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

*Online, 20 March 2023, 10am – 12.30pm (+4 UTC)*

UNEP/CMS/DUGONG/TAG1/Doc.07

**NATIONAL REPORT TEMPLATE**

**REGARDING THE IMPLEMENTATION OF THE CONSERVATION AND MANAGEMENT PLAN FOR THE MEMORANDUM OF UNDERSTANDING ON THE CONSERVATION AND MANAGEMENT OF DUGONG (*DUGONG DUGON*) AND THEIR HABITATS THROUGHOUT THEIR RANGE**

(*Draft: October 16, 2022*)

# Background

The purpose of this National Report is to provide information on each signatory dugong range state’s implementation of the Dugong MoU. The information in National Reports will be collated to give an overview of regional and international implementation of the Dugong MoU and to highlight opportunities for collaboration.

The Actions in this report are based on those in the October 2022 version of the Dugong MoU Conservation and Management Plan (CMP).

# Instructions for completing the National Report

* Please complete all questions. Where a written response is required, please provide an answer.
* Checkboxes can be selected by clicking on it, an “x” will appear in the box. You can de-select a box by clicking on it again.
* To enter text, highlight on “click here to insert text” and start typing.
* You should select all activities (checkboxes) that are relevant to each objective of the CMP in your country. Some of the examples are applicable only in certain areas. Thus, not all the actions listed are appropriate to the circumstances in your country and so we expect that you will not check all the actions for any objective.
* The questions in the National Report refer to all activities you have undertaken since your country became a Signatory to the Dugong MoU. You should include activities that commenced before your country signed the Dugong MoU that you have continued since then.
* Detailed responses are encouraged, especially with regard to future plans. Wherever possible and/or relevant, please indicate the source of information used to address a particular objective. For example, if you are answering using information from a published annual report, please include the name of the report and link if it is available online. Remember that you are sharing information with other countries about your progress, so it may be of benefit to them.
* When you have completed your report, please email it, along with any other relevant information to the Dugong MoU Secretariat at [Cms0ffice.ae@cms.int](mailto:Cms0ffice.ae@cms.int) by [specify date].

# Section 1: General information

**On behalf of which country are you completing this National Report? Somalia**

**What agency or institution has been primarily responsible for answering the questions in this report? Ministry of Fisheries and Blue economy, Department of marine environment and aquatic species.**

**Please list any other agencies, institutions or non-government organizations that have provided input: Government institute of Marine Research, and SIFO FISH ORGANIZATION, none government organization,**

**On what date did the Dugong MoU take effect in your country? 19.02.2013 (i.e., what is the start date of activities reported on in this National Report?)** 1 January 2024

**On what date are you submitting this report? 1 February 2024**

# Section 2: Dugong Status

Questions in Section 2 address the objectives and actions in the 2022 version of the Dugong MoU Conservation and Management Plan:

## **Objective 1 – Reduce direct and indirect causes of dugong mortality.**

### **Action 1.1: Identify, assess and evaluate the threats to dugong populations and develop appropriate measures to address these threats.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify capacity, resources and sources of funding for actions to reduce direct and indirect causes of dugong mortality.
* Establish baseline data collection and monitoring programmes, appropriate to national dugong population size and distribution and human capacity, to gather information on the nature and magnitude of threats, including climate change. See Dugong and Seagrass Research Toolkit (<http://www.conservation.tools/>) for methods appropriate for context.
* Regularly update existing data on threats to dugong populations.
* Determine those populations affected by traditional subsistence and customary use, incidental capture in fisheries, and other sources of mortality.
* Conduct socio-economic studies among communities that interact with dugong and their habitats to determine the context for appropriate responses.
* Implement programmes to correct adverse social and economic incentives that threaten dugong populations.
* Facilitate the development of means of subsistence for affected human communities to minimize resultant adverse social and economic impacts.
* Enact, where not already in place, legislation that prohibits the direct use (capture or killing) of, and trade in, dugong their parts or products, whilst allowing exceptions for traditional subsistence or customary use.
* Establish governance and management programmes at a level relevant to the national circumstances to enforce such legislation.
* Negotiate, where appropriate, management agreements in consultation with other concerned dugong range states in the region

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

**Yes there action that we can is raising awareness, and community sensitization programme**.

**Please describe the actions that you consider of limited success and why:**

**Lack capacity building on conservation of dugong and their habitats**.

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

Basic data mapping and previous field assessment.

