## 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 33 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.  The rating system and methodology used to evaluate the information provided in reports submitted by Signatory States through the Online Reporting Facility are described in Part III.

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 (Gray)
- ▪ No information available or o 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.  Although one may wish to examine also the results for any given Signatory State (displayed vertically), this exercise is interesting only to the extent that it may help 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.

4.      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.  These give a general indication of implementation progress, following the generic categories listed above.

5.      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[3].

6.      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.

7.      The evaluation criteria have been only slightly refined since a similar exercise was carried out for the Fifth Meeting of Signatory States in August 2008 (as well as the Fourth Meeting), 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

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[3] Note that the calculated value of each cell is intentionally not displayed in the version presented in Annex 1.   IOSEA Focal Points can view all of the values in the matrix, by clicking on the "Evaluation" button in the Online Reporting Facility's Editor.

and August 2008, and the present analysis made in December 2011. Indeed, one can observe from the matrices produced for each of those previous reporting periods (Annexes 2 and 3) that, over time, the numbers of white, gray 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.

8. It may be instructive to make a distinction between the detailed review of implementation that follows, and the graphical matrix discussed above. The substantive commentary in Part II has been prepared after generating and analysing reports from the IOSEA Online Reporting Facility for all Signatory States, 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 collective 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.

9. 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 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);

- The definitions "General tendencies" in progress – ranging from "limited" to "full or near full implementation" – are subjective and open to interpretation, whereas the underlying scoring is quantifiable and backed by objective criteria.

- Indications are given in the text of how the Signatory States' collective performance, measured in December 2011, compares to the previous reporting exercise (for example, "significantly improved since 2008" or "diminished activity compared to 2008".

- Where appropriate, attention is drawn to "notable responses", in case readers wish to examine in the Online Reporting Facility, in more detail, the particularly informative explanations provided by a given Signatory State.

10. Comparing the details of the results for 2011 and 2008, improvements in implementation/ reporting are observed in 13 of the 24 CMP programmes. Eight of these improvements are considered significant (where overall programme averages have increased by 5 or more points); and two are highly significant (increasing by more than 10 points). For 11 of the CMP programmes, implementation/reporting is insignificantly diminished (in 9 cases) or is unchanged (in two cases).

11. While overall performance across 33 Signatory States has improved since 2008 (by 5 points or 12 percent), one might question why the improvement over the past three years is not more pronounced. It may be explained in large measure by the fact that since 2008, six new Signatories have come onboard – many of which have yet to complete full reports. Indeed, if one removes five of those Signatories from the calculations, the progress is rather more substantial (with an overall programme average of 49, instead of 45, much higher than the average for 2008). Moreover, 13 of the CMP programmes would reflect "good or very substantial progress", rather than the current eight.

12.      Comparing the results for individual Signatories between 2011 and 2008, once observes that 22 of the then 27 Signatories have improved in their implementation/reporting of the CMP (very substantially so, in 14 cases).  Minor declines in the performance of five Signatories could be an artefact of more stringent scoring or may be attributed to a failure to update some information in their reports.

13.      Taking a view across the four IOSEA sub-regions – South-East Asia+, Northern Indian Ocean, Northwest Indian Ocean, and Western Indian Ocean – one observes further shifts in the level of implementation/reporting since 2008.  The Western Indian Ocean group (Annex 1a) has continued to improve, and its collective performance now belongs in the category of "good progress".   A similar positive trend can be found in the Northern Indian Ocean group (Annex 1b), which can probably attributed to much improved reporting of activities by a couple of its members.  In contrast South-East Asia+ (Annex 1c) is virtually unchanged, having taken on board a couple of new Signatories that have yet to provide full reports – a  phenomenon that will likely soon be reversed.  Though evidently still behind in terms of IOSEA implementation/reporting, the Northwest Indian Ocean group (Annex 1d) saw one of the biggest improvements (at least in terms of reporting) since 2008.

\* \* \* \* \*

## List of acronyms appearing in the text

| | |
|---|---|
| ASEAN | Association of Southeast Asian Nations |
| BIOT | British Indian Ocean Territory |
| 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 |
| FAD | Fish Aggregating Device |
| FAO | Food and Agricultural Organization of the United Nations |
| GCC | Gulf Cooperation Council |
| GEF | Global Environment Facility |
| IUCN | World Conservation Union |
| 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 |
| 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 |
| WIOMSA | Western Indian Ocean Marine Science Association |
| WWF | World Wide Fund for Nature |

**Keyword Index for Quick Reference**

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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 (significantly improved since 2008)
**Notable responses:** Comoros, France, Kenya, Madagascar, Malaysia, Seychelles, Thailand, United Arab Emirates, United Kingdom, United Republic of Tanzania, Yemen and Viet Nam

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 highlighting 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.)  About two-thirds of the Signatories have provided very informative responses, including a dozen, mentioned above, that were particularly interesting.

