



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

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### ANALYSIS OF NATIONAL REPORTS

*Prepared by the Dugong MOU Secretariat*

#### Background

1. This Addendum analyses and summarises the results from the National Reports of Signatories submitted to the Dugong MOU Secretariat, as at 2 March 2017, and incorporates data collected from both Signatory and Non-Signatory Range States. The National Report template is framed in the context for implementation of the Dugong MOU Conservation and Management Plan (CMP) and is designed to mirror the objectives and actions outlined in the CMP.

2. National reports from the following countries have been included in this analysis:

• Australia	• Myanmar	• Sri Lanka
• Bahrain	• Palau	• Sudan
• Egypt	• Papua New Guinea	• Tanzania
• Eritrea	• Philippines	• Thailand (draft)
• Jordan (non-signatory)	• Saudi Arabia	• United Arab Emirates
• Kenya	• Seychelles	• Vanuatu
• Madagascar	• Solomon Islands	
• Mozambique	• Somalia	

3. The Secretariat received National Reports from Viet Nam, and France (on behalf of Mayotte and New Caledonia) that used the old national reporting templates. Due to the incompatibility of the data these reports have been excluded from the analysis in this Addendum. All National Reports are available on the MOS3 webpage<sup>1</sup> under 'National Reports' with the exemption of the report received in a draft format. A National Report was received from Indonesia but not in time to be included in this analysis.

4. The Secretariat encourages review of the reports as they provide valuable information on each country's implementation of the Dugong MOU.

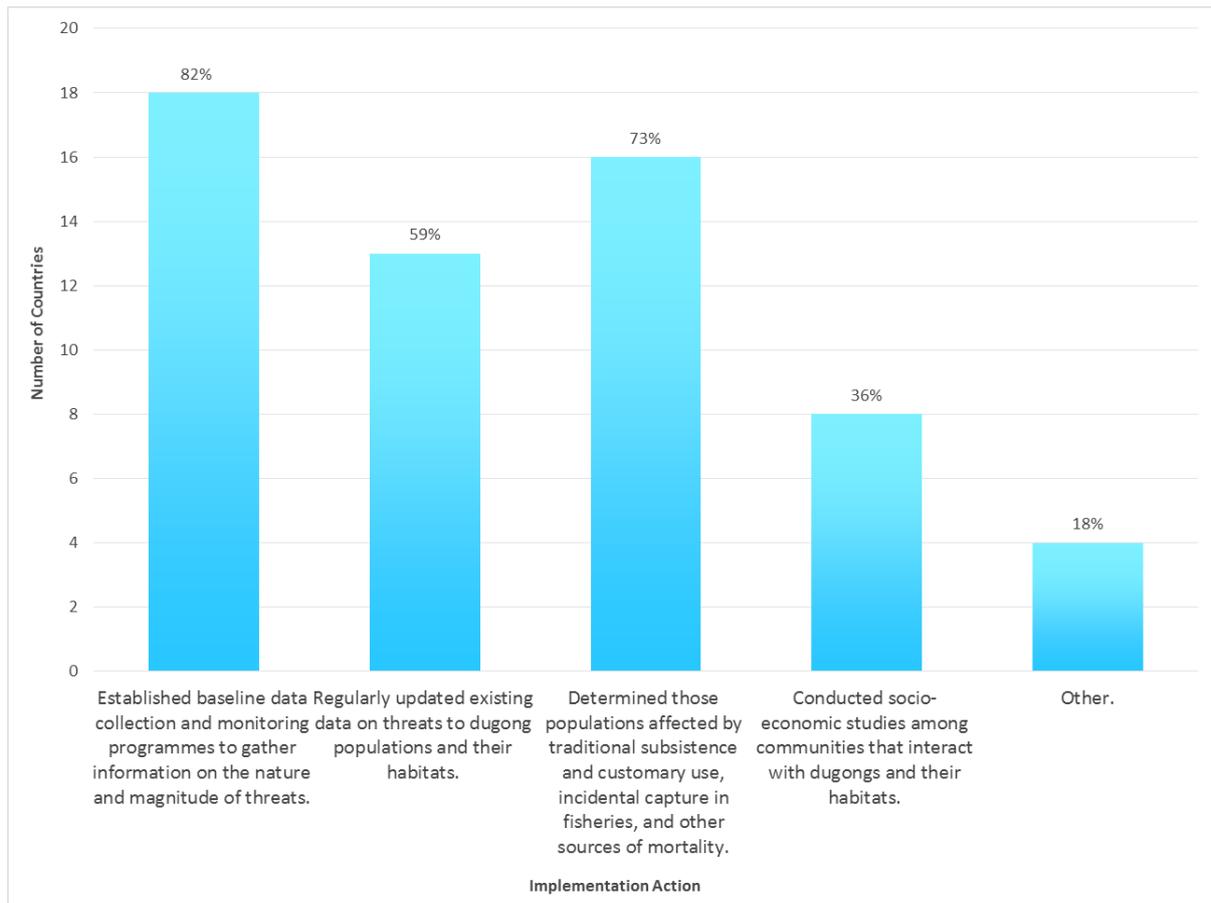
#### Analysis

5. The analysis follows the format of the National Report template. Where a question required the respondent to provide a written answer, a summary of the responses is included in this document. For the detailed response from each country, please see their individual National Report on the MOS3 webpage under 'National Reports'.

<sup>1</sup> [www.cms.int/dugong/en/meeting/third-meeting-signatories-dugong-mou](http://www.cms.int/dugong/en/meeting/third-meeting-signatories-dugong-mou)

## Dugong status

*Question 6: Which of the following has your country done to identify, assess and evaluate the threats to dugong populations?*



To identify, assess and evaluate the threats to dugong populations, the majority of countries implemented the main actions except for conducting socio-economic studies among communities that interact with dugongs and their habitats (implementation rate of 36%).

*Question 7: Has your country undertaken measures to address these threats to dugongs?*

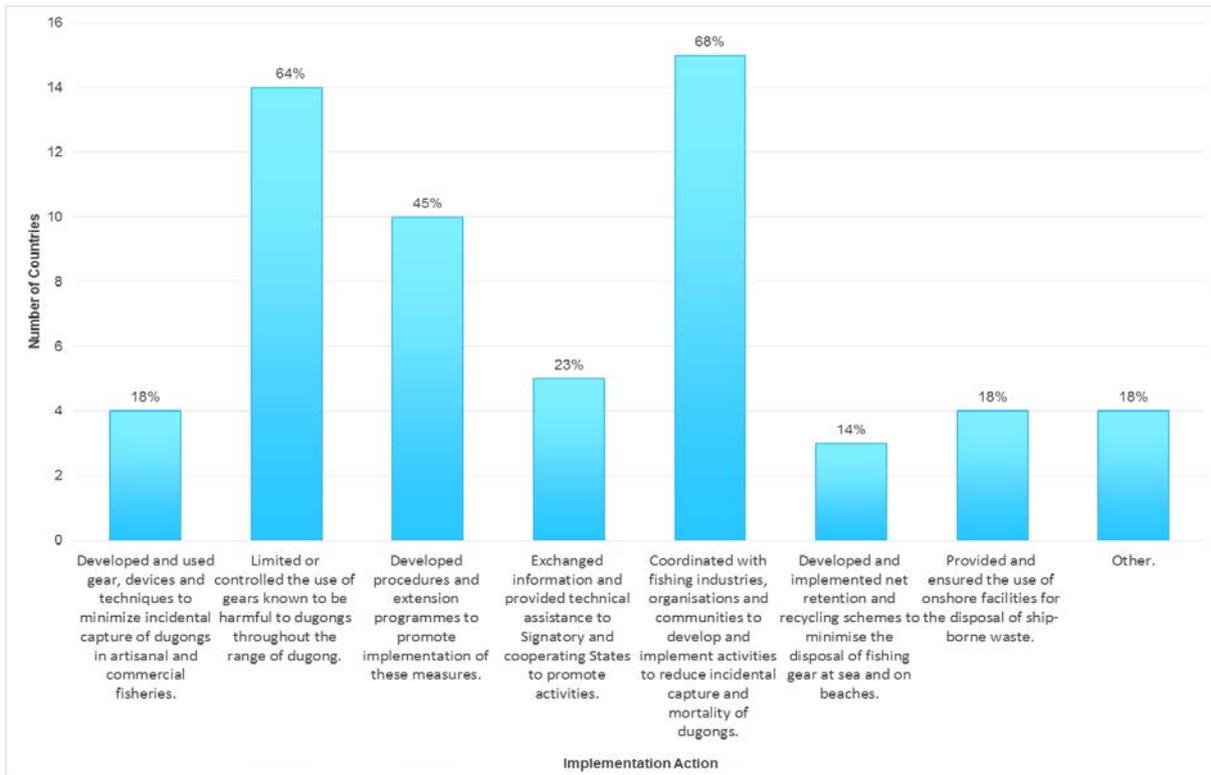
73% of countries have undertaken measures to address identified threats to dugongs.

