

## Part II: Detailed analysis of national reports, excluding site-based information

### Introduction

1. To provide a visual overview of implementation progress to date, the Secretariat has prepared a colour-coded matrix listing each of the 24 programmes of the Conservation and Management Plan (CMP) on one axis and the 35 Signatory States on the other (Annex 1). Criteria were developed and a scoring system was devised to objectively measure the performance of each Signatory State in relation to the measures contained in the CMP. Part III describes the rating system and methodology used to evaluate the information provided in reports submitted by Signatory States through the Online Reporting Facility.

2. Six categories were drawn up to summarize the findings at the level of each programme within the CMP, as follows. The colour of the corresponding cells in the matrix is indicated in parentheses.

- Full or near-full implementation (Blue)
- Active intervention, very substantial progress (Green)
- Partial implementation, good progress (Orange)
- Some progress, but limited in scope (Yellow)
- Very limited progress (Grey)
- No information available or no progress reported (White)

3. The primary purpose of the evaluation matrix is to identify gaps in implementation and reporting *across programmes* (that is to say, horizontally). The overall results (averages) for each programme are indicated in the far right column of the matrix. One may also examine the results for any given Signatory State (displayed vertically) to identify areas where a Signatory State has excelled – and may therefore be able to assist or serve as a model for others – or areas where a given Signatory may need assistance to implement a programme more effectively. The evaluation matrix is not intended for ranking one Signatory State against another; and for this reason, the average results for a given country are displayed only as colour-codes. The coding gives a general indication of implementation progress, following the generic categories listed above.

4. It is worth pointing out that the matrix displays consolidated results at the level of each *programme*, whereas the underlying analysis is done at the finer, *question* level. Thus, the colour assigned to a particular cell (programme) and Signatory State represents a numeric value equal to the *average score* for all questions pertaining to that programme. For its analysis the Secretariat has access to the numeric values associated with each cell in the matrix. Moreover, IOSEA Focal Points can view the individual scoring of each question for their country, by clicking on the “Evaluation” button in the Online Reporting Facility’s Editor.

5. Every response in every national report has been carefully and systematically reviewed. While this process is exhaustive (and somewhat exhausting), one of the strengths of the software programming behind the IOSEA Online Reporting Facility is that the national reports can be rated quite efficiently and the results fed into the evaluation matrix automatically. In other words, once the national reports have been evaluated, the colour-coded matrix can be generated almost instantaneously. Therefore, it is relatively easy to update whenever new information is provided.

6. The evaluation criteria have been only slightly refined since similar exercises were carried out for the Fourth through Sixth Meetings of Signatory States (2006, 2008, 2012), meaning that the results are comparable from one reporting period to the next. In other words, it is possible to make direct comparisons and to measure progress between the analyses of national reports submitted in March 2006, August 2008, December 2011, and the present analysis made in July 2014. Indeed, one can observe from the matrices produced for each of those previous reporting periods (Annexes 2, 3 and 4) that, over time, the numbers of grey and yellow cells (denoting limited implementation) have been replaced by an increasing proportion of orange, green and blue cells, indicative of better reporting and performance.

7. It may be instructive to make a distinction between the detailed review of implementation that follows and the graphical matrix discussed above. The commentary in Part II has been prepared after generating and analysing reports from the IOSEA Online Reporting Facility for all Signatory States, collectively, for each of the approximately 80 questions in the national report template. The colour-coded matrix is generated separately, and derives its content from the numerical performance ratings of the individual Signatory States. The latter allows for broader conclusions to be drawn about the efficacy of overall implementation. The two analyses are thus independent, but mutually supportive.

8. In the following analysis, a number of points should be borne in mind:

- Where information is absent in relation to a particular programme for any given Signatory State, this does not necessarily mean that activities have not taken place in that country; rather this is just as likely to be indicative of under-reporting. This is most certainly the case for Signatory States that have not completed or updated their reports in recent months;
- For some countries, it is known that the information submitted is not comprehensive, particularly where NGO activities have not been reported; therefore, a rating of “limited progress” may understate the extent of actual implementation.
- A shortcoming of the scoring system is that it does not provide for differential weighting of questions, which could have the effect of penalising (or benefitting) a country that answers a relatively “less important” question poorly (or very well);
- In each of the sections of the analysis, the definitions of progress – in terms of “general tendencies” ranging from “limited progress” to “full or near full implementation” – are subjective and open to interpretation, whereas the underlying scoring is quantifiable and backed by objective criteria.
- Some indications are given in the text of how the Signatory States’ collective performance, measured in July 2014, compares to the previous reporting exercise (for example, “significantly improved since 2011” or “diminished activity compared to 2011”).
- Where appropriate, attention is drawn to “notable responses” in case readers wish to examine, in more detail, the particularly informative explanations provided by a given Signatory State in the Online Reporting Facility.

9. Looking across the 24 CMP programmes, the areas in which the most progress in implementation/reporting appears to have been made are:

- 1.1 Understanding of marine turtle populations, conservation achievements and ongoing challenges
- 1.2 Identification/application of best practice to minimise threats
- 1.3 Socio-economic studies and identifying/addressing adverse economic incentives\*
- 1.5 Identification of turtle uses/values and relevant legislative actions
- 3.3 Identification of management priorities
- 5.4 Capacity building, including identification of resource needs
- 6.1 Institutional considerations, including IOSEA membership\*
- 6.4 Coordination among government agencies\*

In other words, Signatory States have a reasonably good understanding of the marine turtle resource, they know what they need to be doing to conserve it, they have identified a number of programmes/activities that they are conducting well, and they know what agencies are or ought to be involved.

10. Comparing the finer details of the results for 2014 and 2011, improvements in implementation/reporting are observed in 14 of the 24 CMP programmes, of which six improvements are deemed significant. Three of them are already listed above (\*1.3, 6.1 and 6.4) and the other areas of most improvement since 2011 are:

- 4.2 Development of alternative livelihoods
- 5.3 Stakeholder participation
- 5.4 Capacity building, including identification of resource needs

The implementation/reporting score is slightly lower or unchanged for ten CMP programmes, compared to 2011. Overall, the weakest implementation/reporting appears to be in the areas of:

- 2.1 Protection of habitat outside established protected areas
- 5.1 Combatting illegal trade
- 5.3 Cooperative management initiatives
- 6.2 & 6.3 Resource mobilisation, for IOSEA operations and domestic programmes

11. The average rating across all 24 programmes and 35 Signatory States remains unchanged since 2011 (45 percent). This may be partly explained by the fact that in 2014 two new Signatories (Egypt and Sudan) have come onboard and have yet to submit a full report (as is the case with Papua New Guinea and Yemen). If one removes those four Signatories from the calculations, the overall progress is rather more substantial (with an overall programme average of 51, instead of 45); and 13 of the CMP programmes would reflect “good or very substantial progress”, rather than the current eight.

12. Comparing the detailed scoring results for individual Signatories between 2014 and 2011, 25 of the then 33 Signatories have improved in their implementation/reporting of the CMP, five of them substantially. The biggest improvements are seen in the reports of United Republic of Tanzania, United Arab Emirates, Madagascar, Malaysia and Pakistan. Minor declines or no change in the performance of the remaining eight Signatories could be an artefact of more stringent scoring or may be attributed to a failure to update some information in their reports.

13. If one looks more closely into the detailed figures available to the Secretariat, which are not presented here, one can group the 35 Signatory States into five broad categories, based on their performance in terms of implementation and reporting: Three “high achievers” (Australia, France, South Africa) are followed by a second tier of solid performers (India, Indonesia, Philippines, Seychelles, United Kingdom, United Republic of Tanzania, United States and Viet Nam). Under-reporting is probably all that prevents a third group of countries (Bangladesh, Comoros, Kenya, Madagascar, Myanmar, Pakistan, Sri Lanka, Thailand, and U.A.E.) from joining this second tier. More serious deficiencies in the reports of the remaining 11 countries<sup>1</sup> make their performance difficult to assess, but it is probably safe to say that the weakness extends also to certain aspects of implementation. (As noted above, Egypt, Papua New Guinea, Sudan, and Yemen have yet to submit reports and do not figure in the analysis.)

14. Taking a view across the four IOSEA sub-regions (Western Indian Ocean, Northwest Indian Ocean, Northern Indian Ocean and South-East Asia+), one observes further advances in the level of implementation/reporting since 2011. The Western Indian Ocean group (Annex 1a) has continued to improve, going from “strength to strength”, with all but two of the member countries attaining the rating of “good progress or very substantial progress”. With enhancements in implementation/reporting in almost all countries, the collective performance firmly belongs in the category of “good progress” (56 points; four higher than 2011).

15. Within the Northwest Indian Ocean group (Annex 1b), with the notable exception of United Arab Emirates, and to a lesser extent Islamic Republic of Iran and Oman, implementation/reporting in the sub-region appears fairly static with no measurable improvement since 2011. The overall group score has actually declined (from 34 to 30) as a consequence of non-reporting by three countries. This is not to say that there were no positive developments in the sub-region; on the contrary the conclusion in 2014 of a four-year EWS-WWF satellite tracking project has brought many important insights into hawksbill turtle movements in the Gulf.

16. The Northern Indian Ocean group (Annex 1c) continues in a positive direction, with all but one member country now attaining the rank of “good progress”. Overall, the collective score reaches 49 points (four higher than 2011). Much of the gain can probably be attributed to improved reporting of actual activities by most of the sub-regional members. Finally, the South-East Asia+ group (Annex 1d) attained the same overall ranking as their neighbours to the west, brought down slightly by the continued absence of a report from Papua New Guinea. Almost all member countries showed improvement in implementation/reporting, leading to a collective score of 49 points (three higher than 2011).

17. In closing it must be pointed out that, from the standpoint of measuring implementation progress, this analysis is only as good as the questions posed in the reporting template and the quality of the responses of Signatory States. Clearly, we are far from perfection on either count; but the fact that such an analysis is even possible is testimony to the large amount of effort invested by all concerned. A second important point is that, while we should be interested in how progress in implementing the IOSEA Marine Turtle MoU translates into stabilised or increasing marine turtle populations, the exercise of quantifying such trends relies in large measure on other partner organisations with the necessary scientific expertise and recognised assessment processes, such as IUCN. With such information in hand, we would have an even more comprehensive understanding of progress to date.

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<sup>1</sup> Bahrain, Cambodia, Eritrea, Iran, Jordan, Malaysia, Maldives, Mauritius, Mozambique, Oman, Saudi Arabia

## List of acronyms and abbreviations appearing in the text

ASEAN	Association of Southeast Asian Nations
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Fauna and Flora
CMP	Conservation and Management Plan
EIA	Environmental Impact Assessment
EWS/WWF	Emirates Wildlife Society/ World Wide Fund for Nature
FAD	Fish Aggregating Device
FAO	Food and Agricultural Organization of the United Nations
GCC	Gulf Cooperation Council
GEF	Global Environment Facility
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unregulated and Unreported (fishing)
KESCOM	Kenya Sea Turtle Conservation Committee
IOSEA	Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding
PERSGA	Regional Organisation for the Conservation of the Red Sea and Gulf of Aden
RFB	Regional Fishery Body
ROPME	Regional Organisation for the Protection of the Marine Environment
SAARC	South Asian Association for Regional Cooperation
SACEP	South Asia Cooperative Environment Programme
SEAFDEC	Southeast Asian Fisheries Development Center
SWIOFP	South West Indian Ocean Fisheries Project
TCP	Turtle Conservation Project (NGO)
TED	Turtle Excluder Device
TIHPA	Turtle Islands Heritage Protected Area
UNDP	United Nations Development Programme
VMS	Vessel Monitoring System
WCS	Wildlife Conservation Society
WIO-LaB	Project Addressing Land Based Activities in the Western Indian Ocean
WIO-MTTF	IOSEA Western Indian Ocean – Marine Turtle Task Force
WIOMSA	Western Indian Ocean Marine Science Association
WWF	World Wide Fund for Nature
BIOT	British Indian Ocean Territory
Iran	Islamic Republic of Iran
Tanzania	United Republic of Tanzania
U.A.E.	United Arab Emirates

## Keyword Index for Quick Reference

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<b>Keyword</b>	<b>Paras.</b>
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## **OBJECTIVE I: REDUCING DIRECT AND INDIRECT CAUSES OF MARINE TURTLE MORTALITY**

### **1.1 Introduction to marine turtle populations and habitats, challenges and conservation efforts**

**General tendency:** Very substantial progress (unchanged since 2011)

**Notable responses:** Australia, Bangladesh, France, India, Mozambique, Myanmar, Seychelles, Sri Lanka, Thailand, United Kingdom, United Republic of Tanzania (*hereafter abbreviated as Tanzania*).

1. This question is purely informational and is intended to provide the reader with an overview of each Signatory's marine turtle populations, associated habitats and status trends; as well as to highlight the country's main challenges and achievements in marine turtle conservation, drawing attention to particular issues of concern. (Detailed information on specific sites is considered separately and does not figure in this analysis.) Over two-thirds of the Signatories have provided very informative responses, including a dozen, mentioned above, that are particularly interesting. Compiled into separate reports for each of the four IOSEA sub-regions, these overviews provide an impressive snapshot of the current status of marine turtles and conservation challenges being addressed by the IOSEA MoU (Annex 1).

### **1.2 Identification and application of best practices to minimise threats**

**General tendency:** Partial implementation, good progress

**Notable responses:** Australia, Cambodia, Comoros, France, India, Indonesia, Kenya, Madagascar, Pakistan, Philippines, Seychelles, South Africa, Tanzania, United States, Viet Nam

2. Signatory States were requested to describe any protocol or approaches for conserving and managing marine turtle populations considered to be exemplary and suitable for adaptation and adoption elsewhere. In general, the responses to this question were quite informative. Though lacking detail in places, with further elaboration they could serve as useful indicators of approaches that might be adopted or adapted across IOSEA countries. Noteworthy initiatives described in some detail include: **Australia's** comprehensive national Recovery Plan (2003), its bioregional planning process (in progress since 2011), a broad partnership with Indigenous communities, as well as wide-ranging research and conservation projects involving various levels of government and non-governmental organisations; **Cambodia's** programme to foster cooperation with coastal fishing communities; **France's** state-of-the-art public information centre (Kélonia, in La Réunion), various outreach activities and productive collaboration with local fishermen; **India's** national sea turtle network (Turtle Action Group) and Marine Resources Conservation Consortium (OMRCC) aimed at promoting dialogue and collaboration; **Kenya's** inclusive national conservation and management strategy for sea turtles (2011-2015); **Madagascar's** invocation of traditional social code (community agreements) known as Dina, and use of financial incentives; **Philippines'** community-based conservation agreements, National Integrated Coastal Management Program, and data-gathering system; **Seychelles'** stakeholder involvement in a nation-wide conservation and monitoring network (Turtle Action Group of Seychelles); **South Africa's** turtle monitoring programme and integrated coastal zone management and legislative regime; **Tanzania's** community-based approaches to monitoring and conservation; **United States'** standardised nesting and foraging area monitoring protocols, light pollution mitigation and by-catch reduction initiatives, as well as species status reviews and recovery plans (available online); and **Viet Nam's** involvement of local communities in nesting beach monitoring and educational/awareness initiatives.

### 1.3 Correction of adverse incentives that contribute to turtle mortality

**General tendency:** Partial implementation, very good progress (increased activity since 2011)

**Notable responses:** Australia, Comoros, France, India, Kenya, Madagascar, Pakistan, South Africa, United Arab Emirates (*hereafter abbreviated as U.A.E.*), Tanzania, United States

#### *Socio-economic studies*

3. About three-quarters of the Signatory States report, to varying degrees, on socio-economic studies or activities that have been conducted among communities that interact with marine turtles and their habitats. (However it cannot be said that these are necessarily representative of recent or ongoing initiatives.) Among them: funding to assist in the development of community-driven approaches to turtle (and dugong) management in **Australia**; successful ecotourism by a local association in **Comoros**; **France**'s scientific partnerships with longline fishermen and participatory light pollution surveys; recently published studies of human-turtle interactions in Lakshadweep Islands and Orissa, **India**; a proposal under evaluation to investigate the economic aspects of marine turtle use and conservation in **Jordan**'s Gulf of Aqaba; numerous investigations of public perception and valuation of biodiversity in **Kenya**, including one done in 2011; numerous studies of the social and traditional importance of marine turtles to local communities in **Madagascar**, including one on green turtle hunting conducted in 2012; an overview of marine turtle-fisheries interactions in **Myanmar**; an assessment of trade of marine turtle artefacts in Maputo, **Mozambique**, conducted in 2005; recent studies in **Pakistan** on the dependence of coastal communities on marine ecosystems; a now historical assessment of the **Philippines**' Turtle Islands sanctuary conducted in 1998; studies in **Seychelles** in early 2000s to evaluate public attitudes towards turtle conservation and the socio-economic importance of marine resources; a 2007 study on interactions between artisanal fisheries and sea turtles in **Thailand**; general socio-economic studies involving stakeholders within the marine protected areas in the **U.A.E.**, including a comprehensive study in Abu Dhabi completed in 2014; numerous participatory studies in **Tanzania** addressing resource-use by coastal communities, as well as trade and economic value of turtle products, and cultural / social implications of human-turtle interactions (2008-2009); **United States**' research from 2004-2008 on the economics of Pacific leatherback conservation, as well as sea turtle-coastal fisheries interactions.

#### *Identification/correction of adverse incentives*

4. More than two-thirds of the Signatory States identified various adverse incentives contributing to turtle mortality – ease of access to the resource, low penalties against illegal harvesting, relatively high prices for turtles and lack of affordable alternatives being among the most common ones. Signatories also list a number of other adverse incentives, such as: legal and illegal coastal development activities, uncontrolled tourism, human migration to coastal areas, incentives to continue or expand harmful forms of fishing, black markets, and poverty/basic nutritional needs, etc. Many Signatories describe steps that are being taken to try to investigate and correct various adverse economic incentives, among them: Australia's partnership with indigenous communities to better manage sustainable harvest of marine turtles; Bahrain's attempts to reduce its shrimp trawl fleet; restrictions on tourism-related construction in sensitive areas in Bangladesh; sale of lower-priced alternative meat in France (Mayotte); efforts of the Islamic Republic of Iran (*hereafter abbreviated as Iran*) to use religious edicts to dissuade consumption of turtle eggs and meat; financial incentive and compensation schemes in Kenya, Madagascar and Mozambique; alternative livelihood programmes in Pakistan, Philippines, Tanzania and Viet Nam; development of turtle tourism in Comoros, Indonesia, Seychelles and Sri Lanka; creation of Conservation Trust Funds in Seychelles; South Africa's sustainable livelihoods programme and well-implemented restrictions on coastal development; and various schemes to involve communities (including former poachers) in eco-tourism activities and



nest protection. While reporting under this section has improved markedly compared to early reports, more in-depth descriptions of practical approaches that have shown some measure of success, as well as details of their resource implications, could serve as useful guidance for other countries.

#### **1.4 Reduction of incidental capture and mortality**

**General tendency:** Some progress, but limited in scope (continuous improvement from 2008 to 2011)

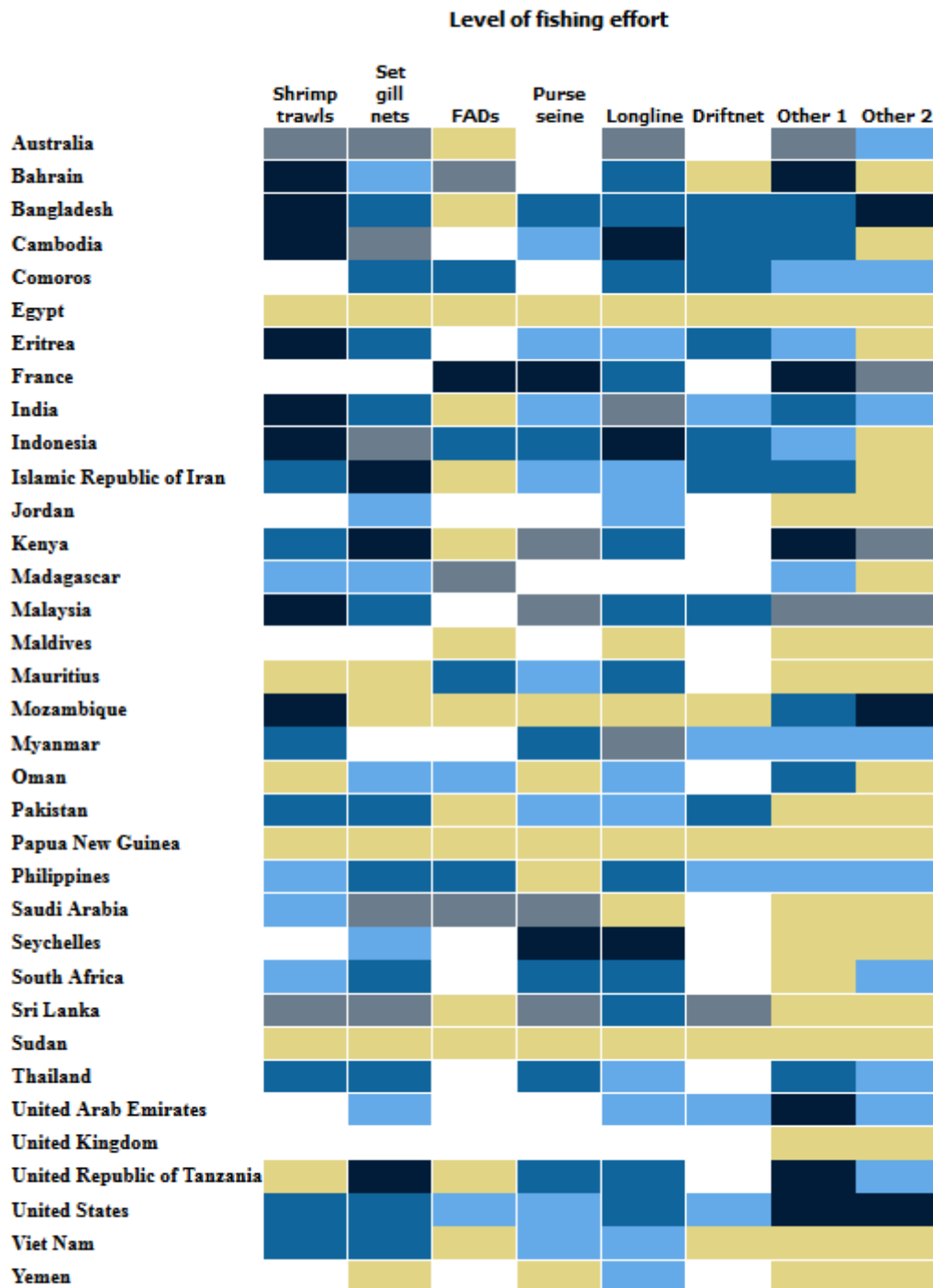
**Notable responses:** Australia, France, India, Pakistan, South Africa, Tanzania, United States

##### ***Fishing effort***

5. The IOSEA reporting template has been designed in such a way as to help Signatory States simultaneously meet their reporting commitments in relation to the FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations. Signatory States are requested to give a subjective indication of the relative level of fishing effort and impact on marine turtles of selected fisheries. There has been a further improvement in reporting compared to 2011, both in terms of the percentage of Signatory States responding and also the depth of their responses. The list of countries for which information on fishing effort and potential impacts on turtles is still largely incomplete has been reduced to only about a half-dozen countries, with Egypt, Mauritius, Papua New Guinea, Saudi Arabia, Sudan and Yemen still falling into that category.