**What else could have been done to reduce direct and indirect causes of dugong mortality for dugong in your country? What are your plans for the future?**

To reduce the mortality of dugong is to conserve and protected areas of seagrass, and planning future is to advocate community role of conservation and no fishing ground around the dugong habitats.

### **Action 1.2: Reduce, to the greatest extent practicable, the incidental capture and mortality of dugong linked to fishing activities.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Assess the levels and locations of artisanal and commercial fishing activities on dugong at ecologically relevant scales.
* Develop and encourage the use of gears, devices and techniques to minimize incidental capture of dugong and other relevant marine wildlife (e.g., small cetaceans and marine turtles) in artisanal and commercial fisheries, such as the use of alternative gears, and/or limit or control the use of gears known to be harmful to dugong throughout their range, such as gill nets.
* Explicitly include dugong and seagrass in objectives when planning the establishment of new marine protected areas and in revising existing protected areas that prohibit or limit fishing activities (i.e. spatial fishing closures), and measure the effectiveness of protected areas in meeting these objectives.
* Develop procedures and extension programmes to promote implementation of these measures.
* Exchange information and, upon request, provide technical assistance to other signatory and cooperating dugong range states to promote these activities, especially states within the same region.
* Liaise and coordinate with fishing industries, fisheries management organizations and community groups to develop and implement these activities.
* Ban the sale of products from dugong caught incidentally in fishing gear and enforce this ban.
* Minimize the disposal of fishing gear at sea and on beaches by developing and implementing net marking, retention and recycling schemes.
* Provide and ensure the use of onshore facilities for the disposal of ship-borne waste.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text] community led conservation programme and educational awareness.

**Please describe the actions that you consider of limited success and why:**

[free text] due to financial challenges. And funding Gap.

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text] Field visit and observation.

**What else could have been done to reduce the incidental capture and mortality of dugong linked to fishing activities in your country? What are your plans for the future?**

[free text] NO fishing trawlers around the seagrass areas, and No Noising engine around the dugong habitats.

### **Action 1.3: Reduce, to the greatest extent practicable, the mortality of dugong arising from anthropogenic activities other than fishing (e.g., vessel strike, pollution, explosives)**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Assess the level, location and impact of existing anthropogenic impacts on dugong at ecologically relevant scales.
* Reduce as much as possible all other human impacts on dugong and their habitats in areas that sustain subsistence and customary use.
* 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.
* Explicitly include dugong and seagrass in the objectives when planning the establishment of new marine protected areas and in revising existing protected areas that prohibit or limit vessel traffic (e.g., slow zones, no go zones), and measure the effectiveness of protected areas at meeting those objectives.
* Explicitly include dugong and seagrass in Environmental Impact assessments of all relevant coastal development projects?

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text] community participatory, and community engagement.

**Please describe the actions that you consider of limited success and why:**

[free text] lack of policy intervention and advocacy.

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to reduce the mortality of dugong arising from anthropogenic activities other than fishing (e.g., vessel strike, pollution, explosives)? What are your plans for the future?**

[free text] Plastic pollutions are major threat of Dugong in Somalia.

### **Action 1.4: Reduce, to the greatest extent practicable, the illegal take of dugong.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Assess the levels, locations and impacts of the illegal take of dugong.
* Establish appropriate and effective management programmes to address the illegal take of dugong (e.g., full or partial hunting ban with adequate enforcement, awareness programmes).
* Ban the sale of products from dugong taken illegally and enforce this ban.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to reduce, to the greatest extent practicable, the illegal take of dugong? What are your plans for the future?**

[free text]

### **Action 1.5: Ensure that traditional subsistence and customary use of dugong is sustainable in areas where it is permitted.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Assess the levels, locations and impacts of traditional subsistence and customary use of dugong at ecologically and culturally relevant scales using culturally appropriate techniques*.*
* Reduce as much as possible all other human impacts on dugong and their habitats in areas that allow traditional subsistence and customary use.
* Work with relevant local communities to establish culturally appropriate management programmes to ensure that traditional subsistence and customary use is sustainable, taking account of cultural practices and the temporal and spatial variability of dugong reproductive rates and other impacts on the species in a precautionary manner*.*
* Ensure that such programmes do not have adverse unintended consequences (e.g., increase use of other threatened species such as marine turtles)*.*
* Work with local communities to develop culturally appropriate alternative means of subsistence in areas where the traditional subsistence and customary use of dugong is permitted to alleviate adverse social and cultural impacts*.*
* Negotiate, where appropriate, management agreements on the sustainable level of traditional subsistence and customary use where it is permitted, in consultation with other concerned dugong range states, to ensure that such use does not undermine traditional conservation efforts*.*
* Ensure that the management of other species (including fisheries) does not have adverse unintended consequences on the traditional customary use of dugong where it is permitted*.*