*Question 8: What kind of measures has your country undertaken to address these threats?*

Australia, Palau, Philippines, Saudi Arabia, Seychelles, Sri Lanka, United Republic of Tanzania (Tanzania) and Vanuatu addressed threats by protecting the dugongs through legislation which generally included declaring protected areas and management plans. In addition, Australia and Vanuatu introduced measures to allow the sustainable and controlled use of dugongs for traditional use. Australia, Madagascar and Sri Lanka also monitored and enforced this legislation. Eritrea conducted research on incidental bycatch in gillnets.

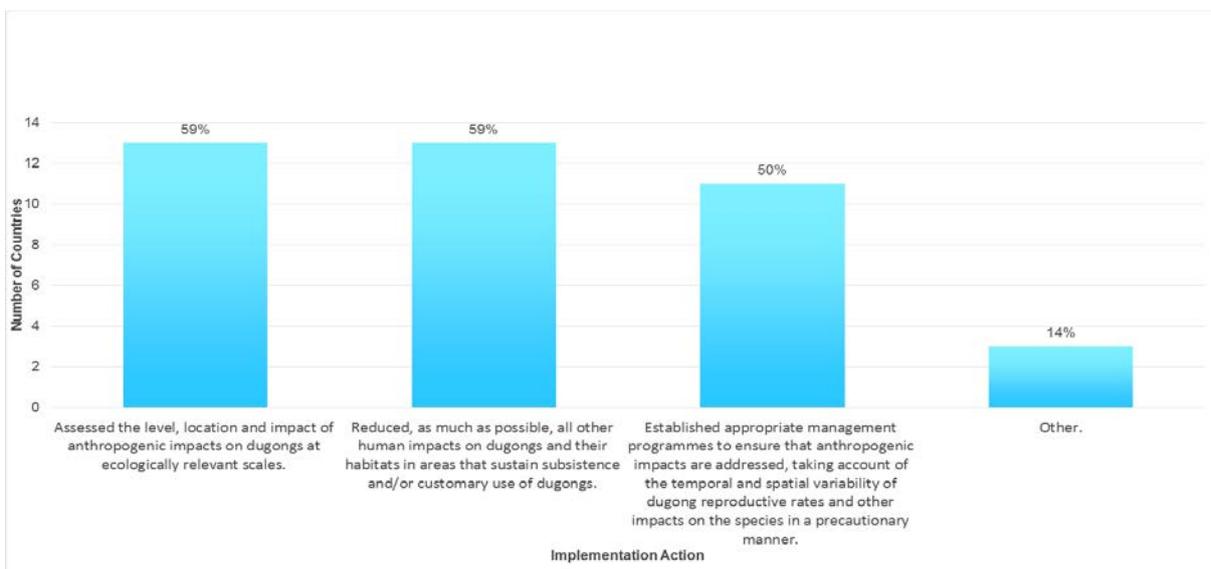
Australia, Myanmar, Philippines, Saudi Arabia, Solomon Islands, Sri Lanka and Tanzania introduced awareness, education and training programmes to interested stakeholders and community members. Philippines and Tanzania established a dugong stranding network to monitor gill net mortalities, identify bycatch hotspots and reporting mechanisms. Most countries encouraged community participation and engagement to identify and mitigate threats to dugongs.

Question 9: Which of the following has your country done to reduce the incidental capture and mortality of dugongs as a result of fishing activities (i.e. bycatch of dugongs)?



To reduce the incidental capture and mortality of dugongs as a result of fishing activities most countries coordinated with stakeholders to develop and implement activities to reduce incidental capture and mortality of dugongs and limited or controlled the use of fishing gears that are known to be harmful to dugongs. Low implementation success occurred for the majority of the implementation actions.

Question 10: Which of the following has your country done to reduce the incidental mortality of dugongs from other anthropogenic (human) activities?



To reduce the incidental mortality of dugongs from other anthropogenic (human) activities, 50—60% of countries implemented the associated CMP implementation actions.

*Question 11: Has your country undertaken actions to reduce and/or prevent the illegal take of dugongs?*

68% of countries took action to reduce and/or prevent the illegal take of dugongs.

*Question 12: What has your country done to prevent the illegal take of dugongs?*

Australia, Bahrain, Egypt, Eritrea, Madagascar, Mozambique, Palau, Philippines, Saudi Arabia, Solomon Islands and Vanuatu reported that their national legislation has provisions to prevent the illegal take of dugongs. Australia, Eritrea, Mozambique, Palau and Philippines reported that they included penalties within this legislation. Egypt, Myanmar, Philippines, Saudi Arabia, Sri Lanka and Vanuatu also reported that they monitor and enforce the illegal take of dugongs. Egypt, Madagascar, Mozambique, Myanmar, Sri Lanka and Vanuatu also reported that they incorporate community awareness programmes to support the prevention of the illegal take of dugongs.

*Question 13: Is customary and/or subsistence use of dugongs allowed in your country?*

23% of countries allowed customary and subsistence use of dugongs.

*Question 14: What has your country done to ensure that customary and/or subsistence use of dugongs is sustainable?*

Australia, Myanmar, Palau and Vanuatu have reported that their national legislation provides provision to use dugongs for customary and/or subsistence purposes. Australia, Papua New Guinea and Solomon Islands have also developed and implemented culturally appropriate management programmes to ensure customary use of dugongs is sustainable. These management plans generally detail dugong management, governance and cultural protocols, education and compliance, and monitoring. Australia, Papua New Guinea and Vanuatu also had restricted the number of dugongs that can be taken for traditional use and included conditions such as that traditional fishing methods and gear must be used when hunting dugongs to manage traditional take within sustainable limits that are aligned with cultural requirements.

Australia, Palau, Papua New Guinea and Solomon Islands also provided community awareness programmes to educate that the general public and/or tourists know about traditional connections and communicate to community members the requirements and conditions of customary and/or subsistence use of dugongs.

*Question 15: Are Dugongs and/or their habitats granted legal protection in your country?*

73% of countries have granted legal protection to dugongs and/or their habitats.

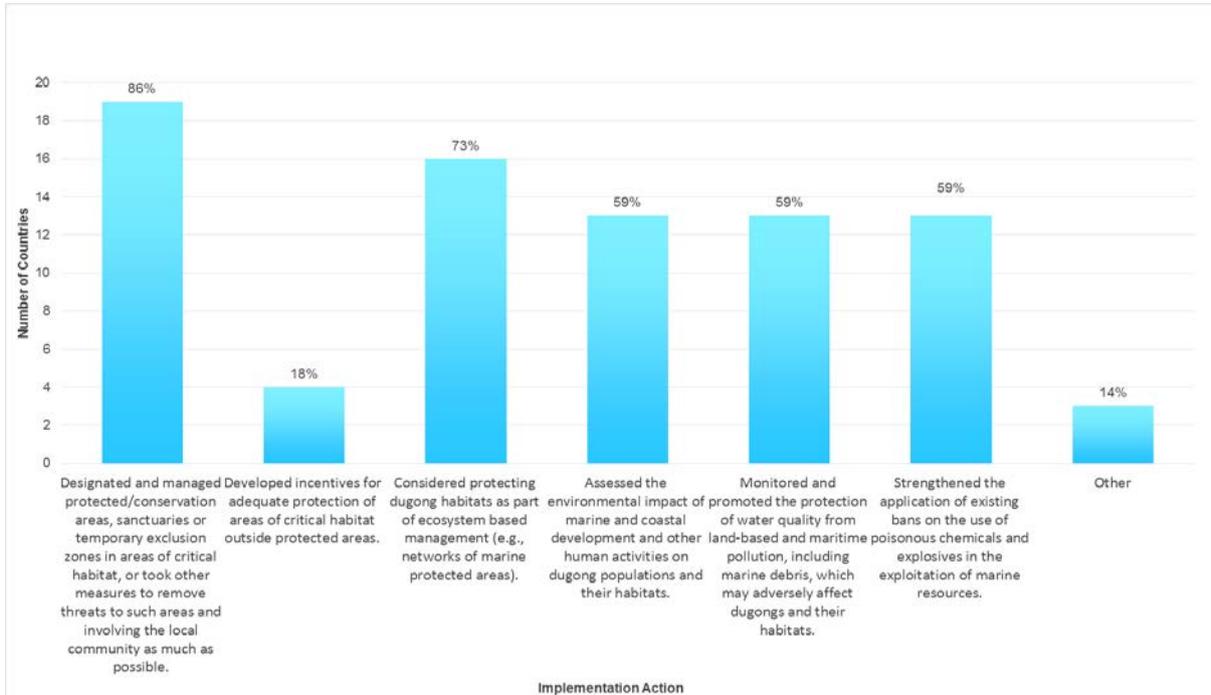
*Question 16: What kind of legal protection are dugongs and/or their habitats granted and what measures has your country developed to review and, where necessary, strengthen the legal protection of dugongs and their habitats?*