6. The fisheries described in some detail include: shrimp trawls, set gill nets, anchored fish aggregating devices (FADs), purse seines, longlines, driftnets, and other miscellaneous fisheries. Figures 1a and 1b give a graphical overview of the reported level of *effort* of each fishery. For many countries this information is accompanied by a more detailed description of the fishery. The level of additional detail provided for all fisheries has been augmented, but there is still considerable room for improvement (for example, with regard to scale of the fishery, operational coverage, and extent of interactions with turtles). Longline, set gill net and shrimp trawl fisheries are reported to be in operation in 93, 86, and 72 percent, respectively, of the Signatories responding, and the level of effort was reported to be “moderate to relatively high” in about 50 percent of those countries.

1.4.1 Indicate, and describe in more detail, the main fisheries occurring in the waters of your country, as well as any high seas fisheries in which flag vessels of your country participate and could possibly interact with marine turtles. [INF]



In the matrix above, the colour blue depicts the presence of a particular fishery, while the shade of blue represents the reported relative level of fishing effort taken from Question 1.4.2 (see key for details).

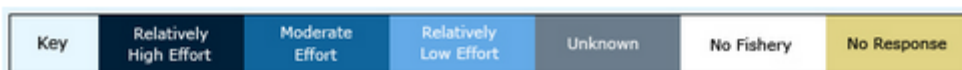
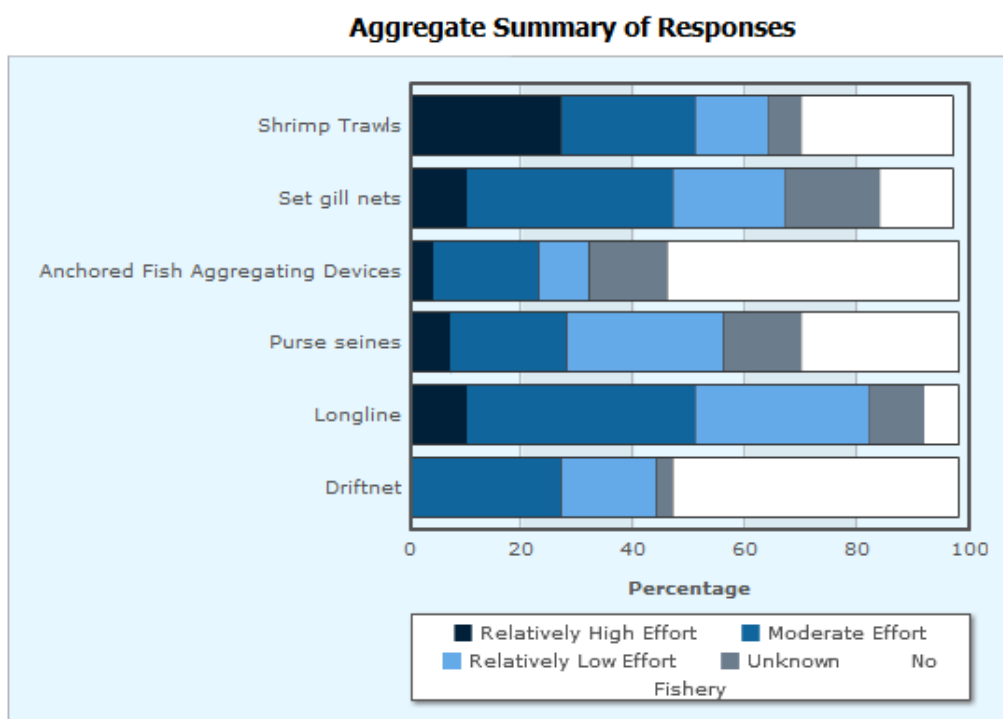


Figure 1a. Level of fishing effort, per country



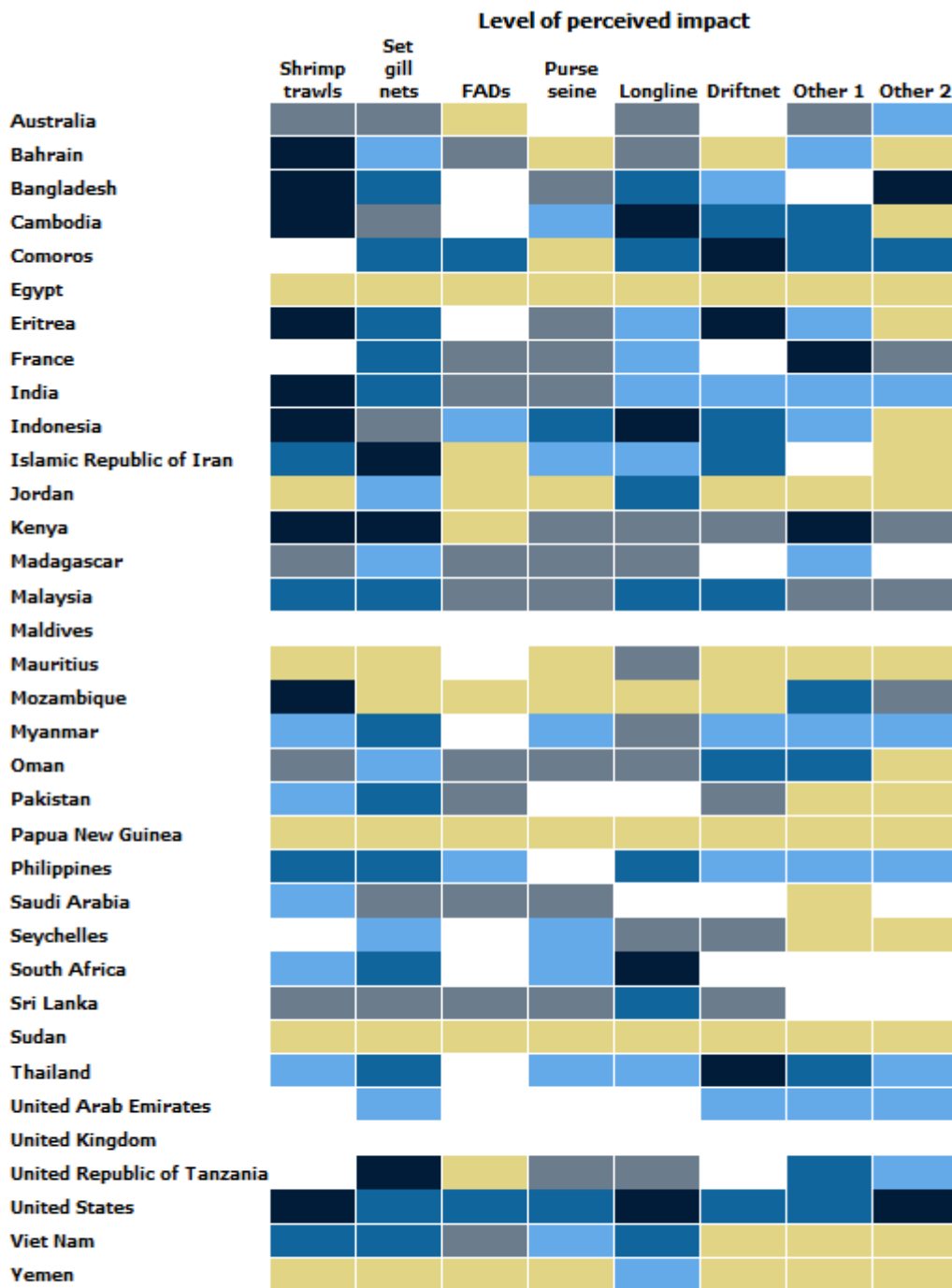
**Figure 1b. Aggregate summary of responses for fishing effort, as a percentage of countries reporting.**

***Perceived fishing impacts***

7. Figures 2a and 2b provide a similar graphical overview of the level of perceived *impact* of the various fisheries as reported by the Signatory States. By way of example, shrimp trawls are reported by nine Signatory States (Bahrain, Bangladesh, Cambodia, Eritrea, India, Indonesia, Kenya, Mozambique and United States) to have a “relatively high” impact. This amounts to about a third of those Signatories responding. Set gill nets are reported by 15 Signatory States (more than half of those responding) to have a “moderate to relatively high” impact – with Islamic Republic of Iran, Kenya and Tanzania reporting a particularly serious problem. The number of Signatories reporting “moderate to relatively high” impacts of longlines was somewhat lower (just over 35 percent), with four notable cases: Cambodia, Indonesia, South Africa, and United States. Over a third of the Signatories responding indicated “unknown” impacts in relation to longlines. Other fisheries, such as purse seines and FADs, were generally reported to have relatively less impact on marine turtles.

8. Already, the amount of collective information that can be gleaned from these sections of the reports is extensive. It warrants a more in-depth analysis than can be attempted here due to space and time constraints. There is, of course, still much room for improvement – in terms of precision and completeness of the responses – but already the reports make a valuable contribution to our understanding of the fisheries that may be interacting with marine turtles. Admittedly, the assessments of effort and impact are still to a large extent subjective, but as countries begin to provide more detailed information on the operation of a given fishery (e.g. as Australia, India, Kenya, Pakistan, South Africa, Tanzania and Viet Nam have done for some fisheries), the evaluations can be made more objectively on the basis of quantified data. Therefore, Signatory States are encouraged to give priority to completing and strengthening sections 1.4.1 and 1.4.2 of their reports.

1.4.2 Please indicate the relative level of fishing effort and perceived impact of each of the above fisheries on marine turtles (e.g. in terms of by-catch). [TSH]



In the matrix above, the colour blue depicts the presence of a particular fishery, while the shade of blue represents the perceived level of fishing impact (see key for details).

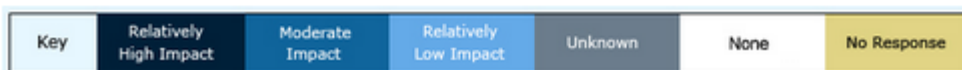


Figure 2a. Level of perceived impact of each fishery on marine turtles, per country

### Aggregate Summary of Responses

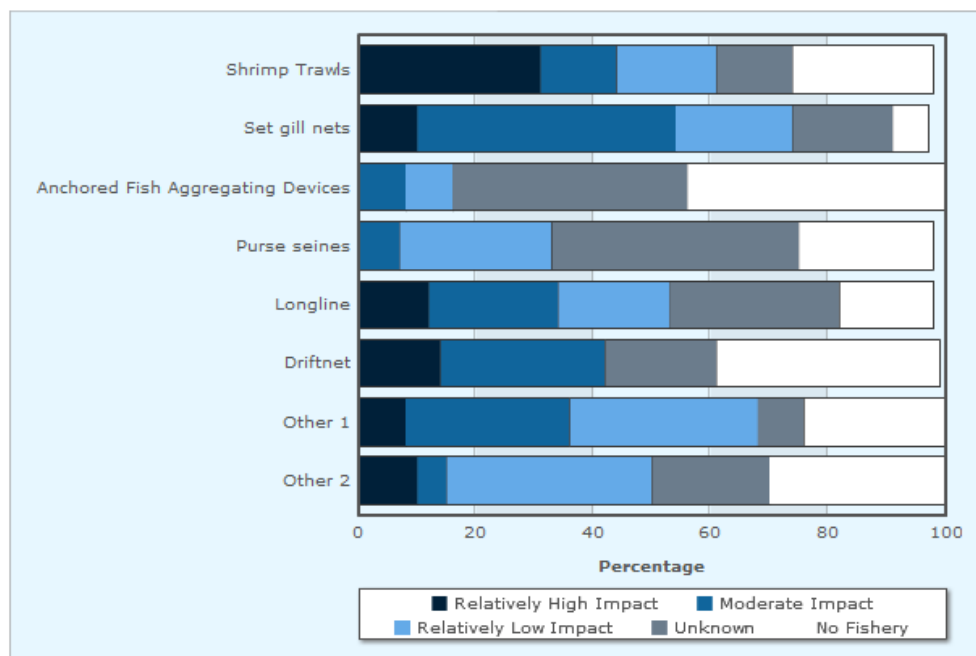


Figure 2b. Aggregate summary of responses for fishing impact, as a percentage of countries reporting.

### Illegal fishing

9. About three-quarters of the Signatories (fairly constant proportion compared to 2011) cite specific examples of illegal fishing in the IOSEA region that may impact marine turtles. Compared to 2011, more information on illegal foreign fishing activities taking place in the IOSEA region is available, with new accounts provided by Bangladesh, Comoros, India, and Madagascar; adding to the existing list of countries providing such accounts (Indonesia, Malaysia, Mozambique, Philippines, South Africa and the United Kingdom). Examples include: some illegal, unregulated and unreported (IUU) fishing in northern **Australian** waters; illegal use of gillnets and fishing out of season in **Bahrain** waters; illegal foreign trawlers operating in **Bangladesh** as evidenced by a 2013 report; destructive fishing gear used in **Cambodia**; a lack of enforcement of national laws over foreign fisheries operating in **Comoros'** Moheli Marine Park (MMP); illegal fishing with various gear types in **France**; foreign turtle poachers operating in the **Indian** waters of Andaman and Nicobar islands; foreign vessels fishing illegally in **Indonesian** waters, as well as use of explosives and chemicals by local fishers; poison/blast fishing and illegal longlining in **Kenya**; unconfirmed reports of illegal fishing by Asian vessels in **Madagascar**; illegal use of large-meshed bottom gill-nets in **Malaysia**, as well as illegal take of marine turtles by foreign fishing vessels in territorial waters; illegal purse seiners poaching from **Maldivian** waters; illegal Asian longline fishing vessels, targeting tuna and sharks in **Mozambique**; illegal trawling and drift gill nets in **Oman**; continued use of explosive and other destructive fishing methods (e.g. in **Bangladesh, Philippines, Tanzania**); use of gear of excessive length / illegal mesh size in **Pakistan**, aggravated by the newly reported presence of "sea lords", particularly in the Sindh province; illegal foreign fishing/poaching targeting sea turtles in southern **Philippines**; harpooning of turtles at sea in **Seychelles**; cross-border poaching in protected areas by foreign longliners and trawlers in **South African** waters; incursion of illegal fishing boats into coastal areas of **Thailand**; use of illegal fishing gear such as drift gill nets and monofilament nets in **U.A.E.**; newly reported beach seine activity in **Tanzania**; and illegal fishing mainly for bêche de mer in the **BIOT** archipelago. The **United States** notes that if countries are certified to be

engaged in IUU fishing, the provisions of the High Sea Driftnet Fisheries Moratorium Protection Act can come into force, which includes the denial of port privileges. While not all of the cases cited are necessarily ongoing (many of the accounts are historical or are not temporally defined), the extensive list gives an idea of the scope of illegal fishing activities that may be impacting marine turtles across much of the IOSEA region.

### ***Minimizing incidental capture and mortality***

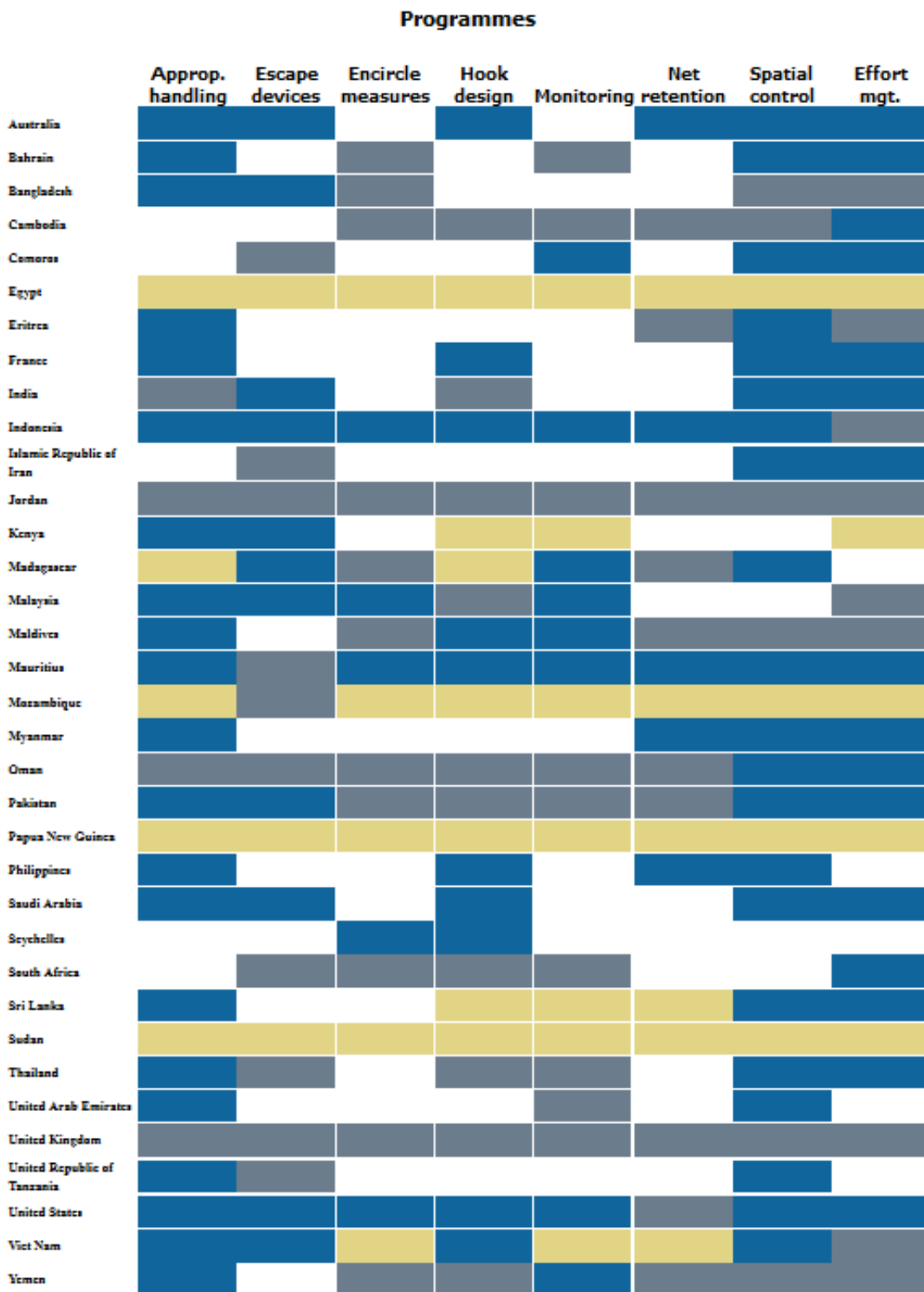
10. Signatory States are requested to report on the implementation of several methods of minimizing incidental capture and mortality of marine turtles in fishing. These include appropriate handling of incidentally caught turtles; devices that allow the escape of marine turtles (e.g. TEDs); measures to avoid encirclement of turtles in purse seines; appropriate combinations of hook design, bait type, depth, gear specifications and fishing practices; monitoring and recovery of FADs; net retention and recycling schemes; spatial and temporal control of fishing; and effort management control.