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

**General tendency:** Partial implementation, good progress
**Notable responses:** Australia, Bahrain, Bangladesh, Cambodia, Eritrea, France, Kenya, Madagascar, Philippines, Seychelles, South Africa, United Republic of Tanzania, United States

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 especially 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 (apparently under revision), its broad partnership with Indigenous communities, as well as wide-ranging research and conservation projects involving various levels of government and non-governmental organisations; Bahrain's investigations into sources of turtle mortality; Bangladesh's community-based conservation approaches; Cambodia's programme to foster cooperation with coastal fishing communities; Eritrea's public awareness initiatives; France's state-of-the-art public information centre (Kélonia/La Réunion) and its fruitful collaboration with local fishermen; Indonesia's conservation concessions and no fishing zones; Kenya's inclusive national conservation and management strategy for sea turtles; Madagascar's invocation of traditional social code (community agreements) known as Dina, Philippines' community-based conservation agreements and data-gathering system; Seychelles' stakeholder involvement in nation-wide conservation and monitoring programmes; South Africa's comprehensive monitoring programme and strategically-focused coastal management regime; United Republic of Tanzania's incentive-based approaches to monitoring and conservation; and the United States' standardised nesting and foraging area monitoring protocols, and work in the areas of  mitigation of light pollution and bycatch reduction.

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

**General tendency:** Partial implementation, good progress
**Notable responses:** Australia, Comoros, Kenya, Madagascar, Philippines, Tanzania, United States

*Socio-economic studies*

3.      About two-thirds 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. Among them: funding to assist in the development of community-driven approaches to turtle (and dugong) management in Australia; an anthropological study of traditional use of marine turtles in Comoros, questionnaire surveys in Eritrea; ongoing studies of human-turtle interactions in Lakshadweep Islands and Orissa, India; economic valuation of marine biodiversity (notably turtles) in tourism in Indonesia; numerous investigations of public perception and valuation of biodiversity in Kenya; studies of the social and

traditional importance of marine turtles to local communities in Madagascar; studies in Pakistan on the dependence of coastal communities on marine ecosystems; an in-depth social and institutional assessment of the Philippines' Turtle Islands sanctuary conducted in 1998; studies in Seychelles to evaluate public attitudes towards turtle conservation and the socio-economic importance of marine resources; a study on interactions between artisanal fisheries and sea turtles in Thailand; general socio-economic studies involving stakeholders within the marine protected areas in the United Arab Emirates; numerous studies in Tanzania addressing resource-use by coastal communities, the economic value of turtle products and the cultural / social implications of human-turtle interactions; United States' research from 2004-2008 on the economics of Pacific leatherback conservation as well as sea turtle-fisheries interactions in coastal fisheries.

### *Identification/correction of adverse incentives*

4.     About 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 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 address the 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); Iran's efforts to use religious edicts to dissuade consumption of turtle eggs and meat; financial incentive and compensation schemes in Kenya and Mozambique; alternative livelihood programmes in Pakistan, Philippines, Tanzania and Viet Nam; development of turtle tourism in Indonesia, Seychelles and Sri Lanka; South Africa's sustainable livelihoods programme and 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, more in-depth descriptions of practical approaches that have shown some measure of success would be beneficial.

## 1.4 Reduction of incidental capture and mortality

**General tendency:** Some progress, but limited in scope (further improvement in reporting since 2008)
**Notable responses:** Australia, France, Indonesia, Philippines, South Africa, United States

### *Fishing effort*

5.     The IOSEA reporting template has been designed in such as way as to help Signatory States to 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 2008, 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 just a handful:  Maldives, Mauritius, Mozambique, Papua New Guinea, Saudi Arabia, and Yemen.

6.     The fisheries described in some detail include: shrimp trawls, set gill nets, anchored fish aggregating devices (FADs), purse seines, longlining, driftnets, and other miscellaneous fisheries. Tables 1 and 1a 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.  Shrimp trawl and set gill net fisheries are reported to be in operation in 73 and 86 percent, respectively, of the Signatories responding, and the level of effort was reported to be "moderate to relatively high" in about than 50 percent of those countries.