The following countries provided a response to this question: Australia, Bahrain, Egypt, Eritrea, Mozambique, Myanmar, Palau, Philippines, Saudi Arabia, Seychelles, Solomon Islands, Sri Lanka, Tanzania, United Arab Emirates (UAE) and Vanuatu.

The Secretariat advises reviewing individual National Reports as each country has listed specific national legislation with a comprehensive overview of the objectives and measures that strengthen the protection of dugongs and their habitats.

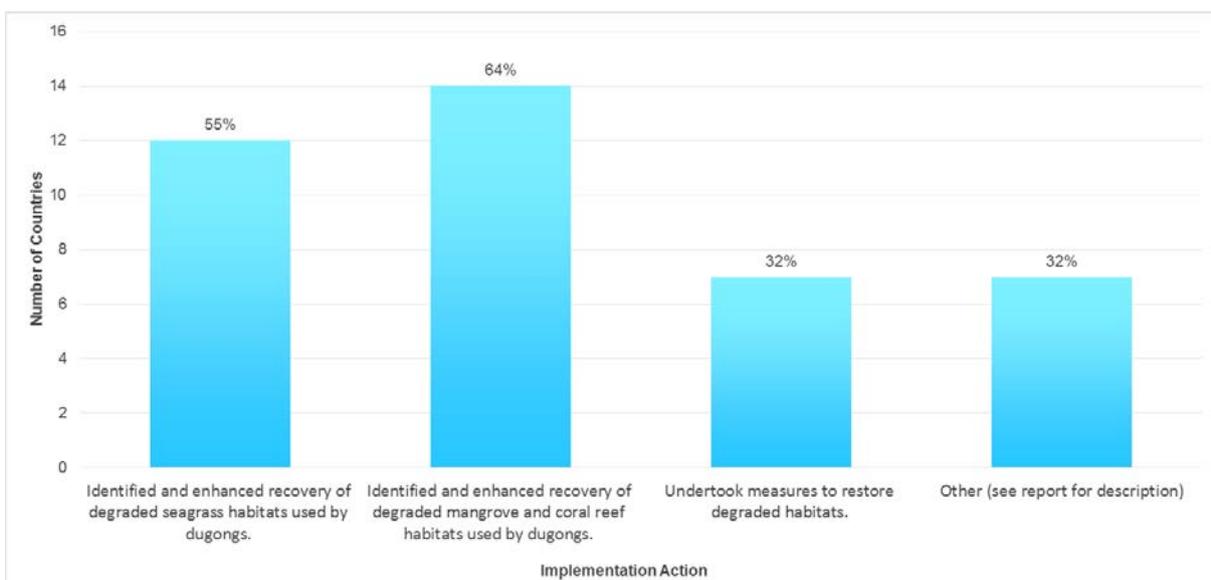
### Section 3: Dugong habitats

Question 17: Which of the following has your country done to protect and conserve dugong habitats (such as seagrasses)?



To protect and conserve dugong habitats, over 70% of countries implemented actions relating to designating and managing conservation areas to protect and remove threats to dugongs and their habitats as part of ecosystem-based management. 59% of countries implemented actions relating to assessing environmental impact of coastal development and human activities; monitoring and improvement of water quality; and enforcing bans on poisonous chemicals and explosives. Incentive-based outcomes for habitat protection were only implemented by 18% of countries.

Question 18: Which of the following has your country done to address current degradation, and to reduce the risk of future degradation of dugong habitats (such as seagrasses)?



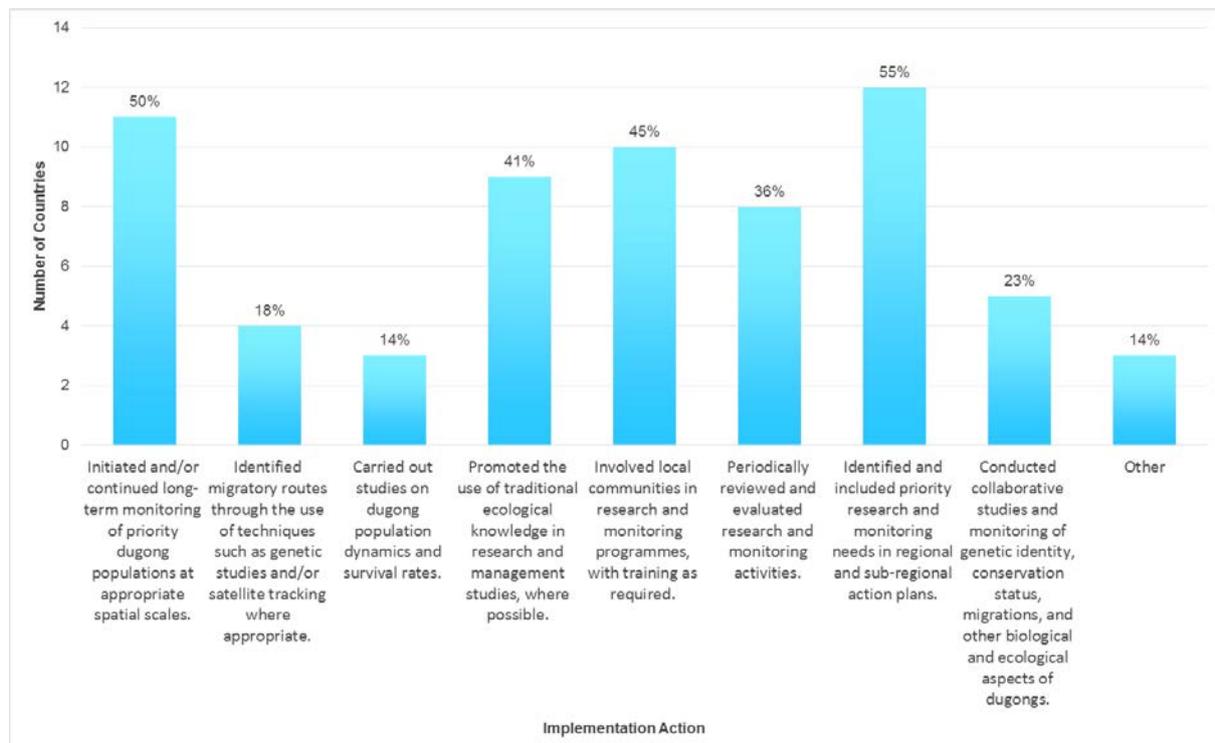
To address and reduce degradation of dugong habitats over 50% of countries identified and enhanced the recovery of seagrass, mangrove and coral reef habitats used by dugongs, while 32% of countries undertook measures to restore degraded habitats or other actions.

**Section 4: Research and monitoring**

*Question 19: What has your country done to determine the distribution and abundance of dugong populations to provide a base for future conservation efforts and actions?*

A detailed description of each country’s response is captured in their individual National Report. A summary of the measures each country undertook is listed in Questions 20 to 25 of this Addendum.