11. With some exceptions, reporting on all of these measures has continued to improve since 2011 (Figure 3, for example, with new information provided by Madagascar, Malaysia and U.A.E.). However implementation appears to remain weak, especially in relation to encirclement mitigation, monitoring of hook design and net retention. Twenty-two Signatories (about two-thirds of those reporting) have initiated training programmes in appropriate handling of incidentally caught turtles. While their efficacy is usually unstated, Australia, Bangladesh, France, Indonesia, Kenya, Myanmar, Tanzania and United States do provide explanations of their training / by-catch mitigation programmes. Australia, in particular, reported on new fisheries permit conditions that now require operators to carry line-cutters and de-hookers on board. Five Signatories indicated that they do not have such programmes in place; and eight have not reported definitively in this area.

12. Only about one-third of all Signatories reporting (Australia, Bangladesh, India, Indonesia, Kenya, Madagascar, Malaysia, Pakistan, Saudi Arabia, United States, and Viet Nam) have initiated programmes requiring the use of devices that allow the escape of marine turtles (proportion unchanged since 2008 and 2011). However the success of implementation varies and many countries report on the reluctance of fishers to install TEDs. Australia, Bahrain, Bangladesh, Eritrea, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Mozambique, Myanmar, Pakistan, South Africa, Thailand, and Viet Nam are among those offering informative descriptions of their efforts, successful or otherwise. Comoros, Oman, U.A.E. and United Kingdom specified that Turtle Excluder Devices (TEDs) were not applicable to their national fishing fleets. Most Signatories responding either do not presently have measures in place to avoid encirclement (i.e. in purse seine fisheries) or such measures are reportedly not warranted in the context of their national fisheries. Nonetheless, a few Signatories (e.g. France, Malaysia, Thailand, United States) report on their experience with the relevant technology and awareness training.

13. More than a third of the Signatories reporting (Australia, France, Indonesia, Maldives, Mauritius, Philippines, Saudi Arabia, Seychelles, United States, and Viet Nam) have investigated appropriate combinations of hook design, bait type, gear specifications and fishing practices as means of mitigating marine turtle by-catch. While generally lacking in detail, some indicative explanations are provided by Australia (elaborated since its last reporting), France, Indonesia, Malaysia, Philippines, Seychelles, South Africa, Thailand and United States. However, a similar proportion of Signatories responding to this question (and probably many more, if one counts non-respondents) have yet to initiate such studies.

1.4.4 Which of the following methods are used by your country to minimise incidental capture/mortality of marine turtles in fishing activities? [IND]



In the above matrix, the colour blue depicts the presence of a particular programme.

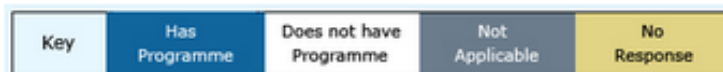


Figure 3. Programmes to minimise incidental capture/mortality of marine turtles in fishing activities

Overall, it would be helpful if more countries were to describe their research activities in this area, in sufficient detail to allow for at least a cursory assessment of the efficacy of different approaches.

14. About two-thirds of the Signatories responding exercise spatial and temporal control of fishing activities, and a comparable percentage manage fishing effort (unchanged from 2008 through 2011). Many provide useful explanations (notably, Australia recently provided additional information). However, several countries, such as Bangladesh, point out that these controls are primarily directed at fisheries management and are not specifically intended to address turtle by-catch. Nonetheless, some of these measures do offer protection for marine turtles and, with some modification, their ancillary benefits for turtles might be enhanced. It would be helpful if all respondents were to provide more details of their spatial and temporal controls so that it might be possible to have a clearer picture of how these might relate to turtle distribution and migratory behaviour.

15. Only five Signatories (Australia, Indonesia, Mauritius, Myanmar and Philippines) report implementing net retention and recycling schemes, with one meaningful example given by Australia on its successful “Ghostnets Australia Programme” involving Indigenous rangers. Effort management control is exercised by more than half of responding Signatory States, with a few providing additional information.

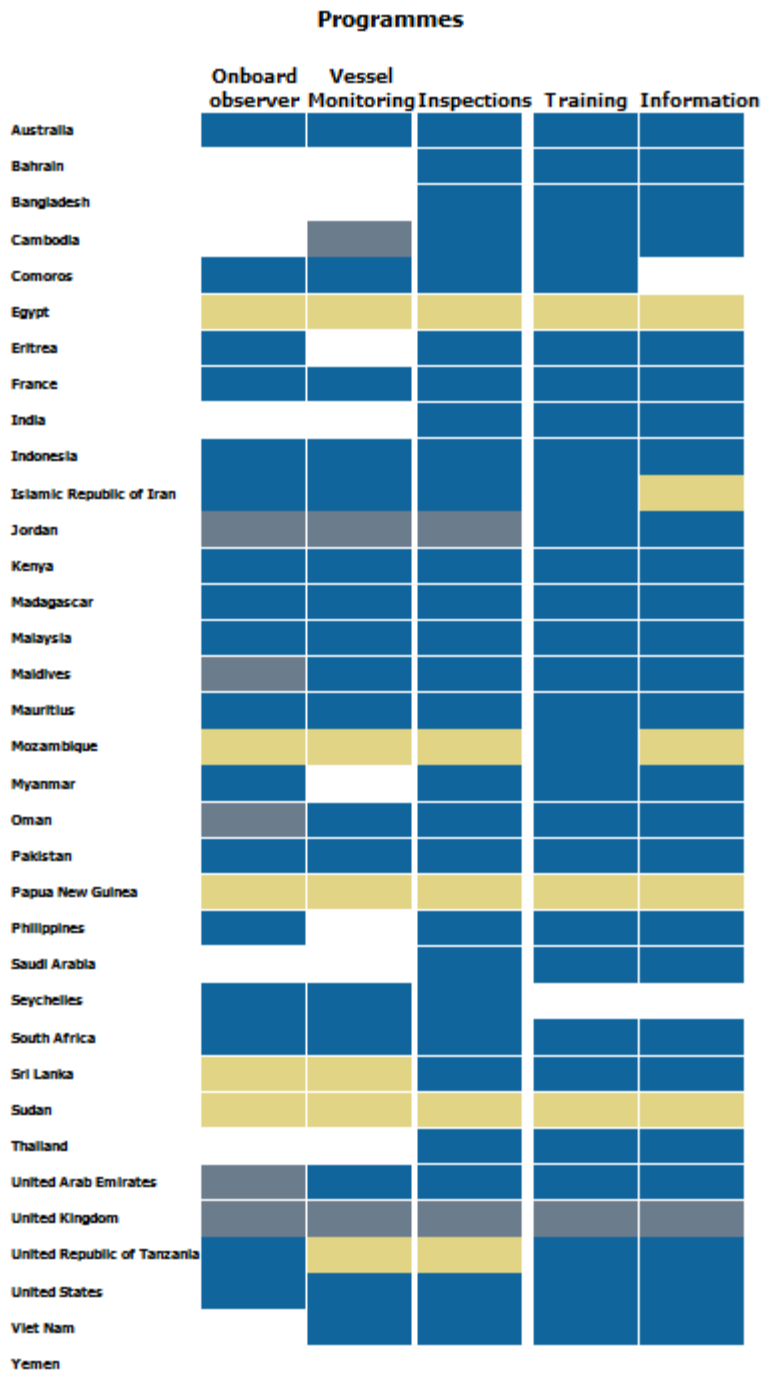
16. Signatory States are requested to report on the development of other fisheries-related programmes that may contribute to minimizing incidental capture and mortality of marine turtles in national waters and in the high seas. As Figure 4 illustrates, both reporting and actual implementation of these programmes is substantial and improvements have been noted since 2011. Well over half of the Signatories responding have some form of onboard observer programme: Australia, Bangladesh, Eritrea, France, Indonesia, Kenya, Madagascar, Mauritius, Myanmar, Pakistan, Philippines, Seychelles, South Africa, United States and Viet Nam provide informative descriptions. Almost 60 percent report the use of vessel monitoring systems (VMS). Most Signatories responding have systems in place for inspections at ports and landing sites, but far fewer at sea. Although these inspections probably have another primary focus, the potential exists for more attention to be given to turtle by-catch through greater cooperation and training. (*NB: some of the responses to this question appear to be confounded by a previous reporting template – and some Signatories need to revisit their responses.*) About 90 percent of the Signatories responding have conducted training for fishers and/or have produced a variety of educational information materials; and most offer some interesting explanations. Australia gives a particularly detailed account. In most cases, it would be helpful if these descriptions were elaborated further to provide a better sense of what has been done and what is planned in the future, with a view to avoiding duplication of effort and perhaps identifying areas where joint initiatives could be developed.

### ***Programme reviews***

17. Only about 60 percent of the Signatories responding indicate that they periodically review and evaluate these various mitigation measures and programmes for their efficacy. Australia carries out 6-monthly assessments of implementation and reviews each fisheries by-catch action plan every two years. Informatively, regular evaluations of the effectiveness of training workshops in Tanzanian coastal communities have shown that fishers who participate in training workshops and meetings rarely share information with their peers. Other countries providing additional details of programme assessments include: Bangladesh, France, India, Indonesia, Philippines, Seychelles, South Africa, and United States.



1.4.5 Which of the following programmes has your country developed - in consultation with the fishing industry and fisheries management organisations - to promote implementation of measures to minimise incidental capture and mortality of turtles in national waters and in the high seas?  
 [IND]



In the above matrix, the colour blue depicts the presence of a particular programme to, inter alia, minimize incidental capture of marine turtles (see key for details).

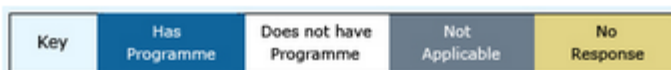


Figure 4. Programmes to promote implementation of measures to minimise incidental capture and mortality of turtles, per country

### *Research and development*

18. Most of the Signatory States report, to varying degrees, on interesting research and development activities in support of by-catch reduction. For instance, **Australia** is continuing its research on more effective TEDs, and has undertaken major ecological risk assessments of the impacts of fisheries on the marine ecosystem. **Bahrain** requires shrimp fishermen to report instances of turtle by-catch; while mortality records have been collected by NGOs in **Bangladesh** since 1996. Surveys supported by SEAFDEC/MFRDMD were conducted near turtle nesting grounds in **Cambodia**. **Eritrea's** Ministry of Fisheries has 10 years of detailed data on incidentally caught turtles; **France** has data collection programmes in place for incidental capture of turtles; while two **Indian** institutes are tasked with monitoring by-catch in various fisheries. **Indonesia** has conducted interviews with fishermen on tuna longliners and shrimp trawls, and is experimenting with circle hooks and TEDs; and **Madagascar** has conducted research to determine the most appropriate specifications for TEDs to be used by prawn trawlers. **Mozambique** has assessed the impact of prawn trawling and beach seining on marine turtles; while **Philippines** is conducting research on circle and J-hooks, and is collecting data on incidental catch in various coastal gears; and **Pakistan** is gathering considerable data through sustained by-catch surveys in collaboration with FAO. **French** and **Spanish** fleets operating around **Seychelles** are working on new drifting FAD designs to reduce by-catch. **South Africa** is experimenting with drumlines to replace bather protection nets and with circle hooks on some longline vessels, and it is reviewing prawn trawl by-catch impacts on leatherback turtles. Its report cites a state-of-knowledge academic report on conservation, monitoring and research from 2014. Meanwhile, South African NGO's have reviewed the impacts of longlining and trawling on vulnerable species. Sustained studies in **Tanzania** confirm that gillnets, particularly bottom set nets, pose a significant threat to green turtles. The **United States'** National Marine Fisheries Service (NMFS) has a few programs that contribute to the research and development of by-catch reduction devices for sea turtles. Finally, the Government of **Viet Nam** and WWF-Viet Nam have launched a two-stage project with support from the US-NOAA on marine turtle interactions in Vietnamese Fisheries.

19. In general, these positive initiatives are reflective of a considerable amount of attention being given to marine turtle-related research across the IOSEA region. More explicit information about the nature of these research programmes – including time frames, periodic updates of findings and published results – would help to ensure that this dynamic work is better coordinated and conducted more efficiently, and that the lessons learned are shared more widely across IOSEA Signatory States.

### *Information and technical exchanges*

20. Two-thirds of the Signatories responding have exchanged information and technical assistance internationally in the area of by-catch mitigation, however it should be noted that many of these are not recent activities. **Australia**, through the Australian Maritime College, conducted research and training on TEDs in Kuwait in 2003; and various Australian agencies are reported to have exchanges with **Indonesia**. **Comoros** has benefited from European Union technical assistance aimed at improving technologies and data collection. **France** has funded research on by-catch and sea turtle migration with an international perspective, and has designed questionnaires used by regional collaborators. In 2004, **Kenya** organised a marine turtle workshop for countries of the Western Indian Ocean region. **Madagascar** convened an FAO workshop in 2007 to share experiences in TED implementation with other Southwest Indian Ocean countries. The **Philippines** reported on exchanges made through SEAFDEC-ASEAN Sea Turtle Conservation and Management meetings; SEAFDEC/FAO workshops on fishery impacts on sea turtles in the ASEAN region (2007-2009); and a collaborative workshop (with NOAA) held in Saipan in 2011 for sharing of green turtle information among the Philippines, Japan, Guam and Marianas Archipelago.

**South African** NGO experience in by-catch mitigation has been shared with neighbouring countries. **Sri Lanka**, through the NGO ‘TCP’, previously distributed its by-catch survey findings internationally, and exchange of tagging data with India has been reported. The **United States** has an active program to exchange technical information related to Turtle Excluder Devices, circle hook technology and more recently modified gillnets with interested countries. **Viet Nam** is collaborating and exchanging information with SEAFDEC and various international NGOs.

### ***Driftnet enforcement***

21. More than half of the Signatory States reporting have some form of legislative prohibition against the use of large-scale driftnets in national waters; or they or not used in territorial waters in any case. Several countries (e.g. India, Oman, Viet Nam) are apparently considering their prohibition; while at least three (Cambodia, Iran, Malaysia, Thailand) have not taken any legislative steps in this regard. Pakistan is currently introducing a pilot project to convert drifting gillnetters to tuna long liners, including a training component. Details are missing for several Signatory States (Cambodia, Egypt, Indonesia, Jordan, Kenya, Maldives, Mozambique, Papua New Guinea, Sudan, Tanzania, Yemen). Less clear from most of the responses is the practical enforcement of legislative measures that are already in place.

## **1.5 Identification of turtle uses/values; legislation and management regimes**

**General tendency:** Partial implementation, good progress

**Notable responses:** Bahrain, Cambodia, France, Philippines, Seychelles, South Africa, U.A.E., United Kingdom, Tanzania, United States

### ***Economic uses and cultural values***

22. As shown in Figures 5a and 5b, almost all Signatory States list a number of economic uses and cultural values of marine turtles, the most prevalent being meat consumption (in 75 percent of those reporting), followed by egg consumption (65 percent) eco-tourism benefits (60 percent), cultural/traditional significance (45 percent), and use of shell (40 percent). The reported increase in egg consumption (by about 15 percent more respondents compared to 2011) may be noteworthy. Meat consumption is rated to be of “moderate to high” prevalence by nine Signatories (Comoros, Eritrea, France, Madagascar, Maldives, Mozambique, Philippines, Seychelles, and Tanzania). Many countries (notably Tanzania) offer a brief description of the nature of this consumption. Only Maldives and Mozambique report high egg consumption; while moderate egg consumption is reported to occur in Bangladesh, Comoros, Eritrea, Indonesia, Madagascar, Myanmar, Philippines and Tanzania. India and Malaysia downgraded their rating compared to 2011 (from moderate to low, and from high to low, respectively), without giving a substantial explanation. Egg consumption apparently does not occur in seven Signatory States, and its importance is either “low” or unrated in about a dozen other countries. Consumptive use of turtles for shell and fat also occurs, but is apparently relatively less common. For example, use of turtle shell products is reported in only a dozen Signatory States, and mostly at low levels – with the exception of Seychelles and Mozambique where trade in turtle shell was reported to be “high” and “moderate”, respectively. A surprisingly small number of countries (Australia, France, Mozambique, Seychelles, South Africa and Tanzania) provide descriptions of eco-tourism programmes centred on marine turtles, even though this activity is reported to occur at some level in 60 percent of the Signatories responding. Some interesting examples of use of turtles in traditional medicine (e.g. Eritrea, Mozambique, Saudi Arabia, Seychelles, Tanzania); as well as cultural/traditional significance (e.g. Australia, France, Myanmar Seychelles, South Africa) are given.

1.5.2 Which, among the following list, are economic uses and cultural values of marine turtles in your country? Please rate the relative prevalence / importance of each consumptive or non-consumptive use. [INF]

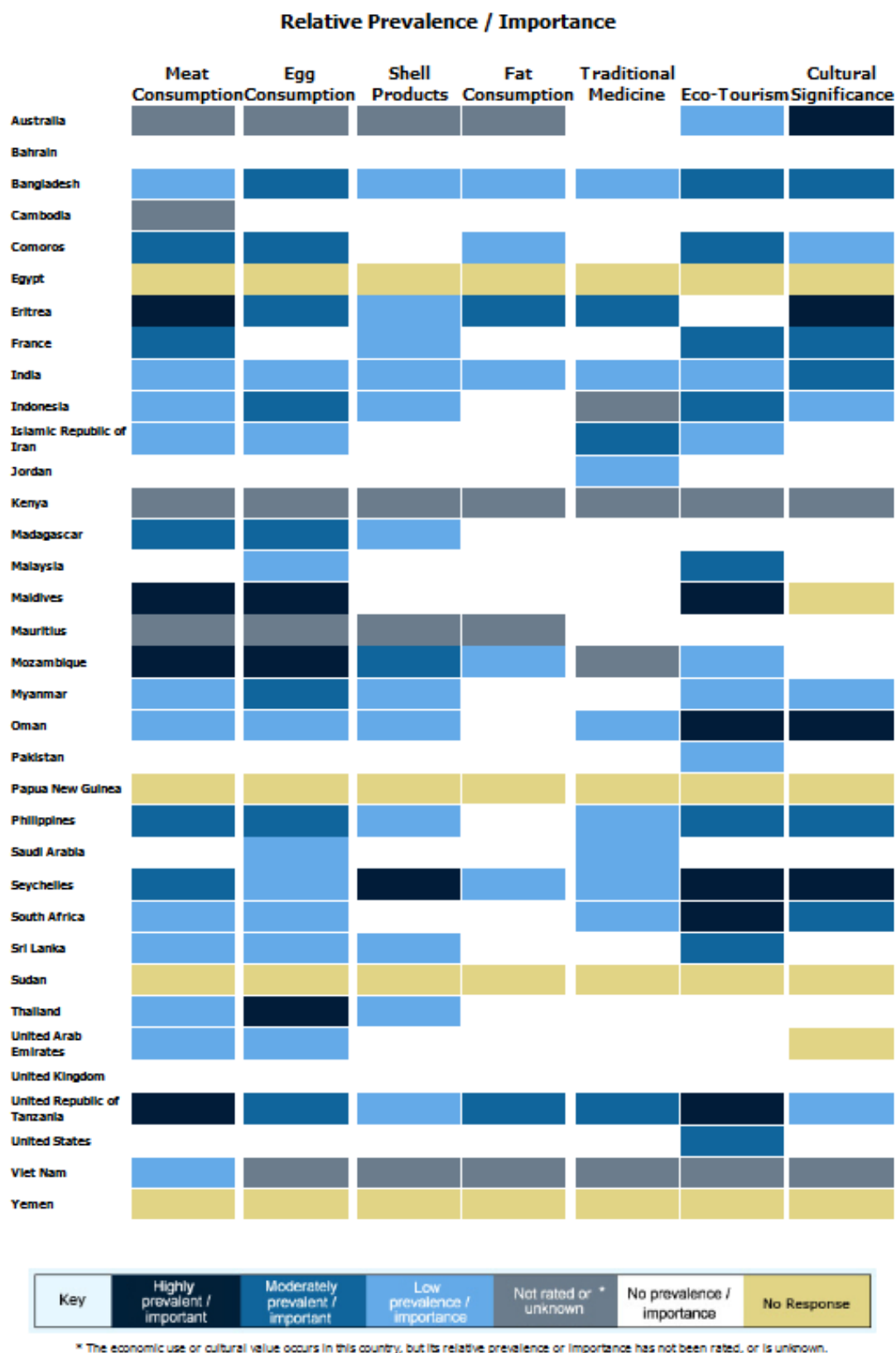
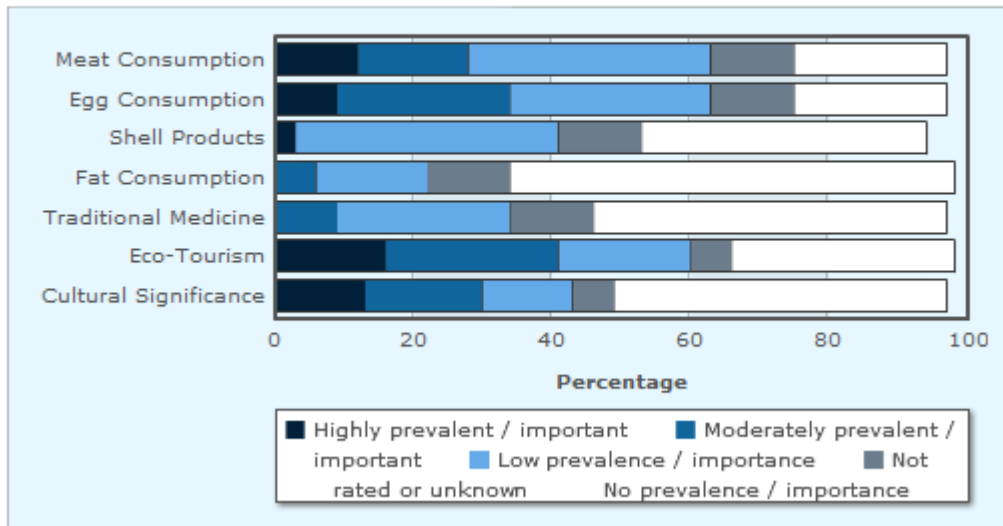


Figure 5a. Relative prevalence / importance of economic uses and cultural values of marine turtles, per country

**Economic uses and cultural values of marine turtles in Signatory States responding to this question**



**Figure 5b. Aggregate summary of responses for economic uses /cultural values, as a percentage of countries responding**

Overall, however, it should be noted that a lack of detailed responses from most Signatory States suggests an information gap that needs to be addressed.