Table 1

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

**Activity Report**

**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]**

**Level of fishing effort**

| | Shrimp trawls | Set gill nets | FADs | Purse seine | Longline | Driftnet | Other 1 | Other 2 |
|---|---|---|---|---|---|---|---|---|
| Australia | Unknown | Unknown | No Response | No Fishery | Unknown | No Fishery | Unknown | Relatively Low |
| Bahrain | Relatively High | Relatively Low | Unknown | No Fishery | Moderate | No Response | Relatively High | No Response |
| Bangladesh | Relatively High | Relatively Low | No Fishery | Moderate | Moderate | No Fishery | Moderate | Relatively Low |
| Cambodia | Relatively High | Unknown | No Fishery | Relatively Low | Relatively High | No Fishery | Moderate | No Response |
| Comoros | No Fishery | Moderate | Moderate | No Fishery | Moderate | Relatively Low | Relatively Low | No Response |
| Eritrea | Relatively High | Moderate | No Fishery | Relatively Low | Relatively Low | No Fishery | Moderate | No Response |
| France | No Fishery | No Fishery | Relatively High | Relatively High | Moderate | No Fishery | Relatively High | Unknown |
| India | Relatively High | Moderate | No Response | Relatively Low | Unknown | Moderate | Moderate | Relatively Low |
| Indonesia | Relatively High | Unknown | Moderate | Moderate | Relatively High | No Fishery | Relatively Low | No Response |
| Islamic Republic of Iran | Moderate | Relatively High | No Fishery | Relatively Low | No Fishery | No Response | Moderate | No Response |
| Jordan | No Fishery | Relatively Low | No Fishery | No Fishery | Relatively Low | No Fishery | No Response | No Response |
| Kenya | Moderate | Relatively High | No Response | Unknown | Moderate | No Fishery | Relatively High | Unknown |
| Madagascar | Relatively Low | Relatively Low | Unknown | No Fishery | No Fishery | No Fishery | Relatively Low | No Response |
| Malaysia | Relatively High | Moderate | No Response | Unknown | Moderate | Moderate | Unknown | Unknown |
| Maldives | No Response | No Response | No Response | No Response | Moderate | No Fishery | No Response | No Response |
| Mauritius | No Response | No Response | Moderate | No Response | No Response | No Fishery | No Response | No Response |
| Mozambique | Relatively High | No Response | No Response | No Response | No Response | No Response | Moderate | Relatively High |
| Myanmar | Moderate | No Fishery | No Fishery | Moderate | Relatively Low | Relatively Low | Relatively Low | Relatively Low |
| Oman | No Fishery | Relatively Low | No Response | Relatively Low | Moderate | Moderate | No Response | No Response |
| Pakistan | Relatively High | Relatively Low | No Fishery | Moderate | Moderate | No Fishery | No Response | No Response |
| Papua New Guinea | No Response | No Response | No Response | No Response | No Response | No Response | No Response | No Response |
| Philippines | Relatively Low | Moderate | Moderate | No Response | Moderate | Relatively Low | Relatively Low | Relatively Low |
| Saudi Arabia | Relatively Low | Unknown | Unknown | Unknown | No Response | No Fishery | No Response | No Response |
| Seychelles | No Fishery | Relatively Low | No Fishery | Relatively High | Relatively High | No Fishery | No Response | No Response |
| South Africa | Relatively Low | Moderate | No Fishery | Moderate | Moderate | No Fishery | No Response | Relatively Low |
| Sri Lanka | Unknown | Unknown | No Response | Unknown | Unknown | No Fishery | No Response | No Response |
| Thailand | Unknown | Moderate | No Fishery | Moderate | Relatively Low | No Fishery | Moderate | Relatively Low |
| United Arab Emirates | | | | | | | Moderate | No Response |
| United Kingdom | | | | | | | No Response | No Response |
| United Republic of Tanzania | Moderate | Relatively High | No Response | Moderate | Moderate | No Fishery | Unknown | No Response |
| United States | Moderate | Moderate | Relatively Low | Relatively Low | Moderate | Relatively Low | Relatively High | Relatively High |
| Viet Nam | Moderate | Moderate | No Response | Relatively Low | Relatively Low | No Response | No Response | No Response |
| Yemen | No Fishery | Relatively Low | No Response | No Fishery | Relatively Low | Moderate | No Response | No Response |