*Question 20: Which of the following has your country done to conduct research and monitoring into dugongs?*



The actions of initiating or continuing long-term dugong population monitoring and the inclusion of priority research and monitoring into sub-regional and regional action plans were implemented by over 50% of countries. The remaining actions to conduct research and monitoring into dugongs had an implementation rate of less than 45% amongst countries.

*Question 21: Does your country collect data on dugongs?*

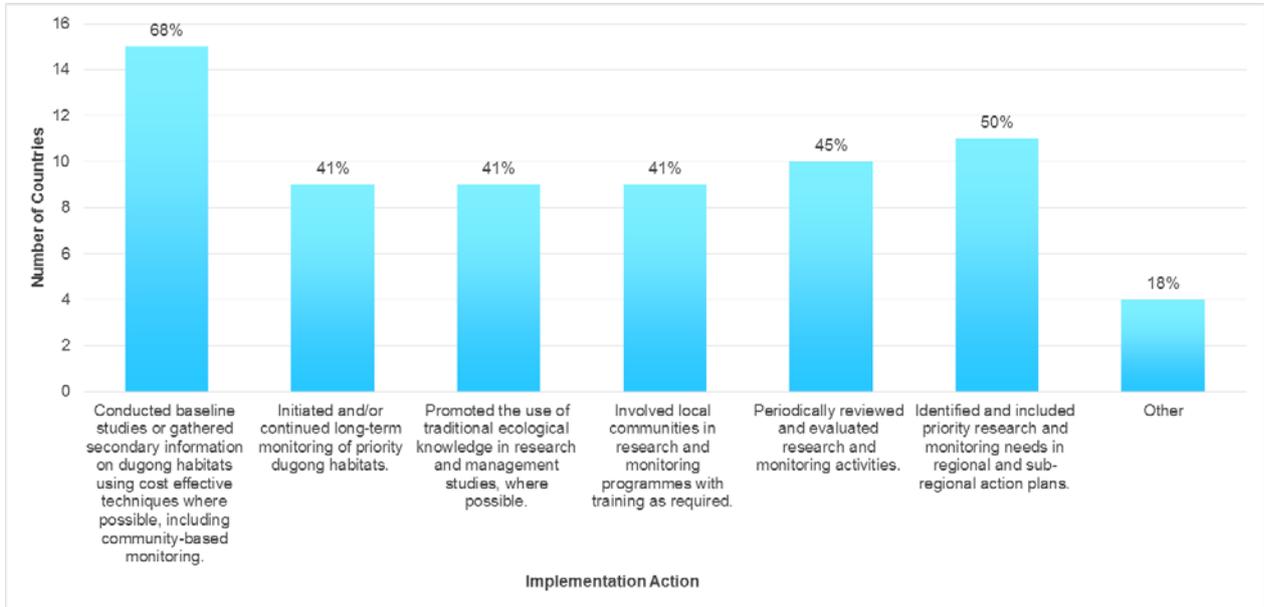
73% of countries collect data on dugongs.

*Question 22: What kind of data does your country collect on dugongs and how is it analysed?*

Considerable variation regarding the types of data collected, methods and analysis occurred between each country. This could be a reflection of differing levels of capacity, baseline data, priorities and resources of each of the country. The Dugong and Seagrass Research Toolkit and CMS Dugong MOU Questionnaire seek to address issues of inconsistent data collection by encouraging a standardised approach to assessment and monitoring of dugongs and seagrasses.

The following countries provided a response to this question: Australia, Bahrain, Egypt, Eritrea, Madagascar, Mozambique, Myanmar, Philippines, Saudi Arabia, Seychelles, Solomon Islands, Sri Lanka, Tanzania, UAE and Vanuatu. The Secretariat advises reviewing individual National Reports for specific data collected by each country.

*Question 23: Which of the following has your country done to conduct research and monitoring into important dugong habitats (such as seagrasses)?*



To conduct research and monitoring into important dugong habitats, 68% of countries conducted baseline studies or secondary information on dugong habitats, and 50% of countries included priority research and monitoring into sub-regional and regional action plans. The remaining actions had an implementation rate of <50% amongst countries.

*Question 24: Has your country undertaken any identification and mapping of important dugong habitats (such as seagrasses)?*

82% of countries have identified and mapped important dugong habitats.

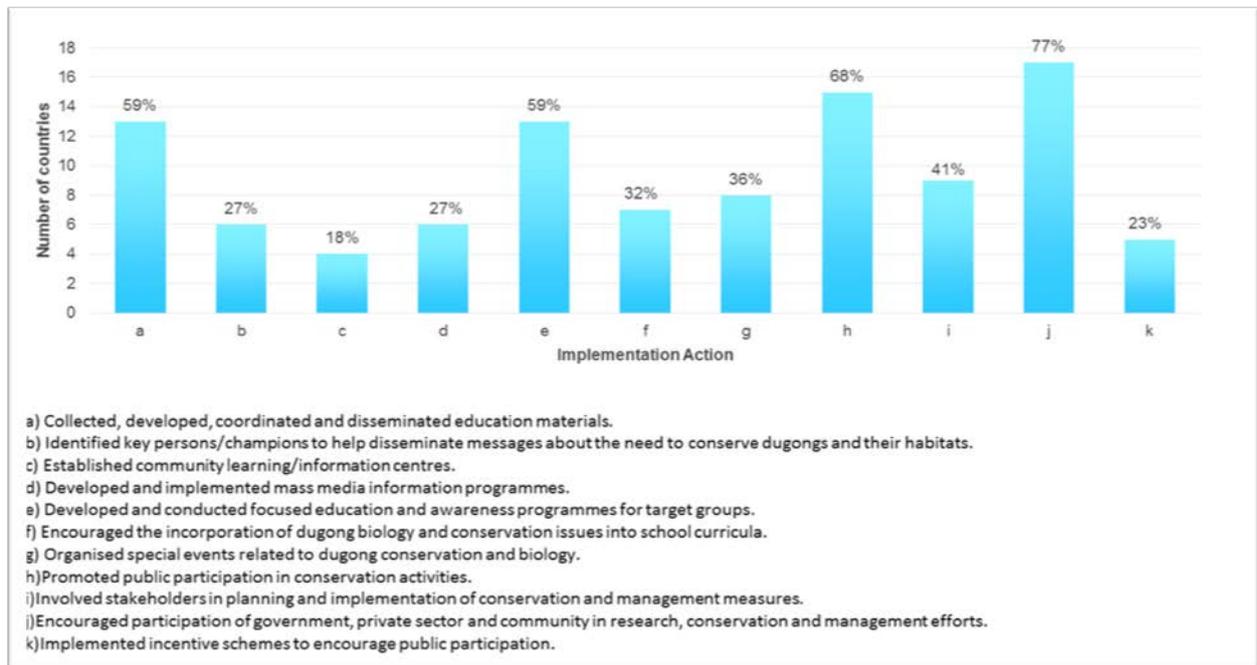
*Question 25: What kind of identification and mapping of dugong habitats has your country undertaken?*

The following countries provided a response to this question: Australia, Egypt, Eritrea, Jordan, Madagascar, Mozambique, Myanmar, Palau, Papua New Guinea, Philippines, Saudi Arabia, Seychelles, Solomon Islands, Sri Lanka, Tanzania, UAE and Vanuatu.

The responses varied between countries and detailed description of each country’s response is captured in their individual National Report.

## Section 5: Dugong conservation

*Question 26: Which of the following has your country done to establish education, awareness and information programmes?*



To establish education, awareness and information programmes, more than 55% of countries encouraged stakeholder participation in research, conservation and management measures; developed and conducted education and awareness programmes; and developed and disseminated education materials. The remaining actions had an implementation rate of less than 45% amongst countries.

