would be good to have expertise on dugong acoustics represented on the TAG.

Dr Das sought clarification on the limit to the number of TAG members (max. 14). Mr Grimsditch confirmed that the TAG is currently at the maximum size, but it is possible to ask the National Focal Points to add additional members.

Prof Marsh reminded the group that the TORs included a representative of the CMS IOSEA Marine Turtle MOU on the TAG. Mr Grimsditch is in conversation with Mrs Heidrun Frisch-Nwakanma (IOSEA Marine Turtle MOU coordinator) to identify a relevant expert.

1. **CMS Dugong MOU activities**

Mr Grimsditch presented the Dugong MOU priority activities(*See attached PowerPoint*) including:

* The fourth Meeting of Signatories (MOS4) is currently planned for Q1 2024. The host country is yet to be determined.
* The MOS4 will be complimented by a dugong technical conference.
* The Dugong MOU has a community-based approach to supporting dugong conservation based on: participatory research, actions & policy, business models, communications.
* IKI Seagrass Ecosystem Services Project
* Dugong & Seagrass Hub
* Small Grants Scheme, new round announced in 2023
* Bazaruto Dugong and Seagrass Conservation project.
* Future Plans:
  + To produce an updated version of the 2001 Dugong Global Status Report. The Dugong MOU is in discussion with Prof Marsh and James Cook University with an aim to complete the updated global status report for dugong populations in time for MOS4. The TAG will be involved in developing the global status report by providing information on existing experts, literature and data sets that are available for dugong populations around the world, as well as by providing peer review of the report prior to publication.
  + To produce a review analysis of dugong bycatch survey data: A review and analysis of dugong bycatch data is being planned based on information collected through the Dugong MOU Catch & Bycatch Questionnaire data. The TAG will be tasked with reviewing the report on dugong bycatch prior to publication.

*Dugong genetics project*

Following the presentation, Dr Himansu Das raised the issue of the dugong genetics project that had previously been initiated by the CMS Dugong MOU. The Environment Agency Abu Dhabi (EAD) had sent dugong samples to Dr David Blair at the James Cook University, but no analysis results or reports had yet been shared with the EAD. EAD is keen for the dugong genetics project to be resumed under the CMS Dugong MOU. Mr Grimsditch agreed that the CMS Dugong MOU and the TAG should follow up with Dr Blair and re-initiate activities related to dugong genetics. Mr Grimsditch informed the TAG that there was great interest in the dugong genetics project at the Western Indian Ocean Marine Science Association Scientific Symposium Dugong Special Session in October 2022 in South Africa. A Rhodes University PhD student and Dr Vic Cockcroft are currently working to restart a Western Indian Ocean genetics review. Prof Marsh raised a topic of research interest for the Western Indian Ocean, regarding the potential genetic connectivity between coastal East African dugong populations and Western Indian Ocean island populations. Prof Sivakumar informed the TAG that the Indian Government has recently completed a dugong genomic study which will be published soon.

*Marine litter*

Prof Sivakumar also raised the importance of considering marine litter and plastic waste when managing for causes of dugong mortality. Mr Grimsditch suggested that plastics and marine litter could be highlighted more clearly within the Dugong MOU CMP. Prof. Marsh reiterated the importance of having a marine turtle expert as a TAG member because the marine turtle community is carrying out significant research on plastics within seagrass meadows and the impacts on turtles, which could also be applicable to dugongs.

**6. Group Discussion 1: Conservation Management Plan (CMP) Review and National Reporting Template for the Dugong MOU**

The CMP is an annex to the Dugong MOU and an important guiding document for signatory states and reporting to the Dugong MOU and the Meeting of Signatories (MOS).

During MOS3, a recommendation was made to review and update the current CMP. Prof Marsh was hired as an expert consultant by Dugong MOU to review the structure and content of the CMP, identify weaknesses, make recommendations, and assess how the CMP is used to report by signatory states against the MOU.

Prof Marsh’s assessment report was circulated to TAG prior to the meeting (UNEP/CMS/DUGONG/TAG1/Doc.06).

Prof Marsh outlined the main findings:

* Threats to dugong and seagrass habitats should be updated to include language on climate change.
* Sections on using ecosystem services data for seagrass management and conservation should be added.