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

**Key:** Relatively High Effort | Moderate Effort | Relatively Low Effort | Unknown | No Fishery | No Response

**Aggregate Summary of Responses**
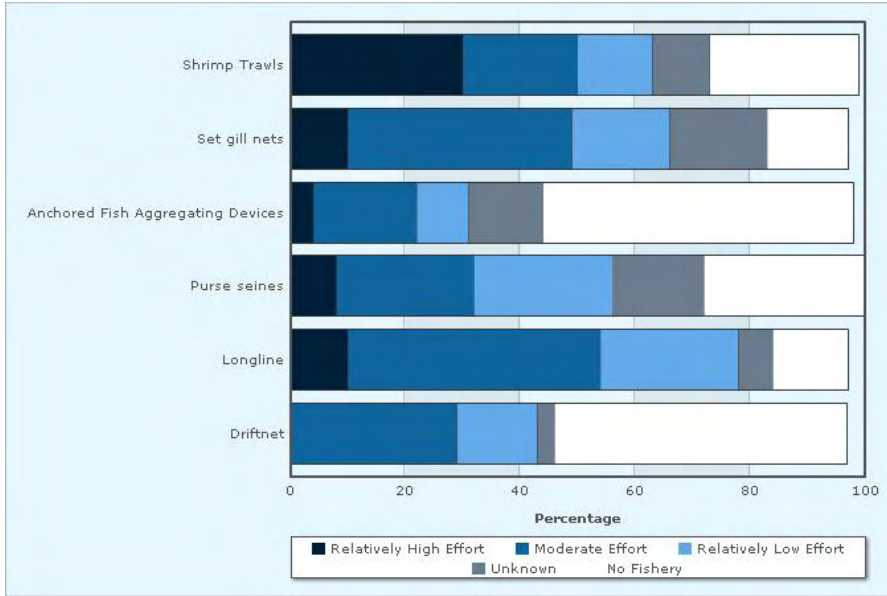
*Perceived fishing impacts*

7.      Tables 2 and 2a provide a similar graphical overview of the level of perceived *impact* of the various fisheries as reported by the Signatories States.  By way of example, shrimp trawls are reported by 10 Signatory States (Bahrain, Bangladesh, Cambodia, Eritrea, India, Indonesia, Kenya, Malaysia, 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 United Republic of Tanzania reporting a particularly serious problem. The number of Signatories reporting "moderate to relatively high" impacts of longlines was somewhat lower (just over 40 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 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.

*Illegal fishing*

9.      About three-quarters of the Signatories now cite specific examples of illegal fishing in the IOSEA region that may impact marine turtles (an increase since 2008).  Examples include illegal, unregulated and unreported (IUU) fishing with gillnets and longlines in northern Australian waters; illegal use of gillnets and fishing out of season in Bahrain waters; destructive fishing gear used in Cambodia; illegal fishing with various gear types in France; 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; 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; illegal foreign fishing/poaching targetting sea turtles in southern Philippines; harpooning of turtles at sea in Seychelles; across-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 gill nets in United Arab Emirates; and illegal fishing mainly for beche de mer in the BIOT archipelago. The United States reports 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 include the denial of port privileges.

*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 (eg. 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.

Table 2

![Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding]

**Activity Report**

**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]**

## Level of perceived impact

| | Shrimp trawls | Set gill nets | FADs | Purse seine | Longline | Driftnet | Other 1 | Other 2 |
|---|---|---|---|---|---|---|---|---|
| **Australia** | | | | | | | | |
| **Bahrain** | | | | | | | | |
| **Bangladesh** | | | | | | | | |
| **Cambodia** | | | | | | | | |
| **Comoros** | | | | | | | | |
| **Eritrea** | | | | | | | | |
| **France** | | | | | | | | |
| **India** | | | | | | | | |
| **Indonesia** | | | | | | | | |
| **Islamic Republic of Iran** | | | | | | | | |
| **Jordan** | | | | | | | | |
| **Kenya** | | | | | | | | |
| **Madagascar** | | | | | | | | |
| **Malaysia** | | | | | | | | |
| **Maldives** | | | | | | | | |
| **Mauritius** | | | | | | | | |
| **Mozambique** | | | | | | | | |
| **Myanmar** | | | | | | | | |
| **Oman** | | | | | | | | |
| **Pakistan** | | | | | | | | |
| **Papua New Guinea** | | | | | | | | |
| **Philippines** | | | | | | | | |
| **Saudi Arabia** | | | | | | | | |
| **Seychelles** | | | | | | | | |
| **South Africa** | | | | | | | | |
| **Sri Lanka** | | | | | | | | |
| **Thailand** | | | | | | | | |
| **United Arab Emirates** | | | | | | | | |
| **United Kingdom** | | | | | | | | |
| **United Republic of Tanzania** | | | | | | | | |
| **United States** | | | | | | | | |
| **Viet Nam** | | | | | | | | |
| **Yemen** | | | | | | | | |

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).