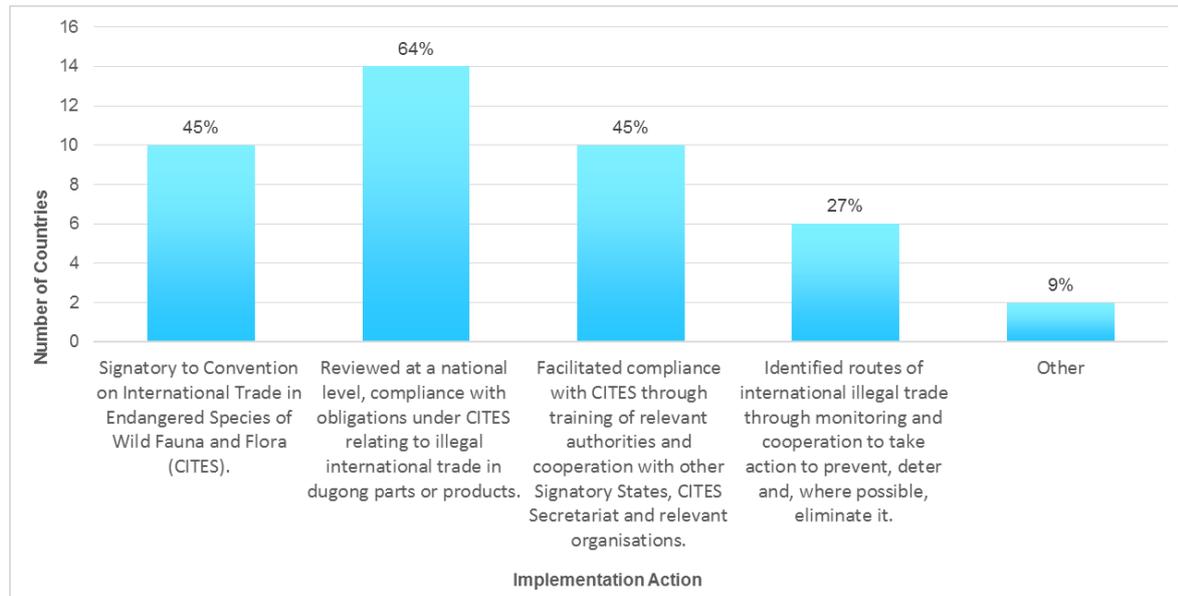
*Question 27: What specifically has your country done to encourage local communities to actively participate in conservation efforts?*

The responses varied between countries and detailed description of each country's response is captured in their individual National Report. Of the 68% of countries that responded to this question, a majority developed and implemented a community awareness and education programme(s).

The following countries provided a response to this question: Australia, Egypt, Eritrea, Jordan, Madagascar, Mozambique, Myanmar, Palau, Philippines, Saudi Arabia, Seychelles, Solomon Islands, Sudan, Tanzania, UAE and Vanuatu.

## Section 6: Cooperation

*Question 28: Which of the following has your country done to collaborate with and assist Range States to combat illegal international trade of dugongs and dugong related products?*



To collaborate with and assist Range States to combat illegal international trade of dugongs and dugong related products, 64% of countries reviewed their national compliance obligations under CITES relating to illegal international trade in dugong parts or products. The remaining actions had an implementation rate of less than 45% amongst countries.

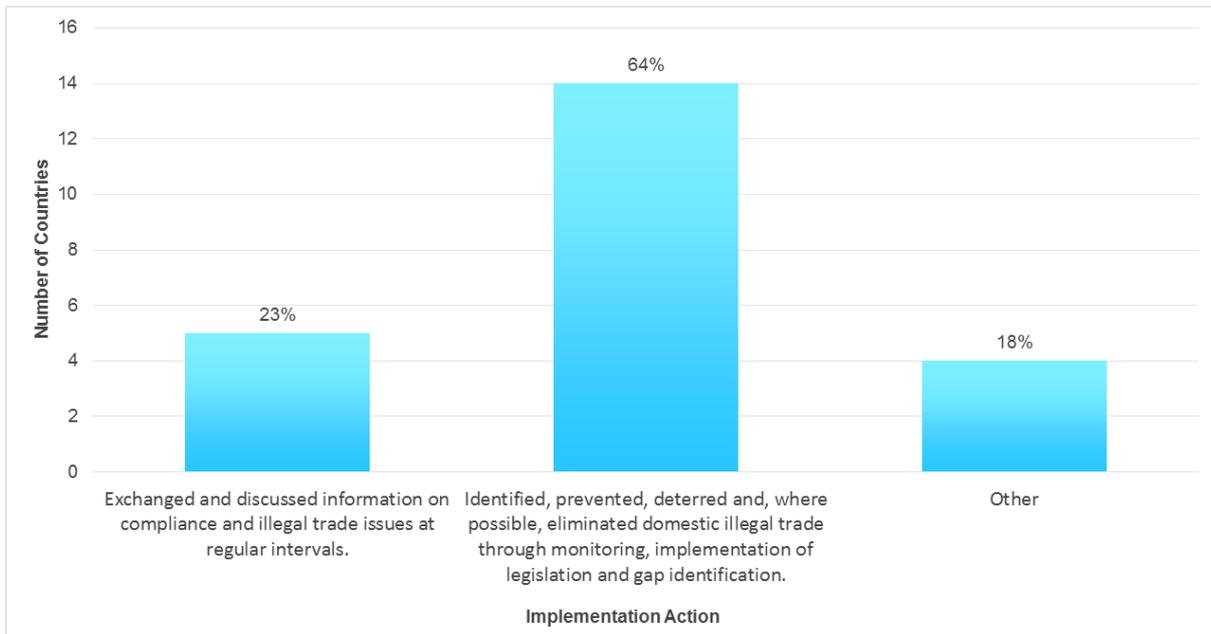
*Question 29: What has your country done to work collaboratively with dugong Range States to combat illegal domestic and/or regional trade of dugongs and dugong related products?*

The following countries provided a response to this question: Australia, Egypt, Myanmar, Papua New Guinea, Philippines, Saudi Arabia, Seychelles, Solomon Islands, UAE and Vanuatu. A detailed description of each country’s response is captured in their individual National Report. However, a summary of the measures each country undertook is listed in Questions 30 to 35 of this Addendum.

A good example of regional collaboration noted in the National Reports is the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF) which Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste are signatories. The CTI-CFF is a multilateral partnership that addresses the urgent threats to coastal and marine resources in the Asia-Pacific Region such as the illegal international trade of dugongs and dugong related products. The CTI-CFF has been developing a management plan under the Threatened Species Goal to address the illegal harvest and protection of migratory pathways for migratory species.

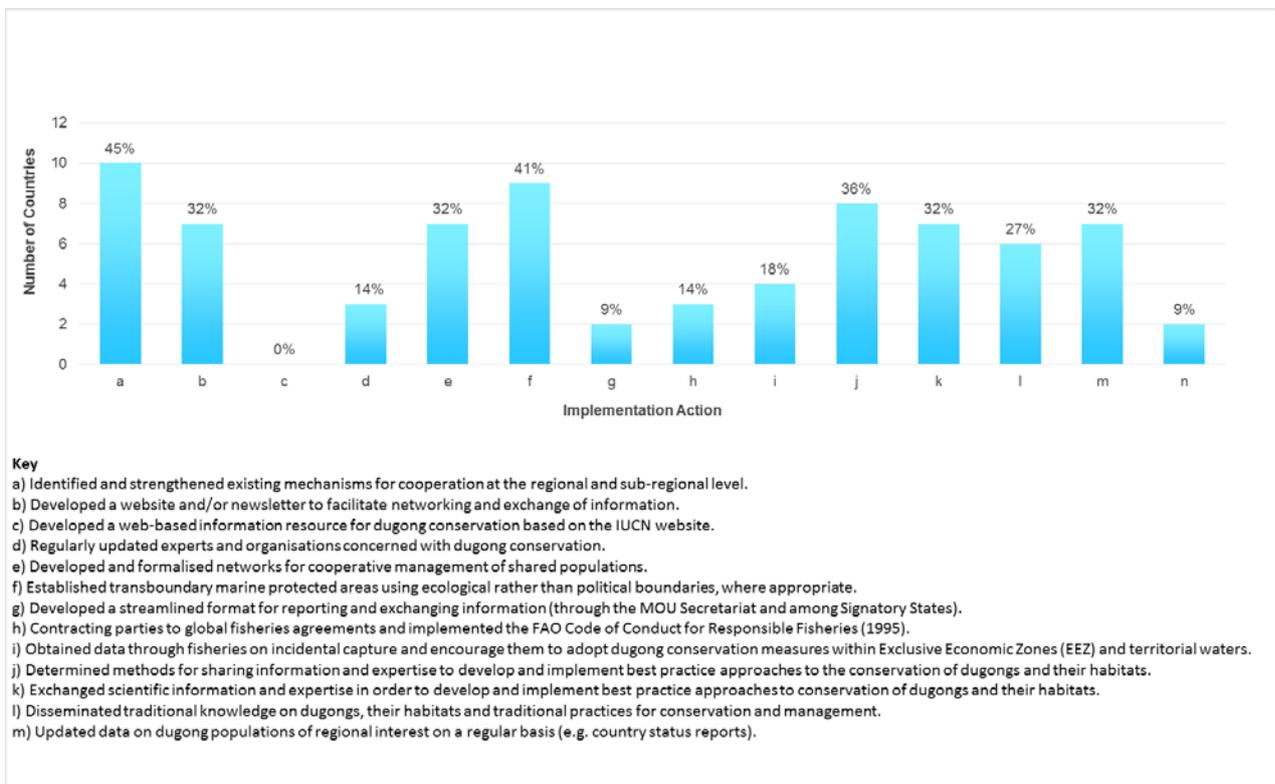
In addition, many countries are a Signatory to and participate in some international fora such as Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Convention on International Trade of Endangered Species (CITES). Some countries also participate in Secretariat of the Pacific Regional Environment Programme, International Union for Conservation of Nature and other conservation groups (WWF, TNC, CI, WCS). The Solomon Islands also reported that they worked with local fisheries authorities, customs and other enforcement agencies to regulate the illegal trade of dugongs.