***Direct harvest and domestic trade***

23. Virtually all of the 31 Signatory States responding have enacted legislation to prohibit direct harvest and domestic trade in marine turtles, their meat, eggs, parts and products – either explicitly or implicitly. Many (including Australia, France, Indonesia, Iran, Madagascar, Mozambique, Seychelles, South Africa, United Kingdom, Tanzania) provide detailed descriptions of the provisions and penalties for infringement. Bangladesh reported a revision of its law in 2012. Notwithstanding the legislative provisions mentioned above, traditional consumption of turtle meat and/or eggs occurs in at least 23 (about 75 percent) of the Signatory States responding; and is reported to be “moderate to high” in about 40 percent of these (Figures 6a and 6b). Australia is unable to characterise the level and impact of the traditional harvest, but offers a detailed explanation of its importance and attempts to monitor it. Historically, in Seychelles, both the level and impact of this harvest was high; and illegal poaching continues today. Bangladesh, Comoros, Eritrea, France, Iran, Kenya, Mauritius, Mozambique, Myanmar and Viet Nam are among the countries offering brief descriptions of the nature of this ongoing consumptive use. The current analysis would benefit from more details explaining the high values for Maldives, as well as Sri Lanka’s downgrade of both the level and impact of illegal poaching from “high” to “moderate” compared to 2011. Only Bahrain, Jordan, Malaysia, Pakistan, U.A.E., United Kingdom and United States report no traditional harvest of turtles for meat.

1.5.3 Please indicate the relative level and impact of traditional harvest on marine turtles and their eggs. [IND, TSH]

**Level of harvest/impact of harvest**

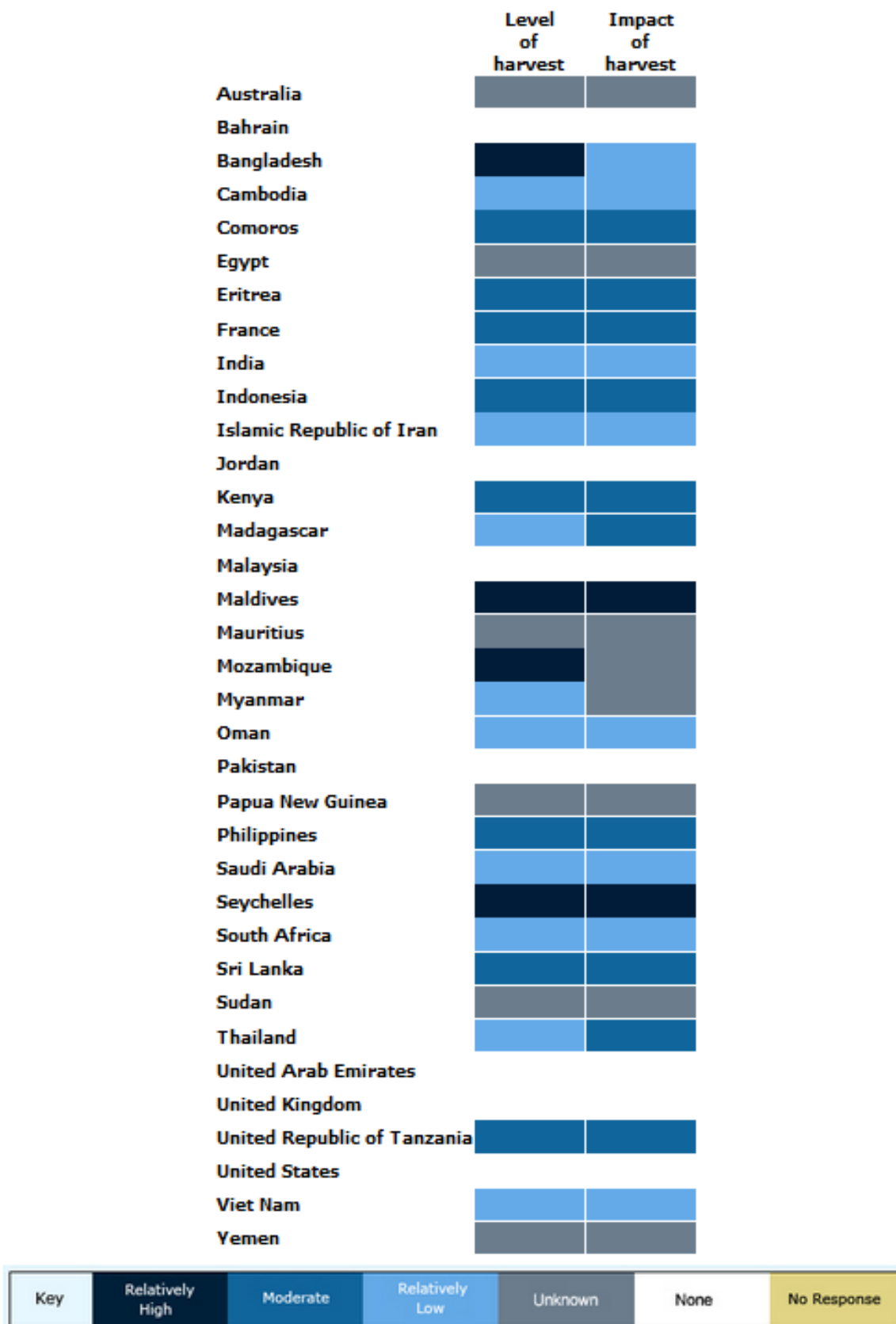


Figure 6a. Relative level and impact of traditional harvest of turtles/eggs, per country

### Comparison of level of impact and level of harvest in Signatory States responding to question

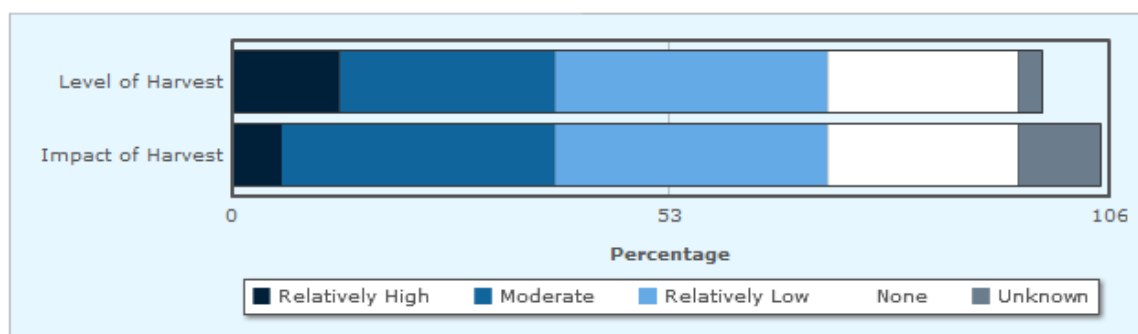


Figure 6b. Aggregate level and impact of traditional harvest of turtles/eggs, all countries

#### Management regimes

24. More than 80% of the relevant Signatory States that responded indicate that they have established domestic management programmes that include limits on levels of intentional harvest, and several of these give specific details. **Australia** is developing a nationally coordinated effort to sustainably manage the harvest of turtles. **Comoros** deploys eco-guards who inform and survey the nesting beaches with the support of local associations. **France** uses a combination of public education and enforcement actions on the ground. Indonesia reports on efforts to phase out harvesting, reduce retail sales, and shift egg harvest concessionaires to alternative income sources. **Iran** conducts site-specific management programmes on a half-dozen islands. A regional order was issued in 2013 to combat the trafficking of turtles in southwest **Madagascar**. Some protected areas have been established in **Malaysia** where egg collection is prohibited. Harvesting of eggs and catching of live turtles is banned from 13 selected islands in **Maldives**, which are monitored regularly to minimize intentional harvesting. **Mozambique** has implemented several awareness campaigns aimed at reducing coastal tourism impacts on marine turtles, as well as illegal trade. In the **Philippines'** Turtle Islands, an administrative order provides for the conservation of a certain percentage of the eggs collected. **Seychelles** documents in considerable detail the successive management regimes put in place over the past 100 years, noting that protected areas where all hunting is prohibited have proven to be more effective than 'selective' regulations. A very effective turtle monitoring and border control programme exists in **South Africa** to fight against illegal trade. In **Sri Lanka**, former egg collectors are employed as turtle nest protectors at several beaches. In **Thailand**, groups of educated local villagers, supported by government officers, are involved in marine turtle monitoring and conservation. In **Tanzania**, the involvement of local communities in nest protection, monitoring, data collection and awareness-raising, as well as ecotourism, have played a key role in reducing threats to turtles.

25. Only a few Signatory States have management agreements already in place, or being negotiated, with other concerned States in relation to sustainable levels of traditional harvest of marine turtles. Australia provides details of relevant agreements with Indonesia and Papua New Guinea. Philippines has a bilateral agreement with Malaysia, and is also dealing with the issue of sustainable harvest in the framework of a separate MoU with Indonesia and Malaysia for the Sulu-Sulawesi Marine Ecoregion. The relatively recent creation of a Peace Park between Mozambique and South Africa – Africa's first Trans Frontier Marine Park, including turtle nesting areas – facilitates close cooperation on cross-border law enforcement.

## 1.6 Development of nesting beach management programmes

**General tendency:** Some progress, but limited in scope

**Notable responses:** Indonesia, Philippines, Seychelles, South Africa, Sri Lanka, United Kingdom, Viet Nam

### *Nesting beach management*

26. Almost all of the Signatory States report having a suite of measures in place to minimise or reduce the mortality of eggs, hatchlings and nesting females (Figure 7a). About 90 percent have monitoring programmes: Australia, Bangladesh, France, India, Iran, Kenya, Madagascar, Mozambique, Pakistan, Seychelles, South Africa, Sri Lanka, U.A.E., United Kingdom, and Tanzania are among those that provide useful descriptions. Debris removal and beach clean-up is practiced in nearly as many Signatory States, but in many cases the frequency and extent of these activities appear to be limited. Australia, France and South Africa provide noteworthy examples of institutionalised programmes. About 90 percent of the Signatories have education/awareness programmes, with Australia, France, Iran, Mozambique, Pakistan, Philippines, Seychelles, South Africa, U.A.E. and Tanzania among those offering notable examples. Over 80 percent have regulations on the location and design of buildings and are working to reduce light pollution; however (with some exceptions, such as Australia, France, South Africa and Tanzania) rather few concrete examples are provided. Nearly 60% of the 31 Signatories responding report using egg relocation and hatcheries as a management tool, and several describe the particular circumstances where this may be necessary. Predator control and restriction of vehicle access are also practiced in about 60 and 75 percent of the responding countries, respectively (an increase since 2011); and specific examples of predation problems and controls on vehicles are given. Re-vegetation of frontal dunes is now occurring in just over half of the Signatories responding (compared to about 40% at the time of the last analysis), with some examples provided by Australia, Bangladesh, France, India, Madagascar, Philippines, Seychelles, Tanzania, United States and Viet Nam. Generally speaking, the national reports would be much more informative if the descriptions of particular activities were more thorough.

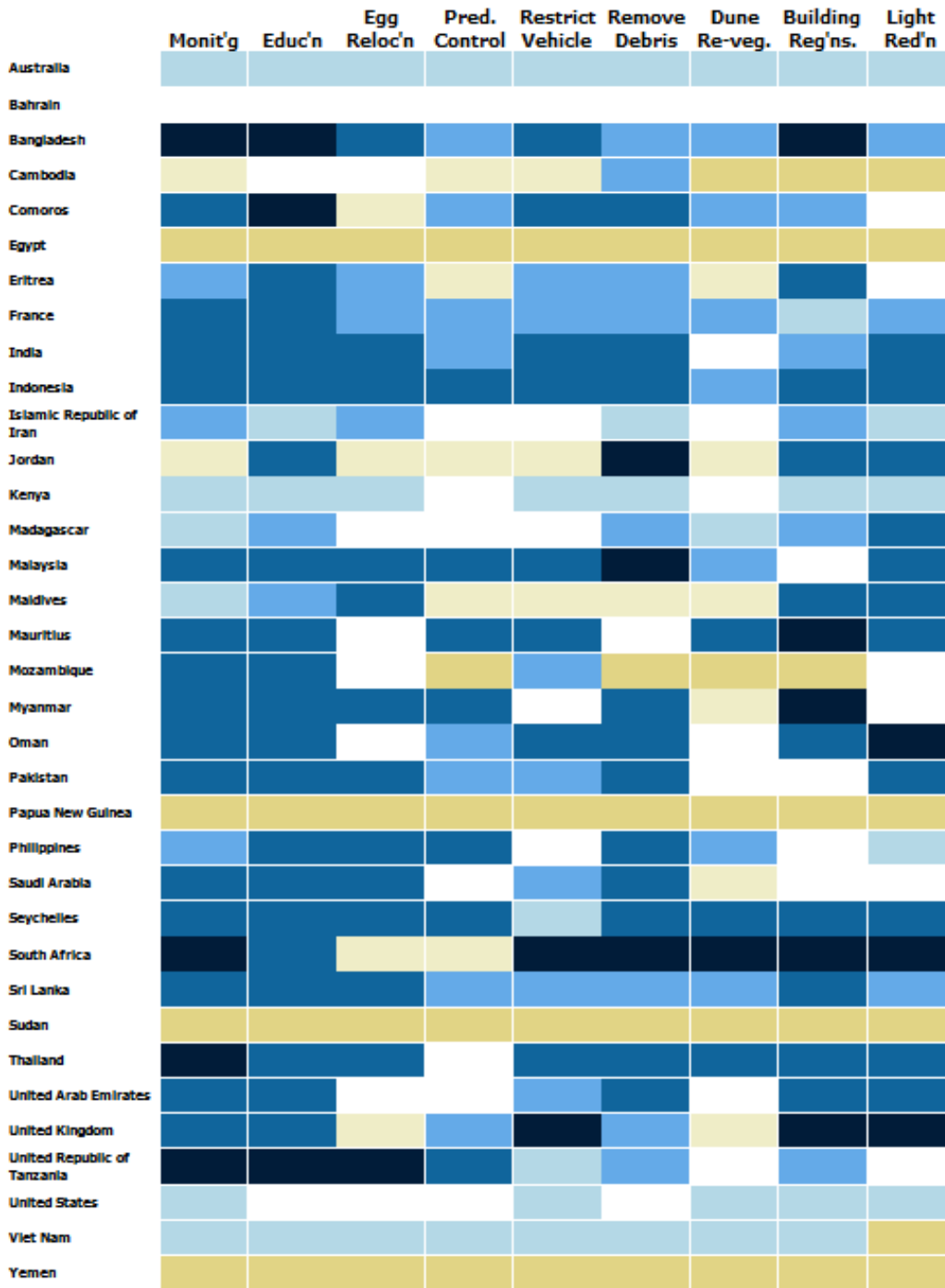
27. As shown by the colour-coding scheme in Figure 7a, the reporting template provides scope for assessing the effectiveness of these measures, if only subjectively, and a majority of responding Signatories have now contributed these details. Monitoring and educational programmes are considered to be relatively effective (i.e. “good” or “excellent”) by about two-thirds of countries that provided a self-assessment; in contrast with efforts in the areas of predator control and habitat re-vegetation, which received favourable ratings by no more than a third of respondents. That not a single country claimed that its predator control measures are “excellent” and more than a third considered their effectiveness to be “low” suggests that there is work to be done in this area – particularly as complementary site-based data reveals that a predation is a problem at a significant percentage of sites.

28. It could be argued that one should not read too much into these “self-assessments”, but they do give Signatories an opportunity to identify and describe particularly effective programmes in their country; and also to draw attention to certain aspects of implementation that are in need of improvement and which might benefit from examining examples of best practice elsewhere. In a former report, Australia noted that there may be considerable variability in the effectiveness of measures across different jurisdictions within the same country, making it difficult for a large country, such as Australia, to make a general self-assessment. This may also be the case for other countries that are federations of a number of states, with coastlines bordering different water bodies (India, Indonesia, Malaysia, Thailand are among the cases). “Comment boxes” allowing Signatories to elaborate further, where necessary, may help to overcome this



1.6.1 Measures in place to minimise the mortality of eggs, hatchlings and nesting females and estimate of the relative effectiveness of these measures.[IND, SAP]

Relative Effectiveness of Mitigation Measures (Self-evaluation)



In the above matrix, the colour blue depicts the use of a particular mitigation measure, while the shade of blue indicates the relative effectiveness of that measure. The percentages in the chart and tables below are based on actual responses ('Not applicable' and 'No responses' are not counted.)

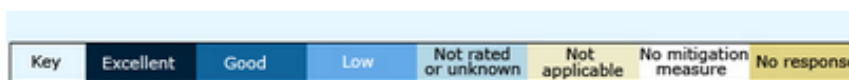
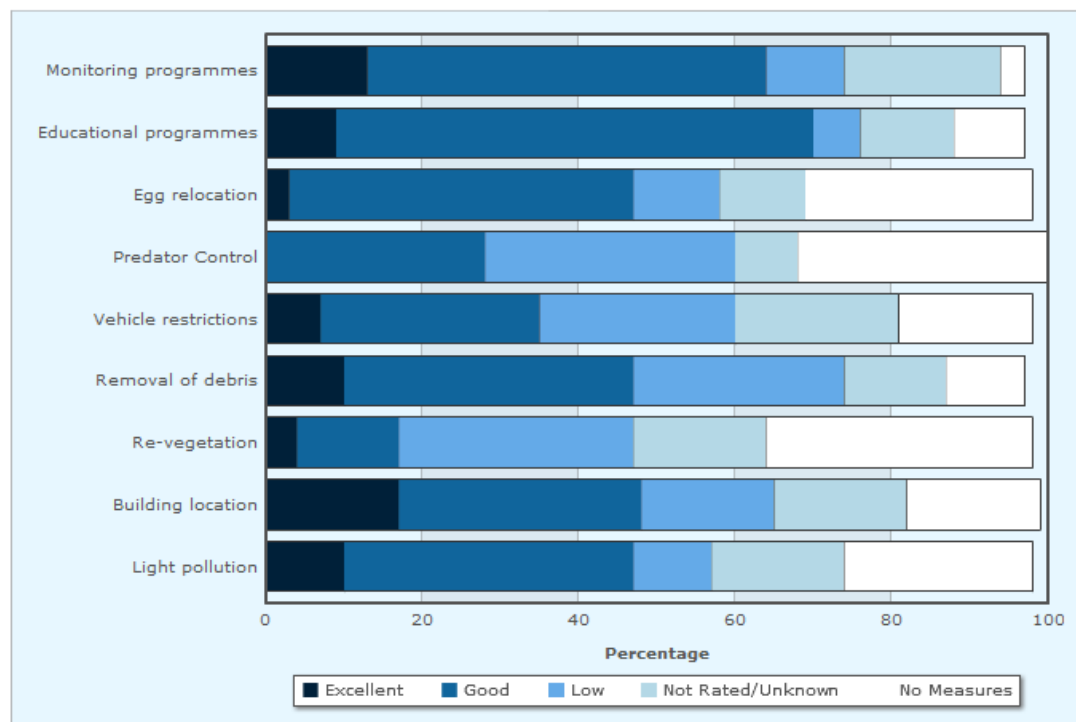


Figure 7a. Relative effectiveness of mitigation measures in place to minimise mortality of eggs, hatchlings and nesting females

## Relative Effectiveness of Mitigation Measures



**Figure 7b. Aggregate summary relative effectiveness of mitigation measures, as a percentage of countries responding**

difficulty to a large extent. Indeed, France has addressed this problem by providing detailed comments for each of its territories that are best treated separately.

### *Programme reviews*

29. More than three-quarters of the Signatory States indicate that they have undertaken a recent evaluation of the effectiveness of their nest and beach management programmes, and some provide specific details of the reviews undertaken (e.g. Bangladesh, Indonesia, Philippines, Seychelles, South Africa, United Kingdom, Viet Nam). In some cases, it is not clear whether the respondent fully understood the meaning of the question, which aims to find out whether programmes are being critically examined to determine whether they are having a positive effect in conserving and recovering turtle populations, according to certain measurable success criteria. A significant number of Signatories still appear not to have incorporated this important review process in their national marine turtle conservation efforts, even if they recognise its necessity. Plans for conducting such evaluations were mentioned by Maldives and Mauritius; it would be appreciated if updates could be provided by these countries in the coming years.