Within the National Reports to MOS3 these elements were rarely mentioned and if they were, mitigation was not addressed.

* The current national reporting format favours yes/no answers through closed questions. This does not allow for details to be provided on lessons learned and exchange of best practices.
* Important elements are overlooked/not reported on in the current national reporting format: no mention about regional initiatives, fishing controls, waste disposal, establishing information centres.
* The template is designed for self-reporting but there are no feedback loops planned within.
* Important to include an opportunity to provide context for national reports. For example, some range states have small dugong populations and do not need/have capacity to design a singular dugong conservation approach, rather better to include them as part of larger marine mammal action plan.

Prof Marsh developed a revised national reporting format based on the example of the CMS reporting format. In the revised version, closed question (yes/no tick boxes) are now specifically linked to the CMP objectives with an opportunity to provide detailed answers as well.

Prof Marsh stressed that signatory states should be encouraged to report on regional collaborations, of particular interest to multilateral environmental agreements such as CMS.

Prof Marsh also expressed her concern that national reports are completed by government officials from central governments who may have limited understanding or information of the dugong research and conservation actions that should be reported on. When preparing national reports, it should be stressed that more extensive consultation with local experts and organizations should be carried out by the national focal points.

Dr Das congratulated Prof Marsh on the revision of the CMP mentioning that it is very needed and is keen to see climate change included in sections regarding habitat management, for instance including climate data from underwater data loggers and blue carbon.

Prof Sivakumar stated that the projects often invest in seagrass restoration even when the cost-benefits are not clear, and resources might be more effectively invested in conservation activities to reduce drivers of degradation. Prof Sivakumar suggested that guidelines on seagrass restoration would be useful to reference in the CMP.

He also noted that actions on satellite tracking have been removed from the CMP and suggested that satellite tracking of dugongs may be needed for endangered dugong populations such as in the Andaman Islands and the Gulf of Mannar that move across large ranges and potentially through corridors to access small patches of seagrass. He suggested satellite tracking of dugongs would provide useful data for conservation planning and protecting critical migration corridors. He requested the TAG to advise on methodologies for satellite tracking of dugongs.

Mr Grimsditch and Prof Marsh agreed that they would review the CMP to note how these issues of seagrass restoration vs conservation and dugong satellite tracking alternatives are covered within the CMP.

Dr Christophe Cleguer explained that satellite tracking may have been removed from the CMP because of the stress the process puts on dugongs and because the bulky tags can cause entanglement and obstructions – although new, smaller tags could fix this issue. Understanding dugong corridors is very important but dugong movement is very individualistic meaning a huge amount of data is needed to truly understand their movement corridors. Perhaps understanding fine-scale genetics and using eDNA could help to understand movement between key areas.

Prof Len McKenzie observed that the review conducted by Prof Marsh is of high quality, particularly the addition of language such as resilience and adaptation allowing for consideration of seagrass status (health/condition) and improving resilience prior to actual loss, rather than focusing only on restoration following loss.

Prof Marsh pointed out that an important focus of changes to the CMP and national reporting template is to encourage meaningful feedback on what has been achieved/implemented that has worked and had a meaningful impact, which could be shared with others. The focus should be on knowledge sharing, rather than box-ticking.

Prof Marsh is keen to request feedback from signatory states (particularly those represented within the TAG, i.e. Madagascar, Kenya, UAE, Mozambique, India) – requesting them to test the revised national reporting format and to provide feedback to the TAG in advance of the MOS.

**7. Group Discussion 2: Update of the ‘Dugong: status report and action plans for countries and territories’.**

The current status of the world’s dugong populations is currently not well documented, and an update of the 2001 report ‘Dugong: status report and action plans for countries and territories’ is planned by the CMS Dugong MOU. It is planned to publish an updated global report on dugong populations and trends, with regional chapters, by MOS4 (Q1 2024). The report will be based on desk-based research, literature reviews and interviews with dugong and marine mammal experts around the world. The report will also draw on the dugong survey research supported by the CMS Dugong MOU through the IKI Seagrass Ecosystem Services Project and the small grants programme.

Prof Marsh explained that the status and trends of global dugong populations need to be updated but that a mechanism also needs to be put in place to prevent the information going out of date soon after publication. She envisions an online wiki-style format allowing frequent, online updates with the TAG acting as quality control. This would ensure information remains contemporary through regular updates.