*Question 30: Which of the following has your country undertaken to cooperate in enforcement activities relating to the illegal trade of dugongs and dugong related products?*



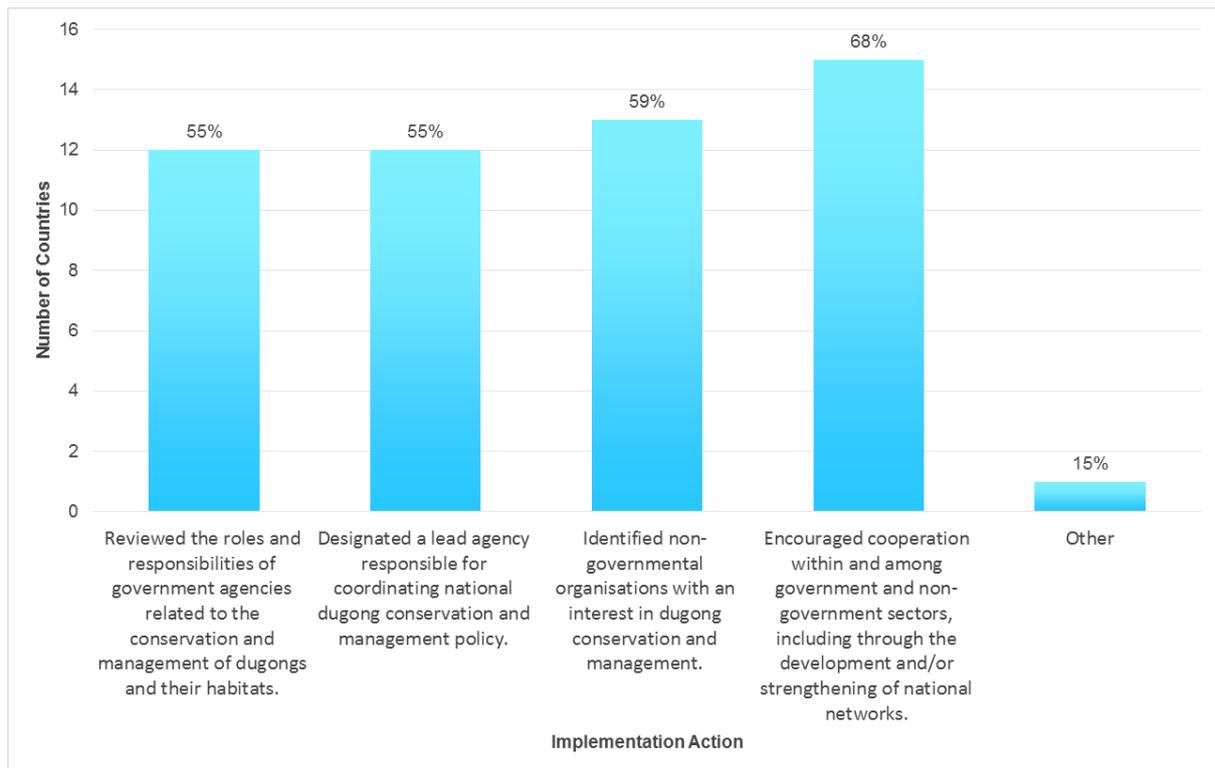
To cooperate in enforcement activities relating to the illegal trade of dugongs and dugong related products, 64% of countries identified, prevented, deterred and where possible eliminated domestic illegal trade through monitoring, implementing legislation and gap identification, while 23% of countries exchanged and discussed compliance and illegal trade issues.

*Question 31: Which of the following has your country done to develop and implement mechanisms for effective exchange of information?*



To develop and implement mechanisms for effective exchange of information, all of the actions had an implementation rate of less than 45% amongst countries.

*Question 32: Which of the following has your country done to improve coordination among government and non-government sectors and communities in the conservation of dugongs and their habitats?*



To improve coordination among government and non-government sectors and communities in the conservation of dugongs and their habitats, all of the implementation actions had an implementation rate of 55% to 68% amongst countries.

*Question 33: What has your country done to develop and implement a regional database of relevant information to dugong conservation and management?*

The following countries provided a detailed response to this question: Australia, Mozambique, Philippines and UAE. A detailed description of each country's response is captured in their individual National Report.

Most countries have not developed a database of relevant information for dugong conservation and management. Australia has developed a public database<sup>2</sup> relating to dugongs. Kenya, Mozambique, Seychelles and Tanzania are implementing regional dugong project funded by Western Indian Ocean Marine Science Association Research Programme (WIOMSA). It is envisaged that the population of dugongs in the western Indian Ocean will be well documented after the project and a database established. Mozambique is coordinating a WIOMSA to collect data on the status of dugong populations using aerial surveys and the CMS Dugong MOU Questionnaire with plans to conduct genetic studies.

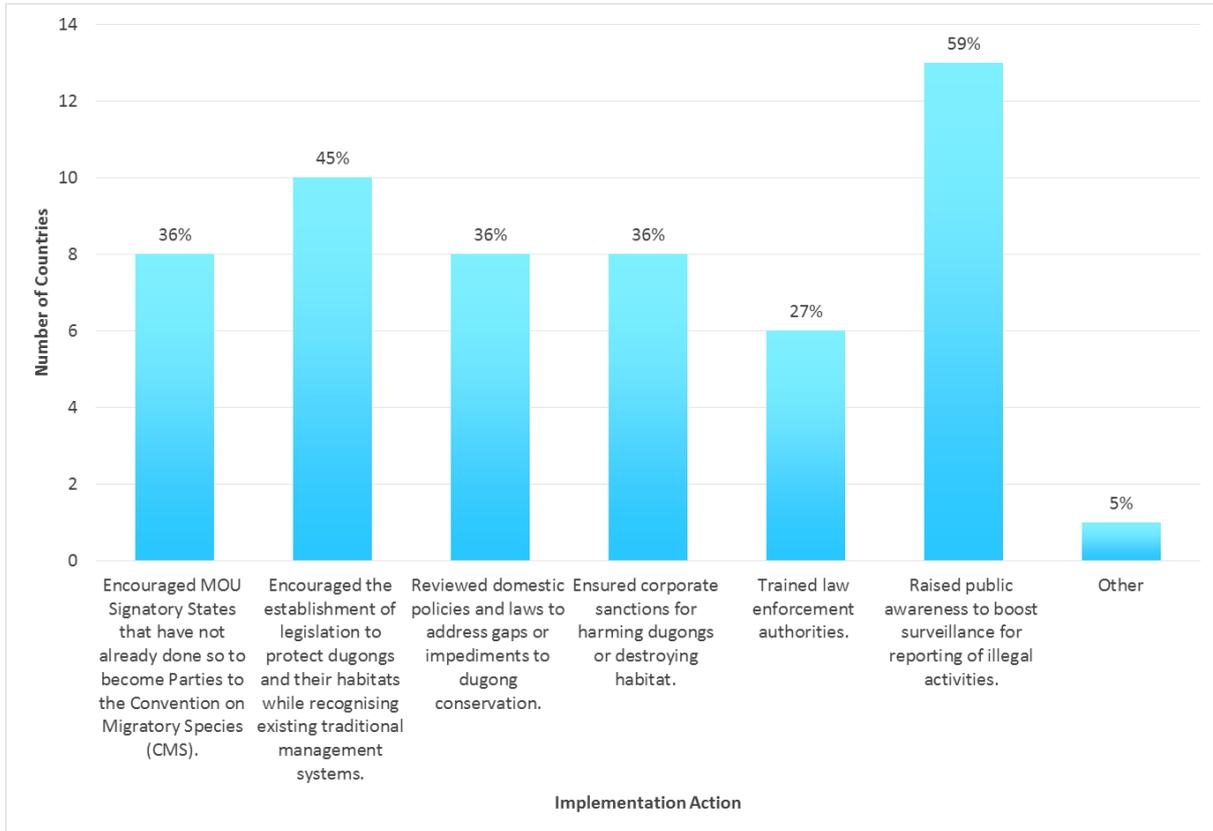
Mozambique has developed multi-media platforms such as a website<sup>3</sup> and a Facebook page to store and exchange information. They have also created two WhatsApp groups, one aimed at scientists interested in data from Western Indian Ocean and the other aimed at partners implementing dugong and seagrass conservation in Mozambique. Philippines feeds national information into ASEAN Centre for Biodiversity (regional database).