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to ensure that traditional subsistence and customary use of dugong is sustainable in areas where it is permitted? What are your plans for the future?**

[free text]

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

### **Action 2.1: Determine the distribution and abundance of dugong populations to provide baselines for future conservation efforts and actions.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify resources and sources of funding for data collection and analysis of information on the distribution and abundance of dugong populations.
* Use the Dugong and Seagrass Research Toolkit (<http://www.conservation.tools/>) to identify contextually appropriate techniques.
* Where possible, conduct baseline studies and gather secondary information on dugong populations using cost effective techniques appropriate to the population size and distribution of dugong and human capacity (e.g., community-based monitoring and megafauna stranding programmes)

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to determine the distribution and abundance of dugong populations to provide baselines for future conservation efforts and actions? What are your plans for the future?**

[free text]

### **Action 2.2: Conduct research and monitoring of important dugong populations**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify ongoing resources and sources of funding for research and monitoring activities of important dugong populations.
* Identify and include priority research and monitoring needs in regional, sub-regional and national action plans.
* Initiate and/or continue long-term monitoring of locally important dugong populations at appropriate spatial scales in order to assess conservation status, using a combination of traditional, community-based and scientific techniques, where appropriate.
* Determine the cultural and provisioning services provided by the legal harvest of dugong and estimate the relative perceived and monetary values of these services, if appropriate.
* Conduct studies on genetic identity, conservation status, movements, and other biological and ecological aspects of dugong, taking advantage of collaborations where appropriate.
* Promote the use of traditional ecological knowledge in research and management studies, where possible.
* Use citizen-science to involve local communities in research and monitoring programmes, with training as required.
* Periodically review and evaluate research and monitoring activities in the context of threats to dugong, including climate change and associated extreme weather events (e.g., marine heatwaves, floods, cyclones and harmful algal blooms).
* Use research studies and monitoring reports to undertake an extinction risk assessment at a relevant scale using the IUCN Red List Categories and Criteria for listing dugong subpopulations on the IUCN Red List of Threatened Species, where appropriate.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to conduct research and monitoring of important dugong populations? What are your plans for the future?**

[free text]

### **Action 2.3 Collect and analyze data that support the identification of sources of mortality, the mitigation of threats and improved approaches to conservation practices.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify and quantify sources of mortality to dugong populations using local information where appropriate.
* Identify population trends using local information where appropriate.
* Identify and prioritize dugong populations for conservation actions.
* Develop indicators to measure the effectiveness of management actions at meeting conservation objectives.
* Use research results to improve management, mitigate threats and assess the efficacy of conservation activities (e.g., habitat loss, etc.).
* Involve local communities in research and monitoring programmes with training as required.

*Develop and harmonize data collection, analysis and storage protocols* for important dugong populations. Data collection techniques should be fit for context as outlined in the Dugong and Seagrass Research Toolkit (<http://www.conservation.tools/>)

Where possible, develop and harmonize reporting formats to enhance evidence-based decision-making.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to collect and analyze data that support the identification of sources of mortality, the mitigation of threats and improved approaches to conservation practices? What are your plans for the future?**

[free text]

## **Objective 3 – Protect, conserve and manage habitats for dugong.**

### **Action 3.1: Identify and map areas of important dugong habitat, and identify threats to those habitats (including climate change)**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify and map areas of important dugong habitat, such as seagrass communities, thermal refuges, vocalization hotspots and migratory corridors, using rapid assessment techniques, citizen science and traditional knowledge where appropriate.
* Establish baseline data collection and monitoring programmes, appropriate to the national dugong population size and distribution and human capacity, to gather information on the nature and magnitude of threats, including climate change.
* Conduct socio-economic studies among communities that interact with important dugong habitats to determine the context for appropriate responses.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to identify and map areas of important dugong habitat and identify threats to those habitats (including climate change)? What are your plans for the future?**

[free text]