## **OBJECTIVE II: PROTECTING, CONSERVING AND REHABILITATING MARINE TURTLE HABITATS**

### **2.1 Establishment of habitat protection/conservation measures**

**General tendency:** Some progress, but limited in scope

**Notable responses:** Australia, France, Pakistan, South Africa

#### *Critical habitats outside protected areas*

30. Only a few Signatory States appear to have measures in place to protect critical habitat outside of established protected areas and, with some exceptions (e.g. Bangladesh, Eritrea and United States), little information is given to suggest that these habitats have been clearly identified – although such efforts are reportedly being conducted in Sri Lanka. Several countries mention future plans with regard to protection of these habitats. In Australia, measures are centred on community-based approaches to sustainable management. France has adopted a range of measures, including public awareness, construction planning provisions, and other regulatory measures. India declares certain coastal waters as no fishing zones during the breeding season. Indonesia cites a range of protection measures introduced at specific locations. The Philippines encourages stakeholder agreements and foresees a “fast track” process for declaring critical habitats which would be quicker than the creation of protected areas. Nesting habitats along the Tanzanian mainland are protected by a network of community Conservation Officers who patrol the beaches every day, all year round. Other initiatives include community participation and awareness, alternative livelihoods, cash incentive and award schemes, eco-tourism and other monitoring activities (e.g. Pakistan, Sri Lanka, Tanzania, Viet Nam). France and Tanzania mention in their reports pending / official candidatures for inclusion in the IOSEA Site Network. In general, the level of detail in most of the responses is insufficient to assess what is actually being done to protect other critical habitats, and this may be a reflection of the difficulty of achieving adequate protection outside of established areas.

#### *Coastal development impacts and mitigation*

31. More than three-quarters of the Signatory States responding carry out assessments, to varying degrees, of the environmental impact of marine and coastal development and other human activities – a notable improvement since 2011. In many cases, general Environmental Impact Assessment (EIA) requirements are cited. Very few report having carried out impact assessments specifically addressing marine turtles in the context of coastal development; however this may understate the actual situation. Australia and France provide detailed information on their programmes and plans. Bangladesh reports on assessments made by local NGOs. India has a requirement to conduct EIA studies/plans for all onshore and offshore developmental projects along the coast, but notes that some major projects have been cleared without critical review. Kenya requires all touristic and other industrial scale developments to file environmental audit reports. Similarly, Iran, Mauritius, Pakistan, Philippines and U.A.E. have EIA requirements for major development projects in environmentally sensitive areas. Pakistan lists recent examples of EIAs that were recently conducted on three mega projects. In Tanzania, surveys of marine turtle habitats were conducted in 2013 as part of a scoping assessment for the construction of an LNG plant in Lindi Region. The United States’ federal Endangered Species Act requires federal agencies to consult with relevant authorities to ensure that planned activities do not jeopardize the continued existence of listed species, including sea turtles.

32. A similar percentage (73%) of Signatory States monitor water quality, either generally or in localised areas, though these efforts tend not to be specific to marine turtle habitat. Examples are given by Australia, France, Iran, Jordan, Kenya, Mauritius, Oman, Pakistan, Seychelles, Thailand, U.A.E. and Tanzania, among others. Bangladesh, India, Indonesia, Myanmar, and Saudi Arabia mention some monitoring done near turtle habitat (e.g. for marine debris and logs), but these actions appear to have been spatially or temporally limited. More generally, it is less clear whether or what steps Signatories have taken to actually *protect or improve* water quality near turtle habitats. In virtually all Signatory States (Bangladesh being the exception) some measure is in place to prohibit the use of poisonous chemicals and explosives, and most provide details of the legislation or regulations, as well as inspection regimes. Kenya reports an 80% reduction in the use of explosives; while Madagascar and Tanzania mention current enforcement efforts. Information reported elsewhere suggests that effective enforcement is problematic in many countries.

## 2.2 Rehabilitation of degraded habitats

**General tendency:** Some progress, but limited in scope

**Notable responses:** Australia, France, India, Jordan, Philippines, South Africa, Viet Nam

33. Almost three-quarters of the Signatory States that responded are monitoring their coral reefs and/or are making an effort at some level to recover degraded coral habitats. Most Signatory States describe their activities in this regard, at least superficially. Activities mentioned include monitoring and rehabilitation actions, baseline research and mapping, upgrading of legal protection status, development of recovery plans, relocation of sewage outfalls, reduction of specific threats, and conduct of education and awareness activities. Australia, France, India, Pakistan, Philippines and Seychelles, Sri Lanka and Viet Nam are among those countries providing detailed information on projects being implemented. Coral reef transplantation projects were also recently mentioned by Indonesia, Iran, Jordan, Oman, U.A.E. and the United States. Notably, the coral reefs in Eritrea, South Africa and United Kingdom are reported to be in near pristine condition and therefore not in need of rehabilitation. South Africa particularly stands out for protecting an estimated two-thirds of its coral reefs.

34. Over 90 percent of the Signatory States that responded are making some effort to recover degraded mangrove habitats, and many of them describe these programmes in more detail, providing information on location and effectiveness. Notable examples include: France (Mayotte), India, Indonesia, Iran, Mauritius, Oman, Pakistan, Philippines, Saudi Arabia, U.A.E. and Viet Nam; while mangrove habitats were reported to be marginal along the coasts of Jordan and South Africa. The importance of these habitats to marine turtles is generally not mentioned. In contrast, slightly more than half of the Signatories responding are engaged in sea grass habitat monitoring and recovery, with Australia being among the most active. Bangladesh, Cambodia Comoros, France (Mayotte), Philippines, Thailand, and Viet Nam also mention efforts in which they are involved, if only on a localised scale, while South Africa reports pristine mangrove habitats on its national shores.

## **OBJECTIVE III: IMPROVING UNDERSTANDING OF MARINE TURTLE ECOLOGY AND POPULATIONS**

### **3.1 Targeted marine turtle and habitat studies**

**General tendency:** Some progress, but limited in scope (increased activity relative to 2008 and to 2011)

**Notable responses:** Australia, France, Seychelles, United Kingdom, Tanzania

#### ***Published literature***

35. Almost all of the Signatory States cite literature relevant to marine turtle research and conservation in their countries, ranging from peer-reviewed journals to reports and proceedings of workshops. Many of the lists are quite extensive (e.g. Australia, Bangladesh, France, India, Indonesia, Kenya, Madagascar, Mozambique, Myanmar, Oman, Seychelles, South Africa, Sri Lanka and Tanzania), and provide a good starting point for a more comprehensive bibliography. A few Signatories could improve their references to bring them up to a comparable standard and some countries that are known to have conducted extensive research, such as the United States, should try to supplement their existing entries.

#### ***Long-term monitoring***

36. Most (about 85%) of the Signatory States are reported to have long-term monitoring programmes in place or planned for priority marine turtle populations, for which varying levels of detail are provided. Bahrain is reported to be among the few exceptions. On closer examination, however, it appears that only about half of the mentioned programmes are of 10 years or longer duration, based on the information given. Australia, Bangladesh, Comoros, France, India, Indonesia, Iran, Malaysia, Mozambique, Oman, Philippines, Saudi Arabia, Seychelles, South Africa, Sri Lanka, Thailand, U.A.E., Tanzania, and Viet Nam fall into this category. The programmes in Australia, France, Oman, Pakistan and Seychelles are especially remarkable for their longevity. Information on timeframe is missing for many other activities, such as the collection of biometric measurement data by local stakeholders in Kenya as part of its net-release programme; and surveys of selected islands in order to monitor population changes. There is good reason to believe that dedicated programmes in several other countries, which commenced in the last five years or so, will be extended indefinitely. For clarity, it would be useful if all Signatories States were to indicate when their monitoring programmes began and to mention, as appropriate, the species concerned and whether there have been any breaks in data collection. In general, it would seem that many of the sites described could constitute index beaches and would benefit from additional international recognition by virtue of their inclusion in the IOSEA Site Network.

#### ***Genetic studies***

37. Further progress was noted in the conduct of genetic studies by Signatory States. Iran and Myanmar have joined Australia, France, India, Indonesia, Philippines, Seychelles, Thailand, United Kingdom, United States and Viet Nam in the list of countries which report having completed or having participated in analyses to characterise the genetic identity of their marine turtle populations. A dozen more Signatories (Bangladesh, Comoros, Kenya, Madagascar, Malaysia, Mozambique, Oman, South Africa, Sri Lanka, U.A.E. and Tanzania) have collected or have contributed samples for use in ongoing research. The extent to which this extensive work is being coordinated on a regional scale is unclear. Consideration should be given to consolidating the results in comprehensive overview document. As a starting point, all Signatories are encouraged to contribute basic details of the genetics work undertaken in their countries to

the [IOSEA Genetics Directory](#) which was incorporated in the IOSEA website already in 2008. To date, the database remains largely unpopulated, except for entries from Australia, France and U.A.E.

### ***Tagging studies***

38. Almost all Signatory States responding have employed flipper tagging to try to identify migration routes. Mauritius, one of only two countries not to have conducted such work, has recently announced future plans. Most provide some details of these studies including, in a few cases, information on tag recoveries and plans for future activities. Exceptionally, Bangladesh, India, Indonesia, Kenya, Seychelles, South Africa, United Kingdom and Tanzania present brief conclusions drawn from their work (the latter being especially informative). Signatory States are strongly encouraged to populate and make use of the newly launched IOSEA International Flippertag Database (<http://flippertag.ioseaturtles.org/>). The state-of-the-art database offers an ideal platform for consolidating all information on international tag recoveries in one place. In general, if it is not feasible for Signatories to include specific details of international tag recoveries in their national reports (for instance, because of space considerations), specific references should be given in published reports where this information may be readily obtained (e.g. through the online [IOSEA Bibliography Resource](#)).

### ***Satellite tracking studies***

39. More than 80 percent of the Signatory States responding (a continuous increase since 2008) have carried out satellite tracking studies, in many cases opportunistically. It should be noted that the IOSEA Satellite Tracking Metadatabase ([http://www.ioseaturtles.org/satellite\\_search.php](http://www.ioseaturtles.org/satellite_search.php)) has much more detailed and up-to-date information on satellite tracking projects conducted in and around the Indian Ocean. Based solely on the information provided in national reports, Australia, France, India, Oman, Saudi Arabia and Thailand appear to have been particularly active in this field, whereas the number of turtles tracked by most of the other countries is relatively small. However, Bangladesh has reported plans to attach 20 additional satellite tags as part of a current project, while the United Kingdom and Tanzania have both reported on studies ongoing as of May 2014. Some respondents provide limited information on certain aspects of this satellite tracking work such as species tracked, location, year, type of transmitter etc. A few, notably Myanmar, mention briefly the results obtained, publications arising from the work, and future planned activities. The important results of a major hawksbill tracking project conducted in the Gulf region from 2010 to 2014 remain embargoed until the latter part of 2014 when a media communications message will be released. In general, the additional information provided by Signatories is insufficient to assess the efficacy of satellite tracking studies overall or to help guide the direction of future work in this area. For this satellite tracking work to be better coordinated and to achieve its intended purpose of identifying migration patterns, all concerned Signatories should supply more information in their national reports on the results obtained, as well as their plans for future studies. The Western Indian Ocean – Marine Turtle Task Force was to have developed a template that might help to standardise information requirements in this regard.

### ***Population dynamics and survival rate studies***

40. Over half of the Signatory States report having carried out studies of marine turtle population dynamics and/or survival rates; 40 percent have not. However, it is difficult to judge the nature and scientific value of the work undertaken based on the rather limited and variable information supplied by most of the respondents. Australia, France, South Africa, United Kingdom, Tanzania and United States appear to have done the most extensive work in this area. They provide detailed information and include

some references to original sources. Comoros has also reported recently on new activities ongoing as of 2014 in Moheli Marine Park.

### ***Disease studies***

41. About forty percent of the Signatory States responding (a modest increase since 2011) have carried out some research on the frequency and pathology of diseases of marine turtles; a few mention fibropapilloma in particular. The intensity of the research and the frequency of data collection vary. Australia, Indonesia, and United States appear to have conducted the most rigorous investigations in this regard. It would be helpful if all of the Signatories cited published and unpublished reports systematically and if the nature of the work undertaken were described in more detail.

### ***Traditional knowledge***

42. Almost three-quarters of the Signatory States reporting (virtually the same as in 2008 and 2011) indicate that they are promoting the use of traditional ecological knowledge in research studies. Most provide some additional information on the nature of this collaboration (e.g. information gained from interviews, consultations and other forms of practical cooperation). Australia describes in detail two recent Traditional Ecological Knowledge projects involving the compilation of cultural datasets. Bangladesh, Eritrea, India, Kenya, Madagascar, Oman, Philippines, Saudi Arabia, Seychelles, Sri Lanka and Viet Nam are among those providing brief examples. France, Pakistan, Sri Lanka and Tanzania also mention supporting publications. In general, the nature of traditional ecological knowledge and the extent to which it is used in research studies is not well articulated in the national reports. As a minimum, it would be helpful if more countries that have incorporated traditional knowledge in research studies were to cite published and unpublished reports, and describe in more detail the nature of these interactions.

## **3.2 Collaborative research and monitoring**

**General tendency:** Some progress, but limited in scope (slight reduction compared to 2011)

**Notable responses:** Australia, France, Jordan, Myanmar, Seychelles, South Africa, Thailand, Tanzania, Viet Nam

### ***Regional or sub-regional action plans***

43. More than half of the Signatory States are participating in other regional or sub-regional action plans or projects that identify priority research and monitoring needs. These include: a Marine Turtle Action Plan under the **Pacific Regional Environment Programme** (cited by Australia, United States); Papua New Guinea's recent involvement in the **Australian Torres Strait Scientific Advisory Committee**; the **Sulu-Sulawesi Marine Ecoregion** and **Bismarck-Solomon Seas Ecoregion** initiatives (mentioned by Indonesia, Philippines); the **ASEAN Marine Turtle MoU** (cited by Indonesia, Myanmar, Viet Nam); cooperative research under **SEAFDEC** and the **SEASTAR2000** projects in South-East Asia (cited by Myanmar, Philippines, Thailand and Viet Nam); the Philippines-Malaysia Turtle Islands Heritage Protected Area (**TIHPA**) initiative; the Bay of Bengal Large Marine Ecosystem Project (**BOBLME**), cited by Malaysia and Maldives; **SACEP's** Marine Conservation and Protected Areas programme (mentioned by Bangladesh); a regional action plan being implemented under **PERSGA**, involving Jordan, Saudi Arabia and six other countries; the Nairobi Convention/IOSEA Western Indian Ocean – Marine Turtle Task Force (**WIO-MTTF**, mentioned by France, South Africa, United Kingdom and Tanzania ); the 1996 **IUCN** Marine Turtle Conservation Strategy and Action Plan for the Western Indian Ocean (cited by France, Seychelles and Tanzania); the South Western Indian Ocean Fisheries Project (**SWIOFP**)

mentioned by France, Mauritius, and Tanzania; and the **WIO-LaB** project under the Nairobi Convention (identified by Comoros). Although not a plan or project, the Indian Ocean Tuna Commission's Working Party on Ecosystems and By-catch (**IOTC/WPEB**) was mentioned by France. Three Signatory States also mention bilateral arrangements in place or planned with neighbouring countries: Iran has now signed MoUs with both U.A.E. and Oman; India refers to a publication supporting its partnership with Sri Lanka, and Seychelles mentions a former four-year bilateral agreement with France. Other Signatory States that are involved in marine turtle conservation activities through sub-regional frameworks, projects or other bilateral/multilateral arrangements are encouraged to mention them explicitly and briefly describe their involvement. The United States is encouraged to briefly describe its constructive bilateral and multilateral activities directly in its national report, rather than simply providing website links.

### ***Collaborative studies and monitoring***

44. Signatory States were requested to identify collaborative studies and monitoring activities that have elicited *international* cooperation (as opposed to strictly *national* or *local* activities). More than two-thirds of the Signatory States report having conducted studies on genetic identity that involved collaboration and partnerships with other countries (for example, in the analysis of samples). In some cases, more details are given under section 3.1.3 of the reports. More than 80 percent have reportedly undertaken collaborative studies on migration (often involving tagging and tag returns, and satellite tracking), such as the Gulf Turtle Conservation Project conducted by EWS/WWF from 2010 to 2014 (cited by Iran and U.A.E.). Fewer Signatories (about half) are involved in international collaboration in relation to conservation status and other biological and ecological aspects. For instance, both Comoros and South Africa mention partnerships with Kélonia (La Réunion) for exchange of information, research and capacity building. In general, the quality and amount of detail in the responses in these sections vary greatly, making it difficult at times to interpret the information provided. The degree to which these studies can be characterised as really involving *international* collaboration is sometimes unclear. To the extent that this research genuinely represents multi-national cooperation, bringing added benefits that could not be achieved working alone, it is worthwhile reporting in some detail.

### **3.3 Analysis and use of data to improve conservation practices**

**General tendency:** Partial implementation, good progress (modest increase in activity relative to 2008 and 2011)

**Notable responses:** Australia, France, India, Indonesia, Seychelles, South Africa, Thailand

#### ***Priority marine turtle populations***

45. Signatory States were requested to list in order of priority their marine turtle populations in need of conservation actions and to indicate for each of them population trends. Most of the Signatories reporting at least give a list of the priority species/populations, and about two-thirds include census or trend data in support of their selection. The indications are unchanged since 2011. **Green turtles** figure high on the list of 17 Signatories: Bahrain, Bangladesh, Comoros, Eritrea, France, Indonesia, Iran, Jordan, Madagascar (southwest), Maldives, Mauritius, Pakistan, Philippines, Seychelles (some islands), U.A.E., United Kingdom and Tanzania. **Hawksbill turtles** figure high in the list of 13 Signatories: Bahrain, Bangladesh, France, Iran, Jordan, Madagascar (northwest), Maldives, Seychelles (some islands), Sri Lanka, Thailand, U.A.E., United Kingdom, and Tanzania. **Leatherback turtles** figure high in the list of 8 Signatories: India, Indonesia, Madagascar (southeast), Malaysia, South Africa, Sri Lanka, Thailand and Viet Nam. **Olive ridley** turtles figure high on the list of 5 Signatories: Eritrea, India, Malaysia,



Philippines, and Thailand. **Loggerhead turtles** figure high on the list of three Signatories: Madagascar (south-east), South Africa and Viet Nam. Australia, Kenya, Mozambique, and United States are among countries that apparently accord equal priority to all marine turtle species found in their waters. If answered comprehensively by all Signatory States, the responses to this query have the potential to help guide the direction of future collective actions, by identifying species/populations most in need of attention as well as countries that share common concerns.

### ***Review and practical application of research and monitoring***

46. Over half of the Signatory States are reportedly reviewing research and monitoring results periodically and evaluating them for their efficacy; but only eight or nine provide additional information that suggests that these reviews occur regularly and may have led to programmatic changes. For example, Australia, Bangladesh, Indonesia, Jordan, South Africa, Thailand, U.A.E. and United States provide further details in this regard. Signatory States were also asked to describe how research results are being applied to improve management practices and mitigation of threats. An increasing number of Signatory States provide at least partly informative responses, among them: Australia, Bahrain, Bangladesh, France, India, Iran, Indonesia, Malaysia, Maldives, Oman, Saudi Arabia, Seychelles, South Africa, U.A.E., Tanzania, United States and Viet Nam. These two questions go to the heart of whether or not research programmes are well-thought out, are being applied strategically to help improve conservation outcomes, and are modified as necessary in the light of objective evaluations. While both are considered highly pertinent, it may be a challenge for some Signatories to answer them at this time.

### **3.4 Standardisation of data collection and exchange of information**

**General tendency:** Some progress, but limited in scope (improvement since 2008, but not since 2011)

**Notable responses:** Australia, Comoros, France, Seychelles, South Africa, United States

#### ***Standardisation of data collection***

47. Nearly three-quarters of the Signatory States responding have taken some initiative to standardise methods and levels of data collection – though mostly at national, rather than sub-regional levels – and most provide at least a brief account of the efforts made in this regard. Bangladesh, Comoros, Eritrea, France, India, Indonesia, Iran, Jordan, Kenya, Madagascar, Malaysia, Mauritius, Myanmar, Philippines, Saudi Arabia, Seychelles, South Africa, United Kingdom, Tanzania, and United States are among those offering some insights. It may be useful for Signatories that have adopted standardised methods, including data collection sheets, to provide details and copies to the IOSEA Secretariat, with a view to making them available for examination through the IOSEA website. This could reinforce efforts to assure a degree of harmonisation of data collection across the region, and indicate a minimum level of data requirement.

#### ***Scientific and technical exchanges***

48. Only 60 percent (21) of the Signatory States responding occasionally exchange scientific and technical information and expertise with other Range States. Four – Comoros, France, Malaysia and United States – reportedly do so often (systematically). The remainder rarely or never exchange information and expertise. The responses suggest that there is considerable room for improvement in this area.

49. Common means of disseminating data to other Range States are publications (scientific and technical reports, websites, brochures, newsletters etc.), followed by international meetings, workshops and training courses. Television, radio, personal communications and collaborations, exhibitions, displays, and presentation of practical research are some of the other methods listed. With few exceptions, however, it is not evident that these methods are targeted specifically towards other Range States in order to convey information that might be valuable for conservation/management actions (e.g. related to ongoing research, new findings, innovative techniques, unusual levels of turtle mortality, potential threats, etc.). More positively, some good examples of active partnerships or vehicles for exchange of information are given by Comoros and France (in partnership), India, Malaysia, Philippines, Seychelles, South Africa, Thailand and United Kingdom. In general, the benefits/outcomes actually achieved from these interactions are not described, nor is an indication given as to what methods have worked and which have been less effective for exchanging useful information with other countries. All Signatories could improve their reporting in this regard.

