



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

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STANDARDISED DUGONG CATCH/INCIDENTAL CATCH SURVEY TOOL

Purpose

To introduce and propose the adoption of a Standardised Dugong Catch/Incidental Catch Survey Tool as a means of rapidly obtaining data from fishermen to assess the status of artisanal fisheries and dugong conservation in places where data are deficient, and where threats to dugong survival may be high.

Background

1. Incidental capture of dugong in fishing gear is the most widespread threats throughout much of their range. Dugongs are caught incidentally in purse seine nets, bay nets, trap nets, beach seine nets, shark nets, trawl nets, fish traps, bag nets, long-lines and fish weirs.
2. Relevant objectives in the Conservation and Management Plan of the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range are:

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

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

3. Similar specific objectives are also contained in the sub-regional Conservation and Management Plan for Dugongs and their Habitats in the Western Indian Ocean:

Objective 3 – Reduce direct and indirect causes of dugong mortality

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

3.2 Reduce incidental capture and mortality of dugongs.

4. Recent evidence has highlighted the potential for large and small-scale artisanal fisheries in developing countries to have significant negative impacts on dugongs. In most cases, documentation of fishery scale and impacts, along with effective on-the-ground local management practices are limited or

non-existent. In the absence of management systems it is not possible to evaluate and quantify the effects of dugong as incidental catch in such fisheries through conventional management evaluation methods. Thus there is a need for a different, rapid and effective way to assess dugong populations, quantify artisanal fishing effort and incidental catch rates in data deficient areas.

Development of the Standardised Dugong Catch/Incidental Catch Survey Tool:

5. There is sufficient general evidence that in most countries where dugongs occur, numbers are small and most local people believe they are declining. Long term scientific data collection of population distribution and abundance and trends through scientific techniques such as aerial surveys are expensive and time consuming. Such methods are often beyond the infrastructure, resources and financial capacity of developing countries. In addition if action is deferred while data on population trends are gathered, then the consequent conservation action may be too late to prevent local extinction. Most data on the distribution and abundance of dugongs and their habitats are not suitable for designing effective conservation actions..

6. An alternative and cost-effective approach is to interview artisanal fishers to identify the areas where the likelihood of dugongs being killed is greatest by hunting, capture in fishing gear and vessel strikes, particularly where dugong habitat and fishing grounds overlap.

7. The Rapid Bycatch Assessment through interview surveys, developed by Project GloBAL at Duke University is a useful tool to quantify the extent of marine mammal bycatch (see GLOBAL project, Global Bycatch Assessment of Long-lived Species, <http://bycatch.env.duke.edu/>).

8. The Secretariat supported a workshop which brought together individuals with dugong and incidental catch assessment background and experience who contributed to the design of the standardised interview survey protocol based on the original method developed by Project GloBAL. This protocol was subsequently sent out for review to a wide-experience base, and revised accordingly.

9. The developed protocol was designed to collect information on dugongs and the threats to their existence which will be combined in a geographical information system (GIS) to identify 'dugong trouble spots'. This will allow communities to visualise 'dugong hot spots' which will help inform and allow local peoples to explore the ways in which the risks to dugongs and their habitats can be reduced.

Implementation of the Standardised Dugong Catch/Incidental Catch Survey Tool:

10. The low technology, low cost and statistically robust standardised survey tool has been designed to obtain updated standardised information on dugong distribution, trends in relative abundance, key habitats and impacts to populations. The tool has three components: the Standardised Dugong Catch/Incidental Catch Survey Questionnaire, a Project Manual and a Data Upload file to assist Range States in project implementation and is available for download at:

http://www.cms.int/species/dugong/dugong_noticeboard.htm.

11. The standardised survey tool is being implemented in projects being coordinated across 5 dugong range states in South East Asia and 5 range states in the Pacific Islands region. Similar projects are planned in range states in the North West Indian Ocean and South West Indian Ocean regions.

12. Each participating range state has been provided with technical support and coordination, including access to a technical advisor to provide advice and guidance to project partners in relation to use of the survey questionnaire, sampling protocol and methodology.

Additional Considerations

13. The standardised survey tool offers an attractive and relatively cheap method to acquire long-term and spatial data related to endangered species status and threats, and is proving to have significant potential as an appropriate starting point to assess dugong populations in developing countries.

14. The standardised survey tool could facilitate multiple, “longitudinal” surveys at particular locations to assess changes over time, as well as collection of comparable data from a number of locations and range states.

15. In addition, the standardised survey tool is designed to collect data not only for dugongs, but also marine turtles and other marine mammals including manatees and cetaceans. Since these species face similar conservation threats to those that jeopardize dugongs, the value of the surveys for identifying and focusing conservation actions extends far beyond that for dugongs alone.

16. To be effective, surveys must be conducted consistently and at the scale of whole countries. The survey will enable future efforts to concentrate on action which ensures that there are dugongs, cetaceans, and sea turtles around for future generations.

Recommendation

- Signatory States and observers where appropriate endorse the Standardised Dugong Catch/Incidental Catch Survey Tool for application wherever small-scale artisanal fisheries and dugong habitat create a threat to dugong population viability.
- Signatory States and observers endorse the application of the tool to other potential range states.
- Signatory States and observers agree to expand the application of the surveys to all range states, subject to available resources.