### **Action 3.2: Establish necessary measures to protect and conserve dugong habitats.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Explicitly include dugong and seagrass in objectives when establishing new or revising existing marine protected, and measure the effectiveness of protected areas at meeting those objectives.
* Clearly articulate threat mitigation objectives for dugong and their habitats in designing marine protected areas (these include sanctuaries or temporary exclusion zones and restrictions on vessel traffic), or undertaking other measures (e.g., modification of fishing gear, banning destructive fishing practices), measure the effectiveness of such actions at meeting these objectives, and involve the local community as much as possible.
* Consider protecting dugong habitats as part of ecosystem-based management (e.g., networks of marine protected areas).
* Consider how to protect areas of important dugong habitat that fall outside existing protected areas (e.g., special management arrangements).
* Assess the environmental impact of marine and coastal development and other human activities on dugong populations and their habitats.
* Monitor and promote the protection of water quality from land-based and maritime pollution, including marine debris, which may adversely affect dugong and their habitats.
* Strengthen the application of existing bans on the use of poisonous chemicals and explosives in the exploitation of marine resources.
* Develop Payment for Ecosystem Services (PES) schemes or other incentive-based schemes for protecting seagrass habitats

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to protect and conserve dugong habitats? What are your plans for the future?**

[free text]

### **Action 3.3: Increase the resilience of seagrass communities of importance to dugong to climate change.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Conduct vulnerability assessments of important dugong habitats in association with local communities.
* Identify and implement appropriate adaptation responses to climate change and other hazards where possible.
* Increase the resilience of seagrass communities vulnerable to climate change by minimizing other hazards

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to increase the resilience of seagrass communities of importance to dugong to climate change? What are your plans for the future?**

[free text]

### Action 3.4: Identify and rehabilitate degraded dugong habitats.

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify and undertake measures where appropriate to enhance recovery of degraded seagrass habitats used by dugong, where the causes of degradation are known and can be reversed.
* Identify and enhance recovery of degraded mangrove and coral reef habitats used by dugong, where the causes of degradation are known and can be reversed.
* Undertake measures to restore degraded habitats.
* Monitor and evaluate the outcomes of the restoration over time

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to Identify and rehabilitate degraded dugong habitats? What are your plans for the future?**

[free text]

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

### **Action 4.1: Identify and monitor important dugong habitats.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify resources and sources of funding for data collection and analysis of information on dugong habitats.
* Use the Dugong and Seagrass Research Toolkit (<http://www.conservation.tools/>) to identify techniques appropriate for context.
* Conduct baseline studies or gather secondary information on dugong habitats using cost effective techniques where possible (e.g., community-based monitoring).
* Initiate and/or continue long-term monitoring of priority dugong habitats.
* Promote the use of traditional ecological knowledge in research and management studies, where possible and appropriate.
* Involve local communities in research and monitoring programmes, with training as required.
* Review periodically and evaluate research and monitoring activities.
* Identify and include priority research and monitoring needs in regional and sub-regional dugong action plans.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to identify and monitor important dugong habitats? What are your plans for the future?**

### **Action 4.2: Conduct research to understand and quantify the perceived and monetary values of the ecosystem services provided by seagrass habitats of importance to dugong.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Conduct studies to: (1) understand the ecosystems services of seagrass beds of importance to dugong (e.g., sediment stabilization, biological diversity, fisheries nursery and feeding grounds, blue carbon, tourism, cultural services and human food security), and (2) estimate the perceived values of these services
* Use research results to identify priority areas for management, and appropriate actions and develop Payment for Ecosystem Services (PES) schemes or other incentive-based schemes for protecting seagrass habitats

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to understand and quantify the perceived and monetary values of the ecosystem services provided by seagrass habitats of importance to dugong? What are your plans for the future?**

[free text]

### **Action 4.3: Conduct research to identify and understand the likely impacts of climate change hazards on seagrass communities of importance to dugong.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Collaborate with international researchers to investigate the likely impacts of climate change hazards on seagrass.
* Assess the vulnerability to climate change of seagrass communities of importance to dugong.
* Initiate and/or continue long-term monitoring of priority dugong habitats to determine the impacts of climate change, especially associated extreme events such as marine heatwaves, floods, cyclones and harmful algal blooms.
* Promote the use of traditional ecological knowledge in research and management studies, and where possible involve local communities with training as required.
* Regularly review and evaluate activities in a program of adaptive management.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What other research could have been done to identify and understand the likely impacts of climate change hazards on seagrass communities of importance to dugong? What are your plans for the future?**