**Key:** Relatively High Impact | Moderate Impact | Relatively Low Impact | Unknown | None | No Response

The following stacked bar chart indicate the perceived impact for each fishery described by the countries responding to Question 1.4.2, as a percentage for each category.

**Aggregate Summary of Responses**
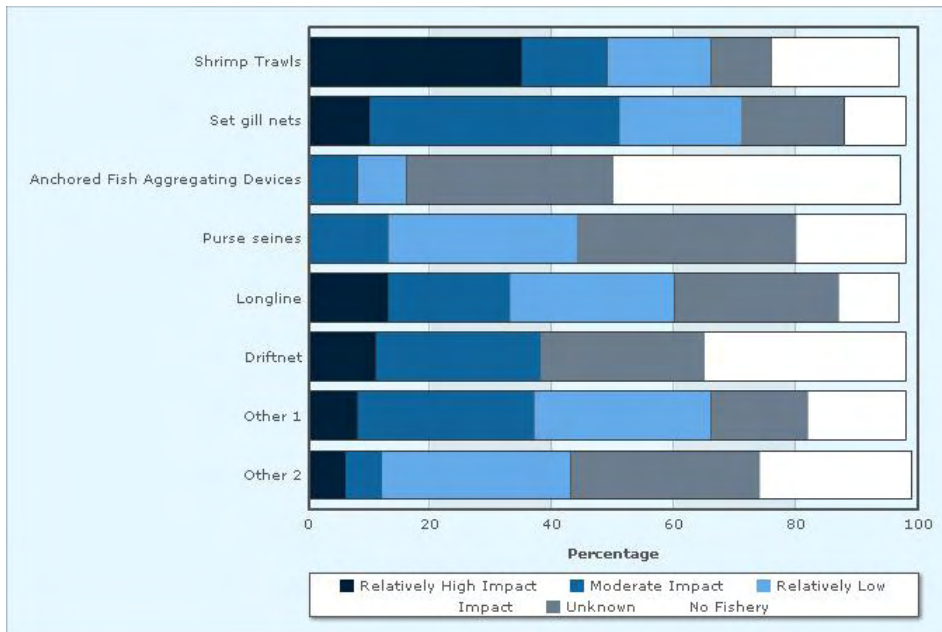
11.     With some exceptions, reporting on all of these measures has continued to improve since 2008 (Table 3), however implementation remains weak.  Eighteen Signatories (well over half of those reporting) have initiated training programmes in appropriate handling of incidentally caught turtles, with Australia, France, Indonesia, Kenya, Myanmar, Tanzania and United States providing noteworthy explanations.  Seven Signatories do not have such programmes in place; and eight have not reported definitively in this area.

12.     About one-third of all Signatories reporting (Australia, Bangladesh, India, Indonesia, Kenya, Madagascar, 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), however the success of implementation varies. Many countries report on the reluctance of fishers to install TEDs. Australia, Bahrain, Eritrea, India, Indonesia, Iran, Kenya, Madagascar, Mozambique, Pakistan are among those offering informative descriptions of their efforts.  About a third of the Signatories responding do not presently have by-catch reduction systems for marine turtles in place, but a few (e.g. Bahrain, Islamic Republic of Iran, Myanmar, United Republic of Tanzania) have undertaken trials or workshops on the relevant technology.

13.     A third of the Signatories reporting (Australia, France, Indonesia, Maldives, 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 sea turtle by-catch.  Some noteworthy explanations are provided by Australia, France, Indonesia, and Seychelles).  A similar proportion of the Signatories responding to this question (and probably many more, if one counts non-respondents) have yet to initiate such studies.

14.     About two-thirds of the Signatories responding exercise spatial and temporal control of fishing activities, and a comparable percentage manage fishing effort (unchanged since 2008).  Many provide useful explanations.  However, several countries 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.

15.     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 Table 4 illustrates, both reporting and actual implementation of these programmes is substantial.  Well over half of the Signatories responding have some form of onboard observer programme: Australia, Eritrea, France, Indonesia, Kenya, Madagascar, and Philippines provide informative descriptions. Approximately half 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 with 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.  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*

16.     Only half 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.  Other countries providing additional details of programme assessments include: Bangladesh, France, Indonesia, Philippines, Seychelles, South Africa, and United States.