<sup>2</sup> [www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\\_id=28](http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=28)

<sup>3</sup> [www.dugongs.org](http://www.dugongs.org)

The United Arab Emirates developed the Abu Dhabi Global Environmental Data Initiative (AGEDI) which is an organization aiming to “facilitate quality environmental data that equips policy-makers with actionable, timely information to inform and guide critical decisions”<sup>4</sup>.

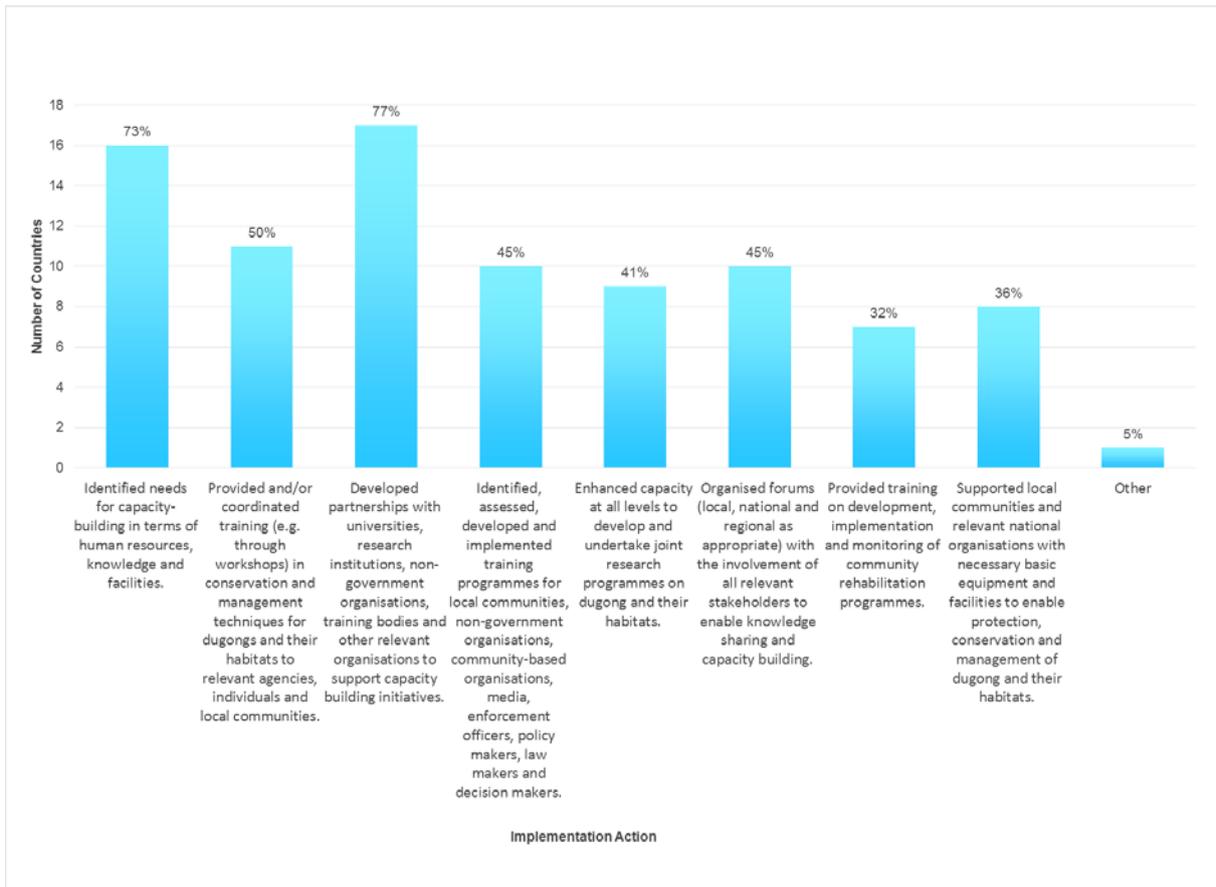
*Question 34: Which of the following has your country done to encourage Range/Signatory States to incorporate dugong and habitat conservation and protection measures into national legislation?*



To encourage Range States to incorporate dugong and habitat conservation and protection measures into national legislation, 59% of countries raised public awareness to boost surveillance for reporting illegal activities, while the remaining actions had an implementation rate of less than 45% amongst countries.

<sup>4</sup> <https://agedi.org/who-we-are/>

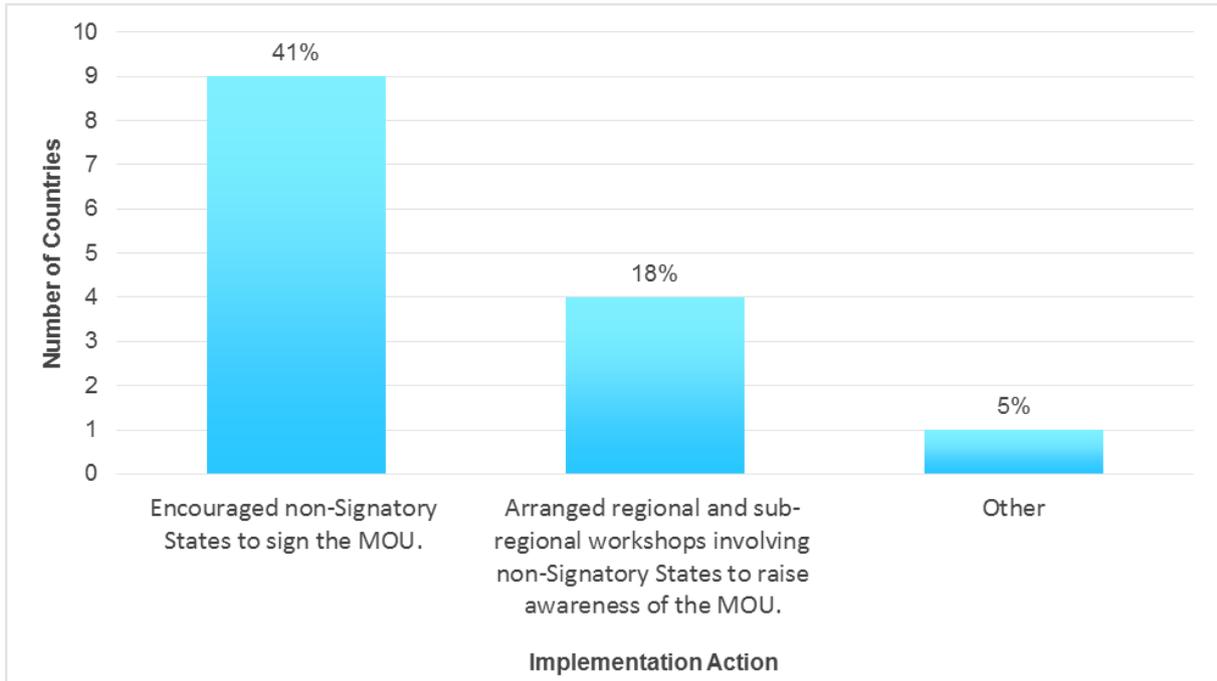
Question 35: Which of the following has your country done to promote capacity building at all levels to strengthen conservation measures?