Dr Amanda Hodgson suggested that national reporting information could feed directly into the status update/wiki-style online updates. This would create synergies and reduce the work expected from signatory states.

Dr Das agreed on the importance of providing an online template for each region/country to allow for regular updates and a system that allows open-platform updating.

Prof Marsh and her team will first draft a sample chapter for the global report based on one region (i.e. East Africa) and circulate to TAG for review and feedback later in the year. This will help to create a model that can then be applied to other regional chapters.

The report will be based on regional chapters but in some cases it may also be appropriate to write national chapters – this will depend on the amount of information available/provided. It will be important to note that different countries have highly variable dugong population sizes as well as variable levels of information and data available.

When defining the dugong regions, Prof Marsh suggested that the Indian Ocean range regions are relatively clearly defined, but that there are more complications in defining the regions in Southeast Asia. These definitions will need to be further clarified through the process of preparing the report.

The TAG will be asked to support Prof Marsh and her team in accessing contacts, papers and reports (particularly grey literature) and metadata. Mr Grimsditch suggested that it could be possible to draw on the data sets collected under the IKI Project and the CMS small grants programme – even though much of this information is not published yet. Dr Hodgson added that she is currently involved in some drone surveys and supplying imagery software so the data collected is standardized and may support the status report.

Prof Marsh will recruit a research assistant to support her role once there is a contract in place between CMS and James Cook University.

**8. Action Points:**

* CMS to identify members interested in volunteering to Chair the TAG
* CMS to identify possible TAG members from Southeast Asia
* CMS to identify IOSEA Marine Turtle MOU representative to join the Dugong TAG
* Prof Marsh to provide contact details of Dr David Blair to CMS and Dr Das for follow up on the dugong genetics analysis
* CMS to look into reviving and clarifying the status of the genetics project
* CMS to send small grants proposal to TAG members for review
* CMS to review the CMP and consider if marine litter and plastics should be highlighted more strongly
* TAG members to provide written comments on the revised CMP to CMS & Prof Marsh
* TAG members to test-run the national reporting format and provide feedback to CMS & Prof Marsh
* The next TAG meeting to take place in 6 months (September or October 2023)

**ANNEX I**

**ALPHABETICAL LIST OF PARTICIPANTS**

**Members of the TAG**

|  |  |
| --- | --- |
| Dr Maitha Al Hameli | Section Manager – Marine Assessment & Conservation Terrestrial & Marine Biodiversity  Environment Agency Abu Dhabi  UAE |
| Dr Norbert Andrianarivelo | Senior Researcher  Institut Halieutique et des Sciences Marines  University of Toliara  Madagascar |
| Dr Chris Cleguer | Senior Research Officer  TropWater  James Cook University  Australia |
| Dr Damboia Cossa | Lecturer  Eduardo Mondlane University  Mozambique |
| Dr Himansu Das | Unit Head - Marine Threatened Species and Habitats  Terrestrial & Marine Biodiversity  Environment Agency Abu Dhabi  UAE |
| Dr Asma Hadi | Manager, Coastal Kenya Programme  WWF-Kenya  Kenya |
| Dr Amanda Hodgson | Research Fellow  Aquatic Megafauna Research Fellow  Murdoch University  Australia |
| Dr Benjamin Jones | Chief Conservation Officer  Project Seagrass  United Kingdom |
| Dr Anna Lafratta | Chief Executive Officer  Associate Research Fellow  Centre for Marine Ecosystems Research, School of Science  Edith Cowan University  Australia |
| Professor Helene Marsh | Emeritus Professor in Environmental Science  James Cook University  Australia |
| Professor Len McKenzie | Principal Research Officer  TropWater  James Cook University  Australia |
| Professor Edward Patterson | Director  Suganthi Devadason Marine Research Institute  India |
| Professor K. Sivakumar | Professor  Department of Ecology and Environmental Sciences  Pondicherry University  India |
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**Convention on Migratory Species**

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| Mr Gabriel Grimsditch | Programme Management Officer (Dugong MOU)  CMS Office - Abu Dhabi  United Arab Emirates |
| Ms Philippa Loates | Associate Programme Management Officer (Dugong MOU)  CMS Office - Abu Dhabi  United Arab Emirates |