Table 3

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

**Activity Report**

**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]**

## Programmes

| | Approp. handling | Escape devices | Encircle measures | Hook design | Monitoring | Net retention | Spatial control | Effort mgt. |
|---|---|---|---|---|---|---|---|---|
| Australia | Has | Has | — | Has | — | Has | Has | Has |
| Bahrain | Has | — | NA | — | NA | — | Has | Has |
| Bangladesh | — | Has | — | — | — | — | NA | NA |
| Cambodia | — | — | NA | NA | NA | NA | NA | Has |
| Comoros | — | NA | — | — | Has | — | Has | Has |
| Eritrea | Has | — | — | — | — | NA | Has | NA |
| France | Has | — | — | Has | — | — | Has | Has |
| India | Has | Has | — | NA | — | — | Has | Has |
| Indonesia | Has | Has | Has | Has | Has | Has | Has | NA |
| Islamic Republic of Iran | — | NA | — | — | — | — | Has | Has |
| Jordan | NA | NA | NA | NA | NA | NA | NA | NA |
| Kenya | Has | Has | — | NR | NR | — | — | NR |
| Madagascar | NR | Has | NA | NR | Has | NA | Has | — |
| Malaysia | — | Has | — | NR | — | NA | Has | NR |
| Maldives | Has | NA | NA | Has | NA | NA | Has | NA |
| Mauritius | NA | NA | — | NA | — | NA | Has | Has |
| Mozambique | NR | NA | — | NR | NR | NR | NR | NR |
| Myanmar | Has | — | Has | — | NA | Has | Has | Has |
| Oman | NA | NA | Has | Has | Has | Has | Has | Has |
| Pakistan | Has | Has | NA | NA | NA | NA | NA | NA |
| Papua New Guinea | NR | NR | NR | NR | NR | NR | NR | NR |
| Philippines | Has | — | — | Has | — | — | Has | Has |
| Saudi Arabia | Has | Has | — | Has | — | Has | Has | Has |
| Seychelles | — | — | Has | Has | — | — | — | — |
| South Africa | NA | NA | NA | NA | — | — | — | Has |
| Sri Lanka | Has | — | — | NR | NR | NR | Has | Has |
| Thailand | Has | NA | — | — | Has | — | Has | Has |
| United Arab Emirates | — | — | — | — | — | — | Has | NR |
| United Kingdom | NA | NA | NA | NA | NA | NA | NA | NA |
| United Republic of Tanzania | Has | — | — | — | — | — | — | — |
| United States | NA | Has | — | Has | Has | NA | Has | Has |
| Viet Nam | Has | Has | NR | Has | NR | Has | Has | NA |
| Yemen | Has | — | NA | — | Has | NA | NA | NA |

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

| Key | Has Programme | Does not have Programme | Not Applicable | No Response |
|---|---|---|---|---|

Table 4


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

**Activity Report**

**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]**

**Programmes**

| | Onboard observer | Vessel Monitoring | Inspections | Training | Information |
|---|---|---|---|---|---|
| Australia | Has | Has | Has | Has | Has |
| Bahrain | | | Has | Has | Has |
| Bangladesh | | | Has | Has | Has |
| Cambodia | | Not Applicable | Has | Has | Has |
| Comoros | | | Has | Has | |
| Eritrea | Has | Has | Has | Has | Has |
| France | Has | Has | Has | Has | Has |
| India | | | Has | Has | Has |
| Indonesia | Has | Has | Has | Has | Has |
| Islamic Republic of Iran | Has | Has | Has | Has | No Response |
| Jordan | Not Applicable | Not Applicable | Not Applicable | Has | Has |
| Kenya | Has | Has | Has | Has | Has |
| Madagascar | Has | Has | Has | Has | Has |
| Malaysia | Has | Has | | Has | No Response |
| Maldives | Has | Has | Has | Has | Has |
| Mauritius | No Response | Has | Has | Has | Has |
| Mozambique | No Response | No Response | No Response | Has | No Response |
| Myanmar | Has | | Has | Has | Has |
| Oman | Not Applicable | Has | Has | Has | Has |
| Pakistan | Has | Has | Has | Has | Has |
| Papua New Guinea | No Response | No Response | No Response | No Response | No Response |
| Philippines | Has | | Has | Has | Has |
| Saudi Arabia | | | Has | Has | Has |
| Seychelles | Has | | Has | | |
| South Africa | Has | Has | Has | Has | Has |
| Sri Lanka | No Response | | Has | Has | Has |
| Thailand | | | Has | Has | Has |
| United Arab Emirates | No Response | No Response | Has | Has | Has |
| United Kingdom | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| United Republic of Tanzania | Has | No Response | No Response | Has | No Response |
| United States | | Has | Has | Has | Has |
| Viet Nam | | No Response | Has | Has | Has |
| Yemen | | | | | |