To promote capacity building at all levels to strengthen conservation measures, 77% of countries developed partnerships with universities, research institutions, training bodies and other relevant organisations to support capacity building initiatives and 73% of countries identified needs for capacity building. The remaining actions had an implementation rate of less than 50% amongst countries.

**Section 7: Implementation of the MOU**

*Question 36: Which of the following has your country done to encourage all Range States to participate in the MOU and its conservation and management activities?*

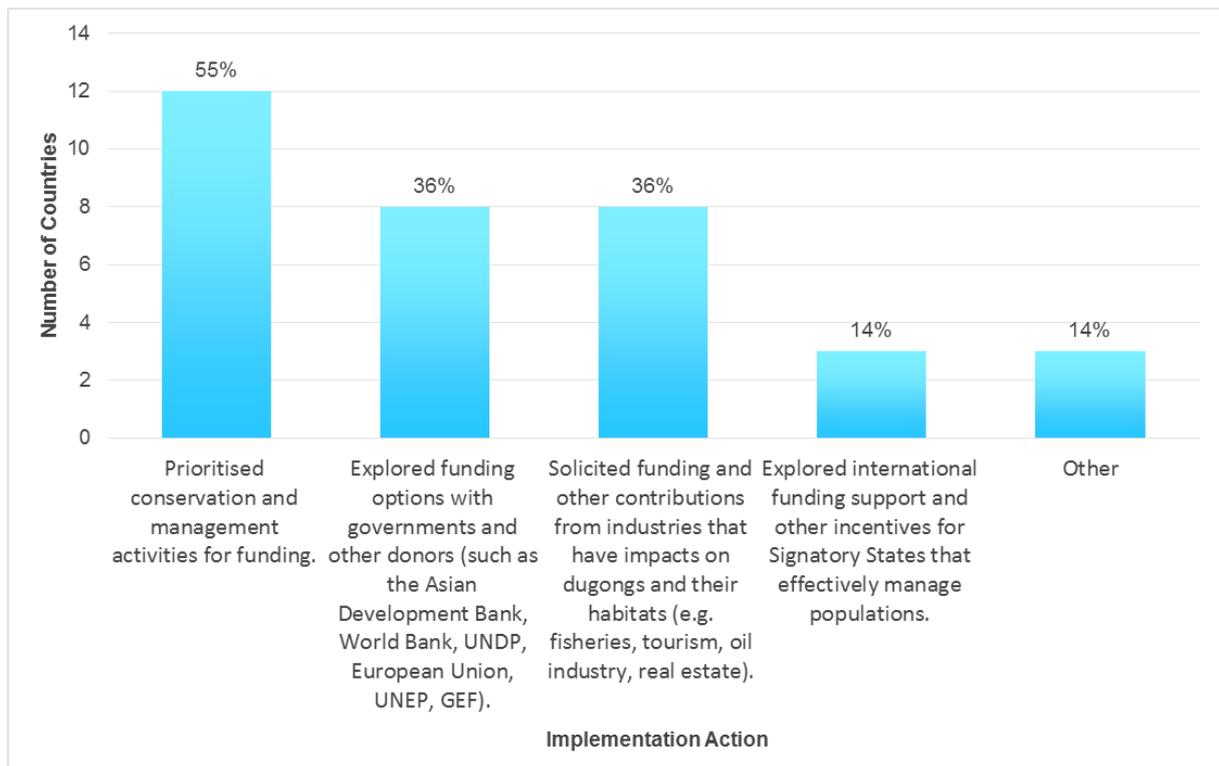


To encourage all Range States to participate in the MOU and its conservation and management activities, 41% of countries encouraged non-Signatory States to sign the Dugong MOU while 18% of countries arranged regional and sub-regional workshops involving non-Signatory Range States to raise awareness of the Dugong MOU.

*Question 37: What, if anything, has your country done to support the Dugong MOU Secretariat to ensure the objectives of the CMP are met?*

The following countries provided a response to this question: Australia, Bahrain, Egypt, Myanmar, Papua New Guinea, Philippines and Saudi Arabia. A detailed description of each country’s response is captured in their individual National Report.

*Question 38: Which of the following actions has your country undertaken to seek resources that support the implementation of the Dugong MOU (at either a national or international level)?*



To seek resources that support the implementation of the Dugong MOU, 55% of countries prioritised conservation and management activities for funding. The remaining actions had an implementation rate of less than 36% amongst countries.

*Question 39: What, if anything, has your country done to create links and develop synergies with other relevant regional conservation conventions, MOUs and agreements?*

The following countries provided a response to this question: Australia, Egypt, Eritrea, Kenya, Papua New Guinea, Philippines, Saudi Arabia, Solomon Islands, Tanzania, UAE and Vanuatu. A detailed description of each country’s response is captured in their individual National Report.

Examples of what these countries have done to create links and develop synergies with other relevant regional conservation conventions, MOUs and agreements includes being a signatory and participant in a number of international fora such as CMS, CITES, IOTC, ISOEA Sea Turtle MOU, Shark MOU, CBD, PERSGA, ROPME, Coral Triangle Initiative, Sulu-Sulawesi Marine Eco-Region and Secretariat of the Pacific Regional Environmental Programme. Most countries also conduct regular reporting for these instruments.

Currently, Kenya and Tanzania is working together on the establishment of a Transboundary Marine Conservation Area that shall enhance and promote the implementation of the MOU.

Kenya also has a strong partnership between government institutions, the private sector and Conservation NGOs such as WWF, East African Wildlife Society, IFAW, Colobus Trust and the Watamu Marine Association amongst others in promoting the implementation of the MEAs and MOUs.

The Philippines established a project to improve ecosystem management and is jointed funded the DENR, the United Nations Development Programme (UNDP) and the Global Environment Fund.

## Section 8: Country priorities & additional comments

Question 40: How much of a priority is each of the objectives below to your country?

Objectives	Ranking Priority (% of Total Countries)		
	Low	Medium	High
1.1 Threats facing dugong populations	0	27	73
1.2 Dugong mortality in fishing activities	14	45	41
1.3 Dugong mortality due to human activities	23	27	50
1.4 Illegal take of dugongs	43	24	33
1.5 Sustainable dugong use	48	29	24
2.1 Dugong populations and habitats	0	33	67
2.2 Dugong research	14	24	62
2.3 Data collection and analysis	14	29	57
3.1 Dugong habitat mapping	9	27	64
3.2 Dugong habitat protection	5	29	67
3.3 Actions to address habitat loss	9	36	55
3.4 Degraded dugong habitats	18	50	32
4.1 Research of habitats	14	41	45
5.1 Information programmes	18	41	41
5.2 Encourage local community participation	18	36	45
6.1 Combat illegal trade	57	14	29
6.2 Exchange information	27	18	55
6.3 Improve coordination	23	23	55
6.4 Database	14	38	48
7.1 Encourage participation in the MOU	33	29	38
7.2 Support the Secretariat	24	38	38
7.3 Seek resources	23	23	55
7.4 Synergy with other conventions	10	52	38
8.1 Incorporation into national legislation	9	36	55
8.2 Legal protection	9	27	64
9.1 Promote capacity building	14	14	73

Of the objectives of the CMP, *Threats facing dugong populations* (objective 1.1) and *Promoting capacity building* (objective 9.1) were identified by over 70% of countries as the highest priority. Between 60% and 70% of countries ranked *Dugong populations and habitats* (objective 2.1), *Dugong habitat protection* (objective 3.2), *Dugong habitat mapping* (objective 3.1), *Legal protection* (objective 8.2) and *Dugong research* (objective 2.2) as being a high priority.

The lowest priority amongst respondents was *Combatting illegal trade* (objective 6.1) with 57% of countries ranked this as a low priority, followed by *Sustainable dugong use* (objective 1.5) and *Illegal take of dugongs* (objective 1.4) with a low priority ranking of 48% and 43% respectively.