50. More than two-thirds of the Signatory States report compiling and exchanging data on marine turtle populations of a regional interest, for example through regional mapping systems, national databases and exchange of information on tagging, tag returns, migration and shared feeding grounds. Tanzania is reported to be in the process of verifying all international flipper tag recoveries so that data can be shared in the new IOSEA database. The responses of several other Signatories suggest recognition of the importance of, and interest in, compiling information pertinent to other Range States, however few details of actual exchanges are provided.

## **OBJECTIVE IV: INCREASING PUBLIC AWARENESS AND ENHANCING PUBLIC PARTICIPATION**

### **4.1 Establishment of education and information programmes**

**General tendency:** Some progress, but limited in scope (tending to good progress since 2008, but virtually unchanged since 2011)

**Notable responses:** Bangladesh, France, Pakistan, Philippines, Seychelles

#### *Education and awareness materials*

51. Virtually all of the Signatory States responding have to some extent collected, developed, and/or disseminated diverse educational materials specifically focussing on marine turtle conservation, and many have developed and implemented mass media information programmes through television, radio, documentaries, and/or newspapers. Australia, France, India, Indonesia, Kenya, Philippines, Seychelles, Sri Lanka, Tanzania and Viet Nam appear to have been especially active in these areas. In general, if Signatories were to provide a more complete and descriptive inventory (including titles, brief explanation of content, target audience, years of production, language versions), this might give a better sense of whether further initiatives are needed – in terms of additional materials, expanded geographic coverage etc. and whether any materials already produced might be used, or adapted for use, in other countries. This may be particularly relevant in the case of costly undertakings, such as videos, which might have wider application.

#### *Target groups*

52. Among the recognized target groups: students and local/fishing communities appear to have received the most attention (from about 85 percent of the Signatories reporting); followed by tourists (69 percent), teachers and the media (each about 65 percent), and policy makers (targeted by about one-half of Signatories). Navy/military personnel and scientists appear to have received lesser attention, having been targeted by 40% of Signatories responding. The limited focus of awareness and education campaigns on the fishing industry and indigenous groups (both about 35%) may be noteworthy. France, Indonesia, Myanmar, Seychelles and United Kingdom are among those providing interesting insights into their respective programmes.

#### *Community learning establishments*

53. Three-quarters of the Signatory States responding have some community learning establishment, variously described as information centres, displays, interpretative centres, “turtle houses”, “environmental corners” and “wildlife clubs”. It would be informative for Signatories to indicate the extent to which these centres are frequented by the public, whether they are staffed full- or part-time, or only seasonally; as well as the general impact they appear to be having – measured, for example, by changes in peoples' behaviour in the vicinity of nesting beaches. This information is generally absent in most of the descriptions.

### **4.2 Development of alternative livelihood opportunities**

**General tendency:** Some progress, but limited in scope (increased activity relative to 2011)

**Notable responses:** Australia, Bahrain, Pakistan, Saudi Arabia, South Africa, Tanzania

54. About 60 percent of the Signatory States responding have undertaken initiatives to identify and facilitate alternative livelihoods, including income-generating activities, for local communities. The range of initiatives include: aquaculture (Australia); horticultural activities, beach protection and tourism services (Bangladesh); construction and nesting beach tourism (Comoros); patrolling and eco-tourism activities (France); turtle-based ecotourism and management (Indonesia); work as rangers, guides and marine park employees (Jordan, Oman); marine waste-based handicrafts (Kenya, Tanzania); general tourism activities (Kenya, Madagascar, Sri Lanka), wildlife watching (Pakistan); provision of soft loans (Philippines); artisan re-training and compensation (Seychelles); and beach monitoring/nest protection (Malaysia, South Africa, Tanzania). In general, it is difficult to assess the efficacy of the programmes mentioned or their potential for replication elsewhere from the limited information presented. A document describing in some detail successful alternative livelihood programmes from across the region, and possibly beyond, could serve as valuable guidance for other countries seeking solutions to similar challenges.

### **4.3 Promotion of public participation**

**General tendency:** Some progress, but limited in scope (modest increase in activity relative to 2011)

**Notable responses:** Australia, India, Indonesia, Kenya, Philippines, Seychelles, South Africa, Sri Lanka, Tanzania, Viet Nam

#### ***Stakeholder involvement***

55. More than two-thirds of Signatory States have undertaken some initiative to involve stakeholders and local communities in the planning and/or implementation of conservation and management measures. This is achieved through active collaboration and participation in research and conservation programmes, as well as in planning processes. Australia describes in some detail the extensive initiatives it has undertaken. Bangladesh recently added information on an initiative to engage offshore fishermen, and assessed the performance of a former project. Other particularly informative responses were provided by France, India, Indonesia, Iran, Jordan, Kenya, Malaysia (on the involvement of trawl fishermen in TED research in Terengganu and Sabah States), Mozambique, Philippines, Seychelles, South Africa, Sri Lanka, U.A.E. (meetings with coastal communities) and Tanzania (community conservation officer network and fisher involvement in flipper tagging programme). It would be worthwhile for all Signatory States that have given brief, though very interesting, responses to the questions on alternative livelihoods and stakeholder involvement to elaborate further – to describe the programmes in more detail and including time frames, cost etc.; mentioning challenges that were faced/overcome, as well as any insurmountable difficulties; overall effectiveness of the programmes; and indication of their potential for replication elsewhere.

#### ***Government, NGO, private sector involvement***

56. Just over 85 percent of the Signatory States responding report some collaboration in marine turtle conservation efforts from Government institutions, NGOs, and the private sector – through funding of activities, involvement in workshops, and/or research and conservation activities. A number of initiatives are noteworthy: past funding of various nongovernmental initiatives in Australia through a National Heritage Trust (no longer in operation), as well as the establishment of a national turtle Recovery Group; Bangladesh's "Strengthening Regional Cooperation for Wildlife Protection Project" (SRCWPP) initiated in 2013; Comoros' involvement of government, NGO and private actors in the Management Committee of the Moheli Marine Park (MMP) and the Moheli Ecotourism House (MEM); a national level network of turtle conservation groups in India, constituted of local and community-based coastal organisations; a

broad-based national sea turtle conservation group in Kenya, known as KESCOM; private sector turtle conservation activities in Maldives; private sector involvement in an “Adopt-a-turtle” programme in Malaysia; Seychelles’ encouragement of the private sector and coastal residents to become involved in conservation projects, including monitoring; involvement of oil companies in marine turtle conservation activities in both Iran and U.A.E.; and involvement of the tourism sector in U.A.E. (i.e., Tourism Development and Investment Company) and Tanzania; establishment of national turtle conservation steering committees in Bangladesh, Madagascar, Oman, Sri Lanka and Tanzania; targeted government and corporate funding for conservation initiatives by the United Kingdom; and collaboration among relevant Government agencies and NGOs in Pakistan, Philippines, Tanzania, United States and Viet Nam.

## **OBJECTIVE V: ENHANCING NATIONAL, REGIONAL AND INTERNATIONAL COOPERATION**

### **5.1 Cooperative enforcement of trade regulations**

**General tendency:** Some progress, but limited in scope

**Notable responses:** Australia, Saudi Arabia, Seychelles

#### ***Illegal international trade***

57. Three-quarters of the Signatory States responding have mechanisms in place and cooperate with other States to try to deter illegal *international* trade. Many provide further details of the nature of these measures. The responses of Australia, India, Indonesia, Kenya, Madagascar, Philippines, and Seychelles are among the most informative. In general, collaborators include CITES Management Authorities/CITES Secretariat; Interpol; domestic or foreign customs services; airport, port and coast guard authorities; specialised enforcement networks; wildlife agencies; as well as various concerned NGOs (such as TRAFFIC). About three-quarters of the Signatories reportedly have undertaken a national review of their compliance with CITES obligations in relation to marine turtles. However, with the notable exception of United Kingdom, the additional explanations that are given provide little clarification and, indeed, suggest that the question may not have been fully understood. A similar number of countries have their own CITES training programmes for relevant authorities or participate/cooperate in those of other bodies; and a handful provide further information of limited detail.

#### ***Illegal domestic trade***

58. About 85 percent of the Signatory States that responded have measures in place to prevent, deter and eliminate illegal *domestic* trade in marine turtle products. Seychelles provides the most detail in this regard, referring to legislation, public partnerships, interagency collaboration, training, and education and awareness programmes. Among the measures mentioned by other Signatory States are: beach patrols and regular monitoring (Iran, Kenya, Philippines, United States), education and awareness programmes (including social media campaigns) aimed at coastal communities (Eritrea, Pakistan, U.A.E., Viet Nam); training of law enforcement personnel (Sri Lanka, Tanzania – notably through seminars conducted in 2014); investigation of poaching reports (United States); monitoring of ports, airports and other areas where illegal trade may occur (Philippines); cooperation with other agencies (Madagascar – through a national workshop convened by the office of the Prime Minister in December 2012); collaboration with the customs service (Australia); prosecution of cases and imposition of fines for violations (Indonesia, Mauritius, South Africa, Tanzania); and regular control of legal stocks of shell (France). A number of

Signatories draw attention to gaps or difficulties in enforcement (e.g. Eritrea), particularly in remote areas (Myanmar), and where there is a dependency on egg harvest for subsistence (Indonesia).

### ***Information exchange on compliance/illegal trade issues***

59. Very few Signatory States (e.g. Australia, Comoros, Kenya, Mauritius, Saudi Arabia, Seychelles, and Viet Nam) appear to have exchanged information or raised certain compliance and/or trade issues in bilateral discussions or international forums, and few details are provided in this regard. South Africa drew attention to a potential local (illegal) market on its border with Mozambique. No Signatory mentioned any particular impediments to identifying illegal trade routes or deterring illegal trade, although such illegal trade is known to occur (for example, many examples could be cited in South-East Asia). This suggests that these issues may be under-reported, and perhaps the reporting template should provide more guidance on what information is expected in this regard. Particular instances of successful interventions and prosecutions could be mentioned, as well as any difficulties experienced that impede more progress in this area. Signatory States may consider citing and providing a specific reference to existing published reports prepared for CITES purposes, in order to give a more ample explanation without much additional reporting effort.

## **5.2 Management issues identified; national actions prioritised**

**General tendency:** Some progress, but limited in scope (little changed since 2011)

**Notable responses:** Australia, Indonesia, Jordan, Madagascar, Mauritius, Myanmar, Philippines, Seychelles, South Africa, United Kingdom, United States

### ***Key management measures / national action plans***

60. Over three-quarters of the Signatory States that responded have taken steps towards developing a set of key management measures to be used as a basis for more specific national action plans. Twelve Signatory States (Australia, Comoros, Jordan, Kenya, Malaysia, Myanmar, Saudi Arabia, Seychelles, Sri Lanka, United Kingdom, United States, and Viet Nam) already have national action plans in place. Viet Nam provides informative details on the effectiveness of its plan to date. At least nine other Signatories (Bangladesh, Eritrea, France, Indonesia, Madagascar, Pakistan, South Africa, Thailand, and Tanzania) are said to be working towards national plans – an increase of two since 2011. Several of these appear to be at an advanced stage of development or review. Six Signatories (Bangladesh, India, Mauritius, Oman, Philippines, U.A.E.) do not have national action plans *per se*, but have incorporated measures for turtle conservation in general National Biodiversity Strategy Action Plans (NBSAPs), or in specific project activities or management plans at particular sites. Only five of the Signatories responding – Bahrain, Cambodia, Maldives, Mozambique, and Iran – reportedly have no national plans.

61. Overall, good progress appears to have been made in this area, although limited information is available on the extent to which the provisions of the IOSEA Conservation and Management Plan have been transformed into broad objectives (key management measures) at the national level. Only a few Signatories appear to have a requirement for periodic review of their national plans for turtle conservation. The principle of incorporating in the national/plan a formal review process – as Australia, Kenya and Philippines have done – is considered essential to successful implementation, but does not guarantee that such a review will be conducted in a timely manner. It would be helpful if all Signatory States would submit their national plans to the Secretariat for future reference, and to make them available online.

62. Signatory States were requested to identify the conservation and management activities that they consider to be among the highest priorities for action. About three-quarters have responded, most listing between 5 and 10 priorities fitting into one of the Conservation and Management Plan's 24 programmatic areas. Ranked in order of frequency of mention (number of times, noted in parentheses), the nine highest priorities identified by the Signatory States are: conducting **targeted studies** on marine turtles and their habitats (37); establishing **habitat protection** and **conservation measures** (27); establishing or strengthening **education and information programmes** (20); **capacity-building, training and partnerships** (17); reducing **incidental capture and mortality** (14); identifying and documenting **threats** (10); enhancing **public participation** (9); and enhancing **cooperation**, information exchange mechanisms (8) and developing nesting **beach management** programmes (8). Many other programmes were mentioned, but with less frequency (Table 1).

63. While these results are not unexpected, the analysis can be interpreted in different ways, and one must be cautious in reading too much into them. For example, a programme might not be identified as a high priority not because it is considered unimportant, but because considerable progress may already have been made in that area. On the other hand, a challenging area of work requiring more resources and time might be accorded less priority than one that is easier to implement with visible results (characteristic of the "low hanging fruit" syndrome). By way of example, only three Signatory States attached high priority to the development of alternative livelihoods (ranked 20<sup>th</sup> out of 24 overall), despite the obvious relevance of this area to the sustainability of marine turtle populations.

64. As a final remark, in future it might be helpful if all Signatories were to provide some explanation or further elaboration of the priorities they have listed. This would include, where appropriate, more precise information on location of the activity, other actors that may need to be involved, and approximate time frames within which the programme of work should ideally be conducted.

#### ***Local management issues requiring international cooperation***

65. Almost all of the Signatory States responding list one or more local management issues for which they consider international cooperation necessary to some extent (Figure 8). **Cooperative research** in several areas (e.g. identification of migration routes, habitat and genetics studies, tagging/satellite tracking and identification of turtle populations) figured prominently, with approximately 25 Signatories rating international cooperation as "important or essential" in these areas. Compared to 2011, an increasing number of Signatory States (25) also singled out **illegal fishing in territorial waters** as a priority. This was followed closely by **training/capacity building, enforcement/patrolling of territorial waters**, and **oil spills, pollution and marine debris**. There was not much to distinguish between several other important issues, which were identified with more or less equal frequency (e.g., **development of gear technology**, poaching/illegal trade in turtle products, hunting/harvest by neighbouring countries, alternative livelihood development).

66. This "broad brush" survey may have some value in providing a quick snapshot of Signatory State opinions, but it is difficult to draw definitive conclusions from it, perhaps because of the difficulty of attributing 'shades of importance' to a wide range of issues that are all fundamentally important. Perhaps if more Signatories were to elaborate on their "tick box" responses with written explanations (as, for example, Australia, France, Philippines, Seychelles, South Africa and Viet Nam have done), the findings could be the basis for a more informed discussion about priorities for international collaboration.

**Table 1. Signatory States' highest conservation and management priorities**

<b>Programme (from the CMP)</b>	<b>No.</b>	<b>Signatory States attaching high priority to the programme</b>
3.1 Conduct targeted studies on marine turtles / habitats	37	Bangladesh x 2, Cambodia x 3, Eritrea, Indonesia, Iran x 2, Jordan, Kenya x 2, Madagascar, Malaysia, Mauritius x 4, Mozambique, Myanmar, Pakistan, Philippines x 2, Saudi Arabia, x2, South Africa, Sri Lanka x 2, Thailand, U.A.E. x 4, United Kingdom x 2, Tanzania, Viet Nam
2.1 Establish habitat protection/conservation measures	27	Australia x 4, Bangladesh, Cambodia x 2, Eritrea, Indonesia, Iran x 2, Kenya x 2, Madagascar x 2, Malaysia x2, Mauritius, Mozambique, Pakistan, Philippines x 3, Thailand, U.A.E. x2, Viet Nam
4.1 Establish / strengthen education, information programmes	20	Bangladesh, Cambodia, Comoros, Eritrea, Indonesia, Jordan, Kenya, Madagascar, Mauritius, Mozambique, Myanmar, Pakistan, Philippines, Saudi Arabia, Seychelles, South Africa, U.A.E., United Kingdom, Tanzania, Viet Nam
5.4 Capacity building, training, partnerships	17	Bangladesh, Cambodia, Comoros, Eritrea, Kenya, Mauritius, Mozambique, Myanmar, Pakistan, Philippines, Seychelles x 2, South Africa, Sri Lanka x 2, Viet Nam
1.4 Reduce incidental capture and mortality	14	Australia, Bangladesh, Eritrea, India, Kenya, Malaysia, Mozambique, Myanmar, Seychelles, South Africa, Thailand, United Kingdom, Tanzania, Viet Nam
1.1 Identify and document threats	10	Indonesia, Iran x 2, Mauritius, Mozambique, Myanmar, Philippines, U.A.E., Tanzania, Viet Nam
4.3 Enhance public participation	9	Comoros, Eritrea, France, Mauritius, Mozambique, Myanmar, Seychelles, U.A.E., Thailand
5.3 Enhance cooperation, information exchange mechanisms	8	Bangladesh, Comoros, Kenya, Mozambique, Myanmar x 2, Seychelles, Sri Lanka,
1.6 Develop nesting beach management programmes	8	Australia, Cambodia, Indonesia, Iran, Sri Lanka, U.A.E., United Kingdom, Tanzania
1.5 Prohibit direct harvest/ domestic trade, except for traditional use	7	Australia, Eritrea, Indonesia, Madagascar, Malaysia, x2, Tanzania
2.2 Rehabilitate degraded habitats	7	Australia, Cambodia, Indonesia, Jordan, Kenya, Myanmar, Seychelles
6.3 Seek additional resources to support implementation	7	Comoros, Eritrea, Indonesia, Jordan, Mauritius, Mozambique, Seychelles
1.2 Identify/apply best practices	7	Bangladesh, Comoros, Eritrea, Indonesia, Iran, Madagascar, Philippines
3.4 Standardise data collection / exchange information	5	Madagascar, Mauritius, Philippines, Sri Lanka, Thailand
5.5 Review legislation / strengthen enforcement	5	Bangladesh, Cambodia, Indonesia, Kenya, Madagascar
5.1 Cooperate to enforce trade regulations	5	Myanmar x 2, Philippines, Saudi Arabia, Seychelles
3.2 Conduct collaborative research / monitoring	4	Australia, Comoros, Philippines x 2
1.3 Conduct studies to correct adverse incentives	4	Bangladesh, Madagascar, Myanmar, Philippines
3.3 Analyse/use data to improve conservation practices	3	Iran, Philippines x 2
4.2 Develop alternative livelihood opportunities	3	Australia, France, Philippines
5.2 Develop/implement action plans	1	South Africa
6.1 Broaden MoU membership	1	South Africa
6.4 Improve government coordination	1	Indonesia
6.2 Support Secretariat, Advisory Committee	0	None



5.2.3 Please indicate, from your country's standpoint, the extent to which the following local management issues require international cooperation in order to to achieve progress. [PRI]

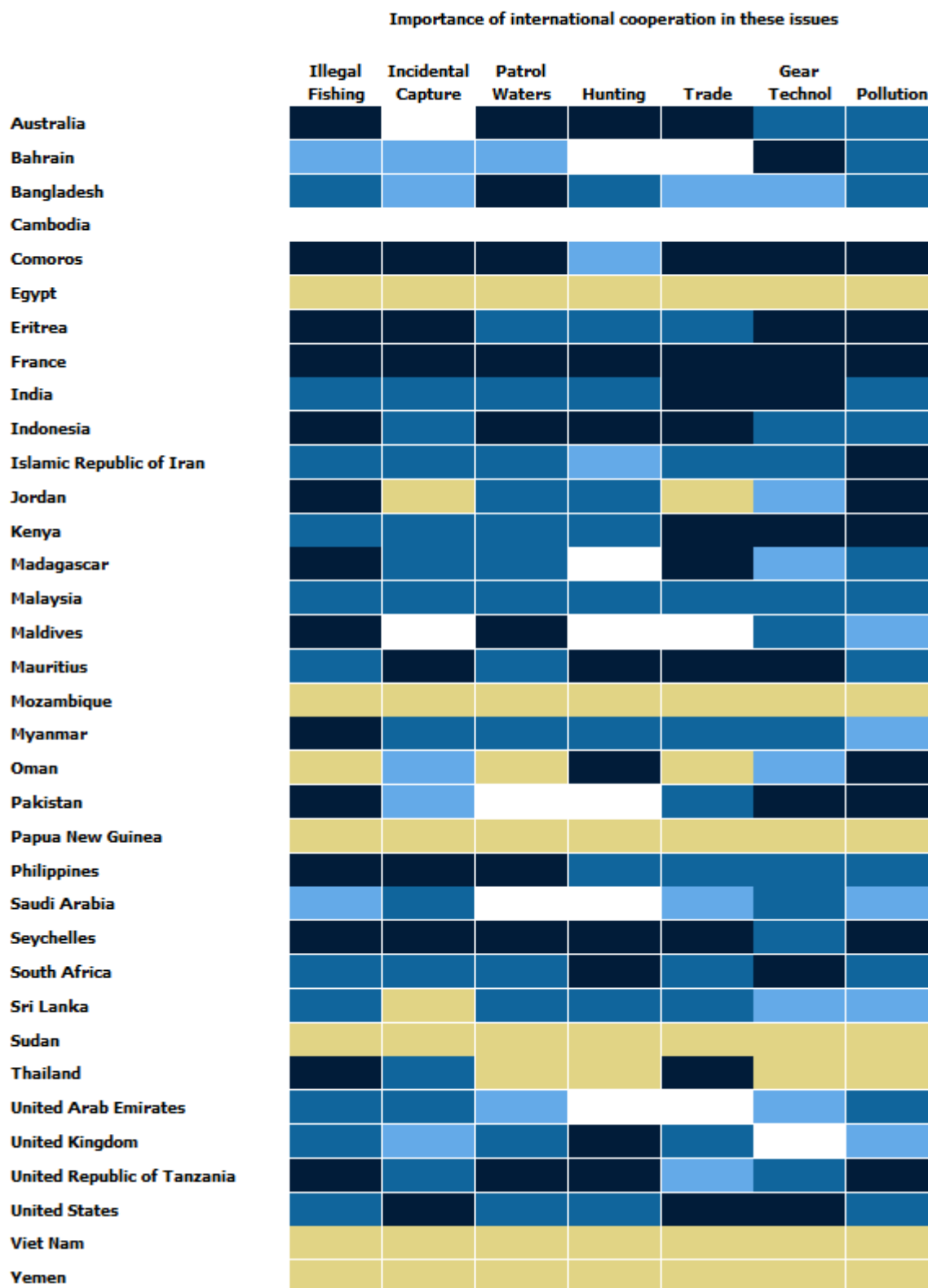


Figure 8. Importance of international cooperation in local management issues (1/2)