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).

| Key | Has Programme | Does not have Programme | Not Applicable | No Response |
|---|---|---|---|---|

*Research and development*

17.    Many (more than 80%) of the Signatory States report 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; 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; two Indian institutes are tasked with monitoring bycatch if various fisheries; Indonesia has conducted interviews with fishermen on tuna longliners and shrimp trawls, and is experimenting with circle hooks and TEDs; 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; Philippines is conducting research on circle and J-hooks, and is collecting data on incidental catch in various coastal gears.  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 is reviewing prawn trawl by-catch impacts. South African NGO's have reviewed the impacts of longlining and trawling on vulnerable species.  Studies in the United Republic of Tanzania confirm that gillnets, particularly bottom set nets, pose a significant threat to turtles.  The United States' National Marine Fisheries Service (NMFS) has a few programs that contribute to the research and development of bycatch reduction devices for sea turtles.

*Information and technical exchanges*

18.    More than half 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 bycatch 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) in Saipan 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', has distributed its by-catch survey findings internationally.  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*

19.    More than half of the Signatory States reporting have some form of legislative prohibition against the use of driftnets in national waters; or they or not used in territorial waters in any case.  Several (eg. India, Oman, Viet Nam) are apparently considering their prohibition; while three (Iran, Malaysia, Thailand) have not taken any legislative steps in this regard.  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
**Notable responses:** Bahrain, Cambodia, France, Kenya, Philippines, Seychelles, South Africa, United Kingdom, United States

*Economic uses and cultural values*

20.    As shown in Tables 5 and 5a, almost all of the Signatory States list a number of economic uses and cultural values of marine turtles, the most prevalent being meat consumption (in 71 percent of those reporting), followed by eco-tourism benefits (60 percent), egg consumption (53 percent) and cultural/traditional significance (41 percent), and use of shell (40 percent).  Meat consumption is rated to be of "moderate to high" prevalence by 8 Signatories (Comoros, Eritrea, France, Madagascar, Maldives, Mozambique, Philippines, Seychelles).  Many countries (notably United Republic of Tanzania) offer a brief description of the nature of this consumption.  Malaysia, Maldives and Mozambique report high egg consumption; while moderate egg consumption is reported to occur in Bangladesh, Comoros, Eritrea, India, Indonesia, Madagascar and Philippines.  Egg consumption apparently does not occur in 8 Signatory States, and its importance is either "low" or unrated in about a dozen other countries.  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, Seychelles, South Africa) are given.  Consumptive use of turtles for shell and fat also occurs, but is apparently relatively less common.  For example, turtle shell products are reported in only a dozen Signatory States, and mostly at low levels.

*Direct harvest and domestic trade*

21.    Virtually all of the 29 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; and many (including Australia, France, Indonesia, Iran, Mozambique, Seychelles, South Africa, United Kingdom, United Republic of Tanzania) provide detailed descriptions of the provisions and penalties for infringement.  Notwithstanding the legislative provisions mentioned above, traditional consumption of turtle meat and/or eggs occurs in at least 24 (about 75 percent) of the Signatory States responding; and is reported to be "moderate to high" in about 40 percent of these (Tables 6 and 6a).  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 and Viet Nam are among the countries offering brief descriptions of the nature of this ongoing consumptive use.  Only Bahrain, Jordan, Malaysia, Pakistan, Saudi Arabia, Thailand, United Arab Emirates, United Kingdom and United States report no traditional harvest of turtles for meat.

*Management regimes*

22.    Nearly 85% 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.  Some protected areas have been established in Malaysia where egg collection is prohibited.  Harvesting of eggs and catching live turtles is banned from 13 selected islands in Maldives, which are monitored regularly to minimize intentional harvesting. In the Philippines' Turtle Islands, an administrative order provides for the conservation of a certain percentage of the eggs collected.  In Sri Lanka, former egg collectors are employed as turtle nest protectors at several beaches. 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. In United Republic of Tanzania, involvement of local communities in nest protection, monitoring, data collection and awareness-raising has played a key role in reducing threats to turtles.

23.    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.