[free text]

## **Objective 5 – Raise awareness of dugong conservation.**

### **Action 5.1: Establish education, awareness and information programmes appropriate to the size of the national dugong population.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify gaps in stakeholders’ awareness of dugong (e.g., presence, population significance, biology and ecology, cultural, environmental, and economic values, importance of seagrass habitats) and develop an dedicated education and awareness programme or include as part of a generic programme for marine megafauna.
* Collect, develop, co-ordinate and disseminate education materials (e.g., dedicated national or regional website for dugong/marine megafauna).
* Identify key persons/champions to help disseminate messages about the need to conserve dugong/megafauna and their habitats.
* Establish community learning/information centres.
* Develop and implement mass media information programmes.
* Develop and conduct focused education and awareness programmes for target groups (e.g., policy makers, teachers, schools, fishing communities, subsistence and customary users, media).
* Encourage the incorporation of dugong biology and conservation into school curricula in the context of generic programs on marine megafauna.
* Organize special events related to marine megafauna, especially dugong conservation and biology (e.g., named days/years, symposia, community education workshops).
* Promote public participation in conservation activities.
* Involve stakeholders (e.g., key policy makers, subsistence and customary users, and local communities) in planning and implementation of conservation and management measures.
* Encourage the participation of government institutions, intergovernmental government organizations, non-governmental organizations, the private sector and the general community (e.g., students, volunteers, fishing communities, local communities) in research, conservation and management efforts.
* Implement, where appropriate, incentive schemes to encourage public participation (e.g., T-shirts, public acknowledgement and certificates)

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Did you develop a dedicated education programme for dugong or include them as part of a generic programme for marine megafauna? Please explain the reasons for your approach:**

[free text]

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to establish education, awareness and information programmes appropriate to the size of the national dugong population? What are your plans for the future?**

[free text]

### **Action 5.2: Engage with local communities to encourage their active participation in conservation efforts.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify, develop and facilitate alternative programmes (e.g., means of subsistence and incentives) that are not detrimental to megafauna, especially dugong and their habitats, in consultation with local communities and other stakeholders.

The following questions appear only if the action was selected.

**Overall, how successful was this action in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the activities that you consider particularly successful and why:**

[free text]

**Please describe the activities that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to engage with local communities to encourage their active participation in conservation efforts? What are your plans for the future?**

[free text]

## **Objective 6 – Enhance national, regional and international cooperation.**

### **Action 6.1: Collaborate with,** **and assist signatory and non-signatory dugong range states to combat illegal international and domestic trade, and to cooperate in enforcement activities relating to dugong products**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Encourage dugong range states (particularly neighboring dugong range 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).
* Review, at a national level, compliance with obligations under CITES relating to illegal international trade in dugong products or marine products with which dugong products may be traded (e.g., shark fins and fish swim bladders).
* Facilitate better compliance with CITES through training of relevant authorities in cooperation with other signatory dugong range states, the CITES Secretariat and other relevant organizations.
* Identify routes of international illegal trade in marine products through monitoring and seeking cooperation to take action to prevent, deter and, where possible, eliminate such trade
* Exchange and discuss information on compliance and illegal trade issues at regular intervals (e.g., through annual reporting to the Dugong MoU Secretariat and at Meetings of the Signatory States (MOS)).
* Cooperate, where possible, in the establishment of transboundary marine protected areas using ecological rather than political boundaries

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to collaborate with, and assist signatory and non-signatory dugong range states to combat illegal international and domestic trade, and to cooperate in enforcement activities relating to dugong products? What are your plans for the future?**

[free text]