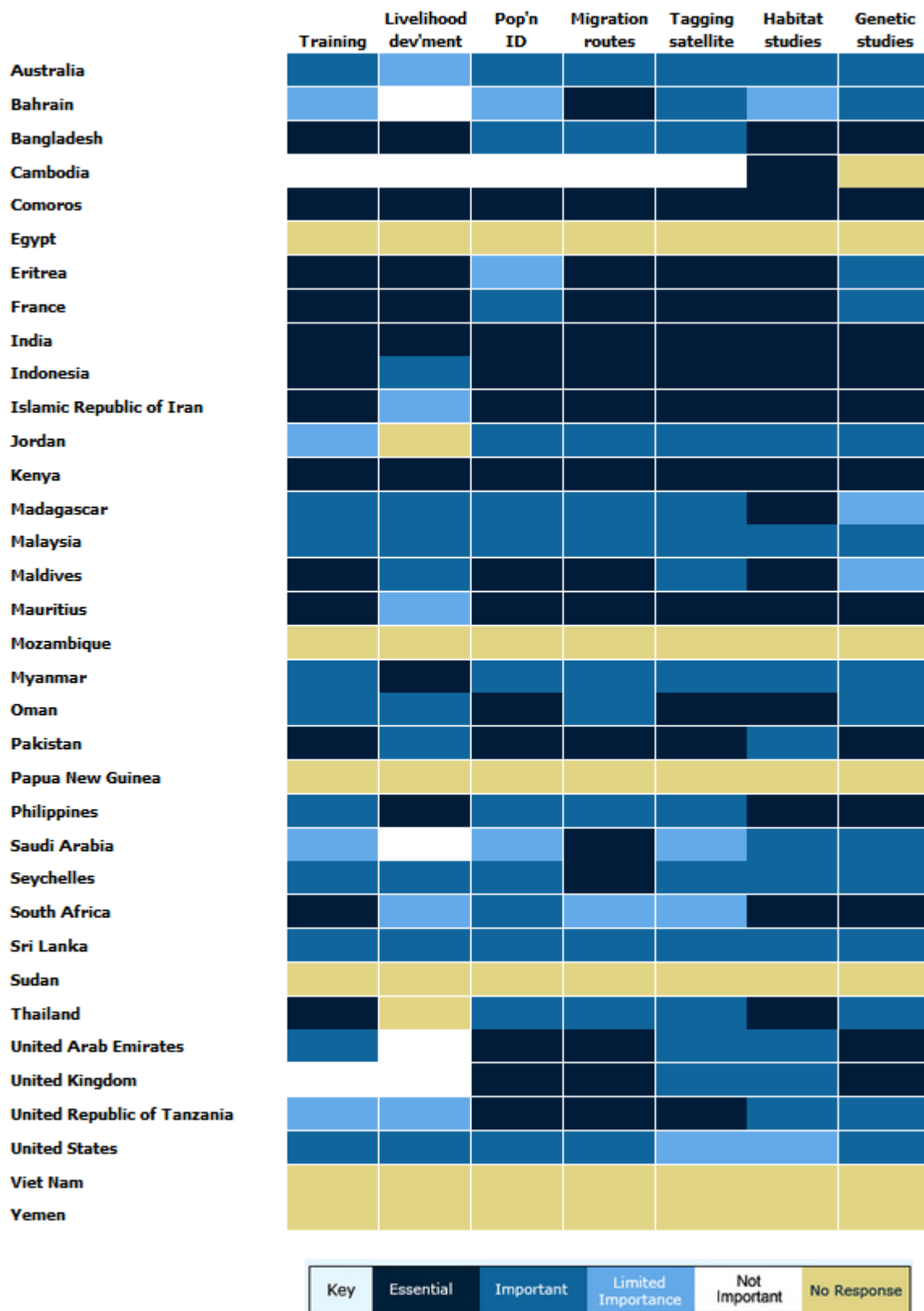


Figure 8. Importance of international cooperation in local management issues (2/2)

### 5.3 Enhancement of information exchange and cooperative management

**General tendency:** Very limited progress (but some improvement from 2008 through 2011)

**Notable responses:** Australia, France, Philippines, Viet Nam

#### *Other mechanisms for sub-regional cooperation*

67. Over eighty percent of the Signatory States note some mechanism that is, or might potentially be, used to enhance cooperation in relation to marine turtle conservation and management at the sub-regional level, including for example: the **ASEAN-SEAFDEC** (cited by Myanmar, Philippines); the **Bismarck-Solomon Seas Ecoregion** initiative (cited by Indonesia); **CBD** and **CITES** (both cited by Bangladesh); **Commission de l'Océan Indien** (cited by Comoros, France and Madagascar); the Eastern Africa Marine Ecoregion initiatives (cited by Mozambique); **FAO** (cited by Viet Nam); **GCC** Permanent Committees for Fisheries and Environment (cited by Bahrain); Indian Ocean Tuna Commission (cited by France); **International Sea Turtle Society** (cited by United States); **IUCN Marine Turtle Specialist Group** (cited by France and U.A.E.); the Nairobi Convention/IOSEA Western Indian Ocean – Marine Turtle Task Force (**WIO-MTTF**, cited by Eritrea, France, Mauritius, South Africa, United Kingdom, Tanzania); **PERSGA** (cited by Bahrain, Eritrea, Saudi Arabia); ROPME (cited by Bahrain, Iran, Jordan, Oman, Saudi Arabia); **SAARC** (cited by India); **SACEP** (cited by Bangladesh and India); **Pacific Regional Environment Programme** (cited by Australia and United States); **SEAFDEC** (cited by Viet Nam) the **Sulu-Sulawesi Marine Ecoregion** initiative (cited by Indonesia and Philippines); the Southwest Indian Ocean Fisheries Project (**SWIOFP**, cited by France); a WWF Asia-Pacific Regional Action Plan for Marine Turtles (cited by Australia); and **WIOMSA** (cited by South Africa); as well as specific working groups, exchange programmes, memoranda of understanding, and collaborative forums (mentioned by Australia, Comoros, Madagascar, Philippines). This question was intended to differ from an earlier one (3.2.1), by seeking an indication of the potential interest and particular strengths that the named organisations might bring to marine turtle conservation in the IOSEA region, as well as their capacity to take on a broader coordination role at the sub-regional level. For the most part, the brief explanations given are not specific in this regard, and could be strengthened by further elaboration.

#### *Networks for cooperative management*

68. A number of Signatory States report having developed, or are participating in, networks for cooperative management of shared populations. (*The intent of this question was to focus on formal management arrangements for shared turtle populations, rather than routine collaboration or information exchange; which probably excludes some of the positive responses.*) Australia is collaborating with Indonesia, Papua New Guinea, Timor-Leste and the Pacific Regional Environment Programme, through various instruments. Australia, Oman, Malaysia, Philippines and South Africa indicate involvement in the establishment of transboundary marine protected areas: Australia describes an arrangement with Papua New Guinea; Oman is working within the framework of ROPME; Philippines and Malaysia concluded a memorandum of agreement to create the Turtle Islands Heritage Protected Area (TIHPA), and the former is a partner in a tri-partite conservation plan for the Sulu-Sulawesi Marine Ecoregion; Saudi Arabia initiated the formulation and drafting of a regional Agreement for the Conservation of Wildlife and its habitats in the Arabian Gulf Countries, currently under review by the members of the Cooperation Council for the Arab States of the Gulf (GCC); South Africa is engaged with Mozambique in the creation of a transboundary park; Thailand is considering the development of transboundary protected areas under the framework of the CBD; the United Kingdom expressed a need to engage more in cooperative management, considering recent scientific developments on connectivity; the United States mentions a

bilateral arrangement outside of the IOSEA region and carries out substantial capacity building in the Pacific; while Viet Nam is considering the establishment of transboundary MPAs in the South China Sea together with six Southeast Asian countries.

### ***Regional Fishery Bodies***

69. Signatory States were asked to indicate what steps they have taken to encourage Regional Fishery Bodies (RFBs) to adopt marine turtle conservation measures within EEZs and on the high seas. With very few exceptions (e.g. Maldives, South Africa, United States), the responses provided to this question so far are generally not informative, notwithstanding the importance of RFBs in addressing relevant management issues related to fisheries-turtle interactions.

### **5.4 Capacity building / strengthening of training programmes, partnerships**

**General tendency:** Some progress, but limited in scope (no improvement since 2006)

**Notable responses:** Australia, Eritrea, France, Seychelles, Tanzania, United States, Viet Nam

### ***Capacity-building and resource needs***

70. The most common capacity-building need identified is for trained personnel, including individuals specially trained in sea turtle biology, ecology, veterinary medicine, necropsies, monitoring/surveys, gear technology, law enforcement, as well as "trainers" who can work with volunteers, students and researchers. Indonesia mentions the need for education in local communities to enhance their knowledge of turtle conservation and to enable them to develop alternative sources of income. Pakistan and South Africa mention the importance of collaborating with scientists outside of the region to provide expertise that does not currently exist in-country (i.e. to help with by-catch mitigation, in the case of Pakistan). Tanzania stresses the importance of improving awareness of Tanzanian fisheries regulation officers on marine turtle conservation laws, to tackle illegal fishing activities. A number of respondents identify a need for equipment and infrastructure, such as patrol boats and motorcycles (especially noted by Tanzania), field and office equipment, DNA analysis facilities, and environmental education centres. Numerous requirements are mentioned under the ambit of research, educational programmes, conservation awareness, working with fishermen, and developing eco-volunteer programmes.

71. In general, France, Mozambique, Myanmar, Pakistan, Philippines, Tanzania and Viet Nam are among the countries having given the most consideration to their current capacity building and resource needs. It would be useful for Signatory States for which this question is relevant to indicate what their existing incapacity is, both in terms of human resources and equipment available for marine turtle conservation activities, and to give a clearer picture of the extent to which progress is impeded in specific areas for lack of such resources (as Tanzania does, quite succinctly).

### ***Training***

72. Most of the Signatory States responding have carried out some training in marine turtle conservation and management techniques. Australia, Bangladesh, Eritrea, France, India, Myanmar, Seychelles, United States, Tanzania and Viet Nam describe rather extensive activities undertaken in this area, including regular specialised training workshops, provision of funds to regional conservation groups, development of a code of conduct for tourist operators, and production of training manuals etc. Myanmar reports on IOSEA Capacity Building / Training conducted in 2012 and which it planned to reproduce at least once per year. In general, although some progress has been noted, it would be helpful if Signatory States were to describe their training activities in more detail (mentioning time frames, frequency, numbers trained,

titles of any publications produced etc.) in order to give a clearer picture of their efficacy and a possible need for more intensive activity. This might also help to demonstrate where synergies could be created among Signatories through joint (e.g. bilateral or sub-regional) activities. Finally, it is not clear from the responses given whether or how training is coordinated *regionally*, although mechanisms for collaboration in this area are known to exist in some sub-regions.

### ***Partnerships***

73. Over 85 percent of the Signatory States responding (a steady improvement from 2008) have established one or several partnerships with universities, relevant organisations, and research institutions nationally and/or internationally. The range of partnerships varies among countries. Australia, in particular, names an extensive and diverse array involving government, community groups, researchers, indigenous communities, NGOs and universities. Comoros, Eritrea, France, India, Indonesia, Jordan, Kenya, Madagascar\*, Myanmar, Oman, Pakistan\*, Seychelles, United States, and Tanzania\*, are also among those providing brief explanations of specific partnerships (\*newly supplied information of interest). In almost all cases, it would be helpful if respondents were to describe these partnerships in more detail, particularly if they bring any innovative approaches to turtle conservation and management that might be of interest or relevance to other Signatory States, as models of best practice.

## **5.5 Review of legislation / strengthening of enforcement**

**General tendency:** Some progress, but limited in scope

**Notable responses:** Australia, France, Madagascar, Philippines, Seychelles, South Africa, Sri Lanka, United States

### ***Effectiveness of national policies and laws***

74. About three-quarters of the Signatories comment on the effectiveness of national policies and laws concerning the conservation of marine turtles and their habitats. Australia reports that a review of its Recovery Plan for Marine Turtles conducted around 2008 showed that a large majority of actions from the plan had been completed or were underway, and that major shifts in public perception and increased government action had been achieved. France reports a significant reduction in poaching in La Reunion as a result of police actions, increased capacity and improved awareness; whereas in Mayotte effectiveness is weak on account of limited anti-poaching resources. Several countries mention that the policies and laws themselves are effective (e.g. India, Indonesia, Malaysia, South Africa, Sri Lanka, United States), but enforcement in many countries (Bangladesh, Comoros, Eritrea, Indonesia, Kenya) is reported to be problematic on account of limited resources. In Iran, a lack of equipment and staff, and the large number of sites to control pose logistical challenges. Madagascar reports difficulties in enforcement at the national level due to a lack of cooperation between different departments, in contrast with effective implementation at regional (mainly southwest) and local levels. Mauritius reports that turtle populations are found on remote islets away from the mainland, making it difficult to conserve and protect their habitats. In Mozambique, it is reported that there are virtually no control activities outside the Conservation Areas or in areas where conservation programs are currently underway, and the motivation and awareness of enforcement personnel exacerbates the problem. Philippines reports that effectiveness of national laws is good in some areas, where there is support from NGOs and grassroots 'people's organisations'. Seychelles notes that penalties for offences were increased significantly under amended legislation introduced in 2001, which appears to have had a deterrent effect; but protection of turtle habitat remains inadequate. In South Africa, the system in place is reported to be very effective, with high enforcement associated with relatively few transgressions. Tanzania notes a number of important deficiencies with

regard to its legislation, as well as insufficient capacity to effectively enforce the laws relating to turtle conservation.

### ***Policy and legislative reviews***

75. About three-quarters of the Signatory States responding have conducted or are conducting a review of policies and laws to address gaps or impediments in relation to marine turtle conservation. Some provide a brief elaboration without going into much detail (e.g. Bangladesh, Indonesia, Iran, Jordan, Kenya, Madagascar, Pakistan, Philippines, Seychelles, South Africa, Thailand, U.A.E., and United Kingdom.) France and Tanzania provide somewhat more specificity. It would be helpful if the nature of the review being, or having been, undertaken were described more thoroughly (e.g. to identify the legislation or regulation being reviewed; giving time frames for the initiation of the review as well as its expected/actual completion date; and possibly indicating whether there was a specific reason that necessitated the review).

### ***Enforcement cooperation issues***

76. Eleven Signatory States report having encountered specific problems in relation to cooperation in law enforcement to ensure compatible application of laws across and between jurisdictions (national and international). The difficulties experienced include: the need for a practical arrangement to enable officers from one jurisdiction to assist in the implementation of legislation within another (internal to Australia); the detention of non-citizens suspected of committing an offence under Australian law involving the use of a foreign vessel; competing priorities between tourism and wildlife departments in Bangladesh; differences of legal interpretation among ministries of environment, fisheries and trade in Madagascar; lack of appropriate jurisdiction dedicated to the conservation of marine turtles in Comoros; differences in legal specifications of fishing mesh sizes (Kenya); variable cross-border cooperation and enforcement, depending on the issue and boundary (Malaysia); general or specific lack of cooperation / coordination (Myanmar, Tanzania, United States – said to be quickly resolved); lack of awareness of existing legislation (Oman, Philippines); challenges in identifying effective communication channels with neighbouring countries (South Africa); and lack of standardized guidelines for the management of hatcheries (Viet Nam). While many of these issues may be country-specific, a greater sharing of information among Signatory States about difficulties encountered and solutions arrived at might yield some practical ideas for application elsewhere.

## **OBJECTIVE VI: PROMOTING AND SUPPORTING IMPLEMENTATION**

### **6.1 Institution strengthening**

**General tendency:** Partial implementation, good progress (increased activity relative to 2011)

**Notable responses:** Australia, Bahrain, Bangladesh, Eritrea, Jordan, Kenya, Philippines, U.A.E., United Kingdom, United States

#### ***Broadening MoU membership***

77. As membership of key countries in IOSEA is now mostly complete, this promotional activity may be less relevant than in the past, however, some countries of importance to marine turtle conservation in the region (e.g. China, Japan, Republic of Korea) remain outside the agreement and might be actively encouraged to consider involvement. Notwithstanding the interest that Signatory States have in soliciting their neighbours to join and participate actively in the implementation of the Memorandum of Understanding, only a dozen Signatories (Australia, Bahrain, Bangladesh, Eritrea, France, Indonesia, Jordan, Philippines, Saudi Arabia, U.A.E., United Kingdom, United States and Viet Nam) are reported to have recently encouraged, or have plans to encourage, other States to sign the agreement. U.A.E. hosted a regional workshop in February 2014 which provided an opportunity for two new countries to sign the IOSEA MoU. The United States has provided contact information for key officials in China and has offered to facilitate contact between the Secretariat and Chinese officials.

#### ***Amending the Memorandum of Understanding***

78. Of the Signatory States actually reporting, about 30 percent (9) indicate that they are currently favourable to amending the MoU to make it a legally-binding instrument; while about 40 percent (12) are not in favour, and eight have no view. These results are similar to findings from 2008 and 2011. Only 13 Signatories (number unchanged from 2011) voice an opinion with regard to the same question posed in a different way, assuming the amendment process were to occur over a longer time horizon. In view of the large number of Signatories responding but having no view on the matter, the results remain largely inconclusive: 23 percent (8) are in favour, 14 percent (5) opposed and 40 percent (14) have no view. A few Signatories offer brief explanations for their current positions. The Sixth Meeting of the Signatory States decided to remove discussion of this matter as a recurrent agenda item, with the understanding that it might be reinstated in future in case renewed interest is shown.

### **6.2 Support for Secretariat / Advisory Committee and IOSEA implementation**

**General tendency:** Very limited progress (virtually unchanged since 2011)

**Notable responses:** Australia, France, India, Oman, South Africa, Thailand, United Kingdom, United States

79. Signatory States are invited to indicate the nature of financial and in-kind support offered towards the operation of the Secretariat and Advisory Committee, and for general IOSEA implementation. While not all Signatories that have provided such support mention it in their national reports, it can be reflected here. Four Signatory States (Australia, South Africa, United Kingdom and United States) have provided substantial, consistent funding over many years towards the operational costs of the Secretariat, for organising meetings and for project implementation including Year of the Turtle activities. Several other countries (France, India, Oman, and Thailand) have also made important contributions since 2008. Maldives, Mauritius, Mozambique, Myanmar and Tanzania have all provided voluntary contributions in

recent years commensurate with the indicative voluntary scale. Australia documents its contributions in detail. The United States indicates that three agencies (Department of State, Fish and Wildlife Service, and National Marine Fisheries Service) would endeavour to continue to provide funding in the future. Iran has expressed an intention to host future IOSEA meetings / workshops; while Bangladesh and Viet Nam describe mitigating circumstances. It should be noted that this is the only question in the reporting template where the rating takes account of information available to the Secretariat that was not necessarily mentioned in the national report.

### **6.3 Resources for domestic implementation**

**General tendency:** Some progress, but limited in scope (virtually unchanged since 2011)

**Notable responses:** Indonesia, Kenya, Philippines, South Africa, United Kingdom

80. About 20 Signatory States make some reference to domestic sources of funding for implementation of marine turtle conservation activities at the national level. However, with a few exceptions, the information is generally non-specific when it comes to quantifying actual programme expenditures. Australia, Bangladesh, Saudi Arabia and South Africa do attempt to give an approximation of expenditures on certain aspects of their programmes. All Signatory States are encouraged to try to document the resources that have been mobilised for implementation of marine turtle conservation activities, to serve as a benchmark for future comparisons.

#### ***Solicitation of funds***

81. About two-thirds of the Signatory States responding have solicited funds from, or have sought partnerships with, other Governments, major donors, industry, private sector etc. for marine turtle conservation activities (somewhat lower than reported in 2011). The sponsors/partners include, among others: UNDP, World Bank, GEF, SEAFDEC, SWIOFP, WWF, WCS, Conservation International, and various other corporate donors and private foundations, including petroleum and gas industries, hotels, private companies etc. The approaches that have been attempted are quite diverse and seem not to be detrimentally competitive. It would be helpful if Signatories that were successful in securing external funding were to provide further information in order to provide a clearer picture of the effectiveness of these approaches. It would also be helpful to mention unsuccessful cases (as Eritrea and South Africa have done) so that lessons might be learned from these experiences.

#### ***Use of economic instruments***

82. Only about eight Signatory States have explored the use of economic instruments for the conservation of marine turtles and their habitats; and the responses are little changed from those given in 2008 and 2011. Few details are provided but promotion of eco-tourism is cited as common theme. Examples include: turtle and nest adoption programmes (Kenya); revenue-generating eco-tourism activities in Comoros, Indonesia, Iran, Madagascar, Pakistan, Philippines and Viet Nam; soft loans to affected families in Philippines; and promotion of alternative livelihoods such as aquaculture in Viet Nam. Indonesia mentions a possible partnership under exploration that would introduce environmental mortgages for local communities linked with coral reefs and nesting beaches. In general, it would be helpful if Signatories that have such projects were to provide further information (e.g. on costs, amount of revenue generated by these initiatives, benefits to local communities etc.); and to comment more generally on their efficacy and cost-effectiveness, including any mitigating factors – such as increased disturbance to turtles, degradation of habitat etc.



## **6.4 Government coordination/cooperation**

**General tendency:** Partial implementation, good progress (improved since 2008 through 2011)

### ***Lead and supporting agencies***

83. Most of the Signatory States responding have designated a lead agency responsible for coordinating national marine turtle conservation and management policy. However, responses to a related question – seeking to ascertain the roles and responsibilities of *other* government agencies that may have a peripheral interest – were more ambiguous. Only about nine Signatory States (e.g. France, Indonesia, Jordan, Malaysia, Maldives, Mozambique, South Africa, United Kingdom and United States) explicitly identified in their responses other agencies that may be involved; suggesting that the question may not have been well understood by the majority.

### ***Review of roles and responsibilities***

84. A third of the Signatories (an increase since 2011) report having conducted a review of the roles and responsibilities of government agencies, and few details are provided. Of the 65 percent that have not conducted or completed such a review, several report that it is being contemplated (e.g. Eritrea, Madagascar, Myanmar, Seychelles, South Africa, Thailand); while a few indicate that there is no need for further review apparently because the mandates are already clear (e.g. France, India, Indonesia, Pakistan, Saudi Arabia, United Kingdom, and United States).



# Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding



## Annex 1. EVALUATION MATRIX: All Signatory States, as at 21 July 2014

Programme	Australia	Bahrain	Bangladesh	Cambodia	Comoros	Egypt	Eritrea	France	India	Indonesia	Islamic Rep. of Iran	Jordan	Kenya	Madagascar	Malaysia	Maldives	Mauritius	Mozambique	Myanmar	Oman	Pakistan	Papua New Guinea	Philippines	Saudi Arabia	Seychelles	South Africa	Sri Lanka	Sudan	Thailand	United Arab Emirates	United Kingdom	United Rep. Tanzania	United States	Viet Nam	Yemen	Overall Programme Average			
1.1 Overview given of species, habitats, achievements, challenges	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	76		
1.2 Best practices identified / applied to minimize threats	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	54	
1.3 Studies conducted to correct adverse incentives	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	50	
1.4 Fisheries interactions identified Incidental capture/mortality reduced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	41	
1.5 Turtle uses & values identified; legislation / management in place	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	54	
1.6 Nesting beach management programmes developed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	44	
2.1 Habitat protected / monitored	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	38	
2.2 Degraded habitats rehabilitated	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	45	
3.1 Basic species and habitat- related studies conducted	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	47	
3.2 Collaborative research and monitoring conducted	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	47
3.3 Research results applied; management priorities identified	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	53	
3.4 Data collection standardised/ information exchanged	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	42	
4.1 Education, information programmes implemented	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	46	
4.2 Alternative livelihood opportunities developed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	41	
4.3 Public / private sector involvement encouraged	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	42	
5.1 Trade regulations cooperatively enforced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	33	
5.2 Mgmt. issues identified; national actions prioritised	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	47	
5.3 Cooperative mgmt. and information exchange enhanced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	28	
5.4 Capacity building / training strengthened	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	50	
5.5 Legislation reviewed; enforcement strengthened	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	41	
6.1 New members solicited; MoU status considered	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	55	
6.2 Secretariat / Advisory Committee supported	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	26	
6.3 Resources sought for domestic implementation	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	31	
6.4 Government coordination / cooperation improved	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	58	
OVERALL AVERAGE: Signatory State																																						45	

No information or no progress reported
  Very limited progress
  Some progress, but limited in scope
  Partial implementation, good progress
  Active intervention, very substantial progress
  Full / near full implementation \*or N/A in few cases



# Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding



## Annex 1a. EVALUATION MATRIX: Western Indian Ocean, as at 21 July 2014

Programme	Comoros	France	Kenya	Madagascar	Mauritius	Mozambique	Seychelles	South Africa	United Kingdom	United Rep. Tanzania	Overall Programme Average
1.1 Overview given of species, habitats, achievements, challenges	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	93
1.2 Best practices identified / applied to minimize threats	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	70
1.3 Studies conducted to correct adverse incentives	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	67
1.4 Fisheries interactions identified / incidental capture/mortality reduced	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	47
1.5 Turtle uses & values identified; legislation / management in place	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	66
1.6 Nesting beach management programmes developed	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	51
2.1 Habitat protected / monitored	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	49
2.2 Degraded habitats rehabilitated	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	57
3.1 Basic species and habitat-related studies conducted	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	64
3.2 Collaborative research and monitoring conducted	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	60
3.3 Research results applied; management priorities identified	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	63
3.4 Data collection standardised / information exchanged	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	59
4.1 Education, information programmes implemented	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	52
4.2 Alternative livelihood opportunities developed	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	50
4.3 Public / private sector involvement encouraged	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	51
5.1 Trade regulations cooperatively enforced	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	41
5.2 Mgmt. issues identified; national actions prioritised	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	59
5.3 Cooperative mgmt. and information exchange enhanced	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	32
5.4 Capacity building / training strengthened	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	64
5.5 Legislation reviewed; enforcement strengthened	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	54
6.1 New members solicited; MoU status considered	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	53
6.2 Secretariat / Advisory Committee supported	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	40
6.3 Resources sought for domestic implementation	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	43
6.4 Government coordination / cooperation improved	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	68
OVERALL AVERAGE: Signatory State											56

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REDUCE MORTALITY

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CONSERVE HABITAT

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CONDUCT RESEARCH

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ENHANCE AWARENESS/PARTICIPATION

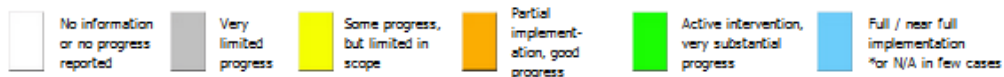
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ENHANCE INTERNATIONAL COOPERATION

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PROMOTE IMPLEMENTATION

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# Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding



## Annex 1b. EVALUATION MATRIX: Northwestern Indian Ocean, as at 21 July 2014

Programme	Bahrain	Egypt	Eritrea	Islamic Rep. of Iran	Jordan	Oman	Saudi Arabia	Sudan	United Arab Emirates	Yemen	Overall Programme Average
1.1 Overview given of species, habitats, achievements, challenges	Green		Green	Orange	Orange	Orange	Orange		Blue	Blue	55
1.2 Best practices identified / applied to minimize threats	Orange		Orange	Orange	Orange	Yellow	Yellow		Orange	Yellow	33
1.3 Studies conducted to correct adverse incentives	Orange		Yellow	Orange	Orange		Grey		Green	Grey	33
1.4 Fisheries interactions identified Incidental capture/mortality reduced	Yellow		Orange	Orange	Grey	Yellow	Grey		Orange	Grey	28
1.5 Turtle uses & values identified; legislation / management in place	Green		Yellow	Orange	Orange	Yellow	Orange		Green	Yellow	42
1.6 Nesting beach management programmes developed	Yellow		Yellow	Grey	Yellow	Orange	Orange		Yellow		25
2.1 Habitat protected / monitored	Grey		Grey	Yellow	Yellow	Orange	Orange		Orange	Orange	26
2.2 Degraded habitats rehabilitated	Yellow		Blue	Yellow	Green	Yellow	Grey		Orange	Orange	35
3.1 Basic species and habitat-related studies conducted	Grey		Yellow	Orange	Grey	Orange	Orange		Yellow	Yellow	25
3.2 Collaborative research and monitoring conducted	Yellow		Yellow	Orange	Orange	Orange	Orange		Yellow	Yellow	24
3.3 Research results applied; management priorities identified	Orange		Yellow	Orange	Orange	Orange	Orange		Orange	Orange	33
3.4 Data collection standardised/ information exchanged	Grey		Orange	Yellow	Orange	Orange	Orange		Yellow	Yellow	30
4.1 Education, information programmes implemented	Grey		Orange	Yellow	Orange	Orange	Orange		Yellow	Yellow	31
4.2 Alternative livelihood opportunities developed	Blue		Yellow	Orange	Yellow	Yellow	Blue		Blue	Blue	40
4.3 Public / private sector involvement encouraged			Yellow	Orange	Orange	Orange	Orange		Orange	Orange	21
5.1 Trade regulations cooperatively enforced			Yellow	Orange	Grey	Orange	Orange		Yellow	Yellow	21
5.2 Mgmt. issues identified; national actions prioritised	Grey		Yellow	Orange	Orange	Orange	Orange		Yellow	Yellow	30
5.3 Cooperative mgmt. and information exchange enhanced	Grey		Grey	Yellow	Grey	Orange	Orange		Grey	Grey	17
5.4 Capacity building / training strengthened	Grey		Green	Orange	Orange	Orange	Orange		Yellow	Yellow	31
5.5 Legislation reviewed; enforcement strengthened	Grey		Yellow	Green	Yellow	Orange	Orange		Yellow	Yellow	27
6.1 New members solicited; MoU status considered	Green		Orange	Yellow	Green	Orange	Orange		Green	Yellow	45
6.2 Secretariat / Advisory Committee supported						Green					8
6.3 Resources sought for domestic implementation			Yellow	Orange	Grey	Yellow	Yellow		Grey	Grey	18
6.4 Government coordination / cooperation improved	Grey		Orange	Orange	Yellow	Orange	Green		Yellow	Yellow	35
<b>OVERALL AVERAGE: Signatory State</b>	Yellow		Yellow	Orange	Yellow	Yellow	Yellow		Yellow	Yellow	<b>30</b>

REDUCE MORTALITY

CONSERVE HABITAT

CONDUCT RESEARCH

ENHANCE AWARENESS/PARTICIPATION

ENHANCE INTERNATIONAL COOPERATION

PROMOTE IMPLEMENTATION







# Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding



## Annex 1c. EVALUATION MATRIX: Northern Indian Ocean, as at 21 July 2014

Programme	Bangladesh	India	Maldives	Pakistan	Sri Lanka	Overall Programme Average	
1.1 Overview given of species, habitats, achievements, challenges	Green	Blue	Green	Blue	Blue	90	REDUCE MORTALITY
1.2 Best practices identified / applied to minimize threats	Orange	Green	Yellow	Green	Orange	55	
1.3 Studies conducted to correct adverse incentives	Orange	Orange	Yellow	Green	Green	57	
1.4 Fisheries interactions identified Incidental capture/mortality reduced	Orange	Orange	Yellow	Orange	Yellow	49	
1.5 Turtle uses & values identified; legislation / management in place	Orange	Orange	Orange	Orange	Orange	55	
1.6 Nesting beach management programmes developed	Orange	Orange	Yellow	Orange	Green	58	
2.1 Habitat protected / monitored	Yellow	Orange	Grey	Orange	Yellow	44	CONSERVE HABITAT
2.2 Degraded habitats rehabilitated	Orange	Green	Grey	Orange	Orange	48	
3.1 Basic species and habitat-related studies conducted	Orange	Orange	Yellow	Orange	Orange	50	CONDUCT RESEARCH
3.2 Collaborative research and monitoring conducted	Yellow	Orange	Yellow	Grey	Orange	35	
3.3 Research results applied; management priorities identified	Green	Green	Yellow	Green	Orange	65	
3.4 Data collection standardised/ information exchanged	Yellow	Orange	Grey	Grey	Orange	30	
4.1 Education, information programmes implemented	Green	Orange	Yellow	Green	Orange	62	ENHANCE AWARENESS/ PARTICIPATION
4.2 Alternative livelihood opportunities developed	Orange	Orange	White	Green	Yellow	40	
4.3 Public / private sector involvement encouraged	Orange	Green	Yellow	Orange	Orange	53	
5.1 Trade regulations cooperatively enforced	Orange	Orange	Grey	Yellow	Yellow	37	ENHANCE INTERNATIONAL COOPERATION
5.2 Mgmt. issues identified; national actions prioritised	Yellow	Orange	Yellow	Orange	Orange	45	
5.3 Cooperative mgmt. and information exchange enhanced	Yellow	Grey	Yellow	Grey	Yellow	23	
5.4 Capacity building / training strengthened	Orange	Orange	Yellow	Orange	Orange	57	
5.5 Legislation reviewed; enforcement strengthened	Orange	Yellow	Grey	Orange	Orange	45	
6.1 New members solicited; MoU status considered	Green	Orange	Orange	Orange	Orange	68	PROMOTE IMPLEMENTATION
6.2 Secretariat / Advisory Committee supported	White	Green	Orange	White	Yellow	25	
6.3 Resources sought for domestic implementation	Yellow	Yellow	White	Orange	Yellow	32	
6.4 Government coordination / cooperation improved	Green	Green	Orange	Orange	Orange	67	
<b>OVERALL AVERAGE: Signatory State</b>	Orange	Orange	Yellow	Orange	Orange	<b>49</b>	





# Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding



## Annex 1d. EVALUATION MATRIX: Southeast Asia +, as at 21 July 2014

Programme	Australia	Cambodia	Indonesia	Malaysia	Myanmar	Papua New Guinea	Philippines	Thailand	United States	Viet Nam	Overall Programme Average	
1.1 Overview given of species, habitats, achievements, challenges	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	73	REDUCE MORTALITY
1.2 Best practices identified / applied to minimize threats	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	60	
1.3 Studies conducted to correct adverse incentives	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	48	
1.4 Fisheries interactions identified. Incidental capture/mortality reduced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	45	
1.5 Turtle uses & values identified; legislation / management in place	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	55	
1.6 Nesting beach management programmes developed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	50	CONSERVE HABITAT
2.1 Habitat protected / monitored	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	38	
2.2 Degraded habitats rehabilitated	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	43	CONDUCT RESEARCH
3.1 Basic species and habitat-related studies conducted	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	51	
3.2 Collaborative research and monitoring conducted	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	63	
3.3 Research results applied; management priorities identified	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	55	
3.4 Data collection standardised/ information exchanged	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	43	ENHANCE AWARENESS/ PARTICIPATION
4.1 Education, information programmes implemented	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	48	
4.2 Alternative livelihood opportunities developed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	33	
4.3 Public / private sector involvement encouraged	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	49	ENHANCE INTERNATIONAL COOPERATION
5.1 Trade regulations cooperatively enforced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	36	
5.2 Mgmt. issues identified; national actions prioritised	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	53	
5.3 Cooperative mgmt. and information exchange enhanced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	38	
5.4 Capacity building / training strengthened	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	53	
5.5 Legislation reviewed; enforcement strengthened	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	40	PROMOTE IMPLEMENTATION
6.1 New members solicited; MoU status considered	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	62	
6.2 Secretariat / Advisory Committee supported	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	33	
6.3 Resources sought for domestic implementation	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	33	
6.4 Government coordination / cooperation improved	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	66	
OVERALL AVERAGE: Signatory State	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	49	

## Annex 2. EVALUATION MATRIX: All Signatory States, as at 23 December 2011

Programme	Australia	Bahrain	Bangladesh	Cambodia	Comoros	Eritrea	India	Indonesia	Islamic Rep. of Iran	Jordan	Kenya	Madagascar	Mauritius	Myanmar	Oman	Pakistan	Philippines	Saudi Arabia	Seychelles	South Africa	Sri Lanka	Thailand	United Arab Emirates	United Kingdom	United Rep. Tanzania	United States	Viet Nam	Overall Programme Average	
1.1 Overview given of species, habitats, achievements, challenges	Blue	Blue	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	55	REDUCE MORTALITY
1.2 Best practices identified / applied to minimize threats	Blue	Blue	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	54	
1.3 Studies conducted to correct adverse incentives	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	49	
1.4 Fisheries Interactions identified; Incidental capture/mortality reduced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	32	
1.5 Turtle uses & values identified; legislation / management in place	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	56	
1.6 Nesting beach management programmes developed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	42	
2.1 Habitat protected / monitored	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	39	CONSERVE HABITAT
2.2 Degraded habitats rehabilitated	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	43	
3.1 Basic species and habitat-related studies conducted	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	41	CONDUCT RESEARCH
3.2 Collaborative research and monitoring conducted	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	45	
3.3 Research results applied; management priorities identified	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	43	
3.4 Data collection standardised/ information exchanged	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	38	
4.1 Education, information programmes implemented	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	46	ENHANCE AWARENESS / PARTICIPATION
4.2 Alternative livelihood opportunities developed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	36	
4.3 Public / private sector involvement encouraged	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	38	
5.1 Trade regulations cooperatively enforced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	34	ENHANCE INTERNATIONAL COOPERATION
5.2 Mgmt. issues identified; national actions prioritised	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	46	
5.3 Cooperative mgmt. and information exchange enhanced	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	20	
5.4 Capacity building / training strengthened	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	39	
5.5 Legislation reviewed; enforcement strengthened	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	33	
6.1 New members solicited; MoU status considered	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	51	PROMOTE IMPLEMENTATION
6.2 Secretariat / Advisory Committee supported	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	12	
6.3 Resources sought for domestic implementation	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	26	
6.4 Government coordination / cooperation improved	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	50	
OVERALL AVERAGE: Signatory State																												40	

	No information or no progress reported		Very limited progress		Some progress, but limited in scope		Partial implementation, good progress		Active intervention, very substantial progress		Full / near full implementation *or N/A in few cases
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### Annex 3. EVALUATION MATRIX: All Signatory States, 31 July 2008

Programme	Australia	Bangladesh	Cambodia	Comoros	Eritrea	Indonesia	Islamic Republic of Iran	Jordan	Kenya	Madagascar	Mauritius	Myanmar	Oman	Pakistan	Philippines	Saudi Arabia	Seychelles	South Africa	Sri Lanka	Thailand	United Kingdom	United Rep. of Tanzania	United States	Viet Nam	Overall
1.1 Threats identified and documented	Active	Partial	Some	Some	None	None	Active	Partial	Partial	Partial	Active	None	None	None	Active	None	Active	Active	Active	None	Active	None	None	Active	0.38
1.2 Best practices identified/applied to minimize threats	Active	Active	Active	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.50
1.3 Studies conducted to correct adverse incentives	Active	Active	None	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.41
1.4 Incidental capture and mortality reduced	Active	None	None	None	None	None	Active	None	None	None	None	None	None	None	Active	None	Active	Active	Active	None	Active	None	None	None	0.20
1.5 Direct harvest and domestic trade prohibited	Active	None	None	None	None	Active	None	None	Active	None	Active	None	None	Active	Active	None	Active	Active	Active	None	Active	Active	None	None	0.38
1.6 Nesting beach management programmes developed	Active	Active	None	Active	None	None	None	None	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.41
2.1 Habitat protection/conservation measures established	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.34
2.2 Degraded habitats rehabilitated	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.36
3.1 Targeted marine turtle and habitat studies conducted	Active	None	None	None	None	None	None	None	None	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.30
3.2 Collaborative research/monitoring conducted	None	None	None	None	None	None	None	Active	None	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.24
3.3 Data analysed/used to improve conservation	Active	None	None	None	None	None	None	None	None	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.28
3.4 Data collection standardised/information exchanged	Active	None	None	Active	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.29
4.1 Education, information programmes established	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.40
4.2 Alternative livelihood opportunities developed	Active	Active	None	Active	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.36
4.3 Public participation	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.34
5.1 Cooperative enforcement of trade regulations	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.28
5.2 Action plans developed/implemented	Active	None	None	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.34
5.3 Cooperative mgmt. and info. exchange enhanced	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.19
5.4 Capacity building/training strengthened	Active	None	None	None	None	None	None	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.37
5.5 Legislation reviewed/enforcement strengthened	Active	None	None	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.26
6.1 Efforts undertaken to broaden MoU membership	Active	Active	None	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.38
6.2 Secretariat/Advisory Committee supported	Active	None	None	None	None	None	None	None	None	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.13
6.3 Resources for implementation sought	Active	None	None	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.24
6.4 Government coordination/cooperation improved	Active	Active	Active	None	None	None	Active	Active	Active	None	Active	None	None	None	Active	None	Active	Active	Active	None	Active	Active	None	None	0.41

No information available or no progress reported
  Very limited progress
  Some progress, but limited in scope
  Partial implementation, good progress
  Active intervention, very substantial progress
  Full or near-full implementation





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