### **Action 6.2: Develop and implement mechanisms for effective exchange of information on dugong and/or marine megafauna more generically.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify and strengthen existing mechanisms for cooperation at the regional and sub-regional level such as relevant Regional Seas Conventions and Action Plans
* Develop a website and/or newsletter to facilitate networking and exchange of information relating to dugong, or marine megafauna more generically.
* Develop a web-based information resource for dugong/marine megafauna conservation (including data on populations, on-going projects) based on IUCN website.
* Regularly update a directory of experts and organizations concerned with dugong/marine megafauna conservation, grouping experts speaking the same language.
* Develop networks for cooperative management of shared dugong populations, within or across sub-regions, and formalize cooperative management arrangements where appropriate.
* Cooperate, where possible, in the establishment and ongoing management of transboundary marine protected areas using ecological rather than political boundaries.
* Develop a streamlined format for reporting and exchanging information (through the Dugong MoU Secretariat and among Signatory States) on the state of dugong/marine megafauna conservation at the national level.
* Encourage Dugong MoU Signatory States that have not already done so to become Parties to the Convention on Migratory Species (CMS) and other CMS groups, such as IOSEA Marine Turtles.
* 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).
* Establish relationships with regional fisheries bodies with a view to obtaining data on incidental capture and encourage them to adopt marine megafauna/dugong conservation measures within Exclusive Economic Zones (EEZ) and territorial waters.
* Determine the most appropriate methods for information dissemination e.g., internet and community forums.
* Exchange, at regular intervals, scientific and technical information and expertise among nations, scientific institutions, non-governmental and international organizations, in order to develop and implement best practice approaches to conservation of dugong/marine megafauna and their habitats.
* Disseminate traditional knowledge on dugong and other marine megafauna, their habitats and traditional practices for conservation and management in a culturally appropriate manner.
* Update data on dugong populations of regional interest on a regular basis (e.g., country status reports).
* Encourage collaboration with the Sirenia Specialist Group, especially in subpopulation listing assessments for dugong where appropriate

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Did you exchange information on dugong or include them as part of a generic exchange of information on marine megafauna? Please explain the reasons for your approach:**

[free text]

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to develop and implement mechanisms for effective exchange of information on dugong and/or marine megafauna more generically? What are your plans for the future?**

[free text]

### **Action 6.3: Improve coordination among government and non-government sectors and communities in the conservation of dugong and other marine megafauna and their habitats.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Review the roles and responsibilities of government agencies related to the conservation and management of dugong and their habitats in the context of marine megafauna management more generically.
* Designate a lead agency responsible for coordinating national dugong/marine megafauna conservation and management policy.
* Identify non-governmental organization(s) with an interest in dugong conservation and management.
* Encourage cooperation within and among government and non-government sectors, including through the development and/or strengthening of national networks

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Did you co-ordinate information on dugong or include them as part of a generic exchange of information on marine megafauna? Please explain the reasons for your approach:**

[free text]

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to Improve coordination among government and non-government sectors and communities in the conservation of dugong and their habitats? What are your plans for the future?**

[free text]

### **Action 6.4: Develop and implement a regional database of relevant information in relation to dugong or marine megafauna conservation and management.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

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

The following questions appear only if the action was selected.

**Overall, how successful was this action in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Did you contribute to a regional database for the dugong or include them as part of a generic exchange of information on marine megafauna? Please explain the reasons for your approach:**

[free text]

**Please describe activities that you consider particularly successful and why:**

[free text]

**Please describe activities that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to develop and implement a regional database of relevant information in relation to dugong or marine megafauna conservation and management? What are your plans for the future?**

[free text]

## **Objective 7 – Promote implementation of the MoU**

### **Action 7.1: Encourage** **signatory and non-signatory dugong range states to participate in the Dugong MoU and its conservation and management activities**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Encourage non-Signatory dugong range states to sign the Dugong MoU.
* Arrange regional and sub-regional workshops involving non-signatory dugong range states to raise awareness of the Dugong MoU in association with the IOSEA MoU for marine turtle, if appropriate.
* Consider, at each meeting of the Signatory States, the timetable for regular reviews of the Dugong MoU implementation

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to encourage signatory and non-signatory dugong range states to participate in the Dugong MoU and its conservation and management activities? What are your plans for the future?**

[free text]

### **Action 7.2: Support the Secretariat of the Dugong MoU to ensure the objectives of the Conservation and Management Plan are met.**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Secure reliable sources of funding to support the Dugong MoU Secretariat in collaboration with other Signatory States.

The following questions appear only if the action was selected.

**Overall, how successful was this action in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the activities that you consider particularly successful and why:**

[free text]

**Please describe the activities that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to support the Secretariat of the Dugong MoU to ensure the objectives of the Conservation and Management Plan are met? What are your plans for the future?**

[free text]

### **Action 7.3: Seek resources to support the implementation of the Dugong MoU**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Prioritize conservation and management activities for funding.
* Explore funding options with governments and other donors (e.g.., the Asian Development Bank, World Bank, UNDP, European Union, UNEP, GEF, GCF, bilateral donors etc.) in association with funding for seagrass communities and/or the IOSEA Marine Turtle MoU, if appropriate.
* Solicit funding and other contributions from industries that have impacts on dugong and their habitats (e.g., fisheries, tourism, oil industry, real estate).
* Explore international funding support and other incentives for Signatory States that effectively manage their populations of dugong and other marine megafauna.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to seek resources to support the implementation of the Dugong MoU? What are your plans for the future?**

[free text]

### **Action 7.4: Create links and develop synergies with other relevant regional conservation conventions, MOUs and agreements**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify and where appropriate establish links to other international, regional, sub-regional fora, conventions, agreements and MoUs (e.g., the IOSEA Marine Turtle MoU), and use them to enhance the conservation management of dugong.

The following questions appear only if this action was selected.

**Overall, how successful was this action in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the activities that you consider particularly successful and why:**

[free text]

**Please describe the activities that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to create links and develop synergies with other relevant regional conservation conventions, MOUs and agreements? What are your plans for the future?**

[free text]

## **Objective 8 – Improve legal protection of dugong and their habitats**

### **Action 8.1: Encourage signatory and non-signatory dugong range states to incorporate dugong and habitat conservation and protection measures into national legislation and to implement these measures**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Encourage Dugong MoU signatory dugong range states that have not already done so to become Parties to the Convention on Migratory Species (CMS).
* Encourage dugong range states to establish legislation to protect dugong and their habitats while recognizing existing customary management systems.
* Co-operate with neighboring jurisdictions in law enforcement to ensure harmonious application of laws across and between jurisdictions (including through bilateral/multilateral agreements and intelligence sharing).

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to incorporate dugong and habitat conservation and protection measures into legislation across signatory and non-signatory dugong range states, particularly in your region? What are your plans for the future?**

[free text]

### **Action 8.2: Review, and where necessary, strengthen national legal protection for dugong and their habitats**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Review domestic policies and laws to address gaps or impediments to dugong conservation.
* Ensure appropriate sanctions for harming dugong or destroying habitat.
* Train law enforcement officers to implement penalties for harming dugong or destroying habitat.
* Use these penalties to raise public awareness and encourage the public to report illegal activities

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to strengthen national legal protection for dugong and their habitats? What are your plans for the future?**

[free text]

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

### **Action 9.1: Promote capacity building at all levels to strengthen conservation measures for dugong and their habitats or marine megafauna more generically**

**Please indicate the actions that have been undertaken by your country during the reporting period. These actions can include ongoing activities as well as actions initiated during the reporting period.**

(select all that apply)

* Identify needs for capacity building in terms of human resources, knowledge and facilities.
* Provide training (e.g., through workshops) in conservation and management techniques for dugong/marine megafauna and their habitats to relevant agencies, individuals and local communities.
* Coordinate training programmes and workshops.
* Develop partnerships with universities, research institutions, NGOs, training bodies and other relevant organizations to support capacity building initiatives.
* Identify, assess, develop and implement training programmes for local communities, NGOs, community-based organizations, media, enforcement officers, policy makers, law makers and decision makers.
* Enhance capacity at all levels to develop and undertake joint research programmes on dugong and their habitats.
* Organize forums (local, national and regional as appropriate) with the involvement of all relevant stakeholders to enable knowledge sharing and capacitybuilding.
* Provide training on development, implementation and monitoring of community rehabilitation programmes.
* Support local communities and relevant national organizations with necessary basic equipment and facilities to enable protection, conservation and management of dugong/marine megafauna and their habitats.

The following questions appear only if at least one action was selected.

**Overall, how successful have these actions been in reducing threats?**

(tick one box)

* 1 very little impact
* 2 small impact
* 3 good impact
* 4 large positive impact
* not known

**Did you exchange information on dugong or include them as part of a generic exchange of information on marine megafauna? Please explain the reasons for your approach:**

[free text]

**Please describe the actions that you consider particularly successful and why:**

[free text]

**Please describe the actions that you consider of limited success and why:**

[free text]

**Please identify the main form(s) of evidence that has/have been used to make this assessment:**

[free text]

**What else could have been done to promote capacity building at all levels to strengthen conservation measures for dugong and their habitats or marine megafauna more generically? What are your plans for the future?**

[free text]