Table 5

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

**Activity Report**

**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]**

## Relative Prevalence / Importance

Key: H = Highly prevalent/important; M = Moderately prevalent/important; L = Low prevalence/importance; NR = Not rated or * (unknown); (blank) = No prevalence/importance; NResp = No Response

| Country | Meat Consumption | Egg Consumption | Shell Products | Fat Consumption | Traditional Medicine | Eco-Tourism | Cultural Significance |
|---|---|---|---|---|---|---|---|
| Australia | NR | NR | | NR | | L | H |
| Bahrain | | | | | | | |
| Bangladesh | L | M | L | L | L | M | M |
| Cambodia | NR | | | | | | |
| Comoros | M | M | | L | | M | L |
| Eritrea | H | M | L | M | M | | H |
| France | M | | L | | | M | M |
| India | L | M | L | L | L | L | M |
| Indonesia | L | M | L | | NR | M | L |
| Islamic Republic of Iran | L | L | L | | M | L | |
| Jordan | | | | | L | | |
| Kenya | NR | NR | NR | NR | NR | NR | NR |
| Madagascar | M | M | L | | | | |
| Malaysia | | H | | | NR | M | |
| Maldives | H | H | | | | H | NResp |
| Mauritius | NR | NR | NR | NR | | | |
| Mozambique | H | H | M | L | NR | L | |
| Myanmar | NR | L | L | | | M | L |
| Oman | NR | NR | NR | | NR | H | H |
| Pakistan | | | | | | L | |
| Papua New Guinea | NResp | NResp | NResp | NResp | NResp | NResp | NResp |
| Philippines | M | M | L | | L | M | M |
| Saudi Arabia | | M | | | M | | |
| Seychelles | M | L | H | L | M | H | H |
| South Africa | L | | | L | | M | M |
| Sri Lanka | L | L | L | L | NR | L | |
| Thailand | | | | | | | |
| United Arab Emirates | | NResp | NResp | | | NResp | NResp |
| United Kingdom | | | | | | | |
| United Republic of Tanzania | NR | NR | NR | NR | NR | NR | NR |
| United States | | | | | | M | |
| Viet Nam | L | NR | NR | NR | NR | NR | L |
| Yemen | NResp | NResp | NResp | NResp | NResp | NResp | NResp |

Key: Highly prevalent / important — Moderately prevalent / important — Low prevalence / importance — Not rated or * unknown — No prevalence / importance — No Response

\* The economic use or cultural value occurs in this country, but its relative prevalence or importance has not been rated, or is unknown.

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

Table 6

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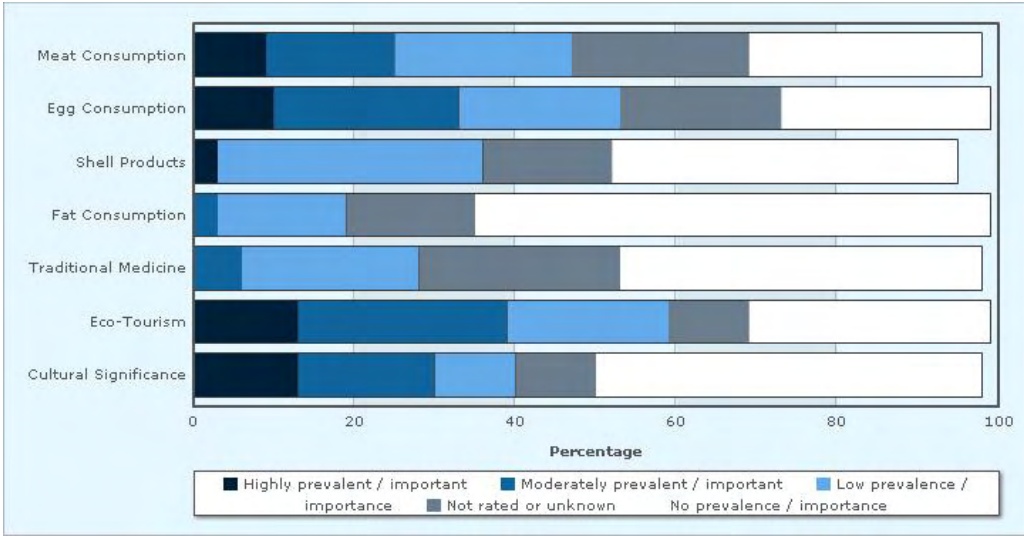
**Activity Report**

**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

| | Level of harvest | Impact of harvest |
|---|---|---|
| Australia | Unknown | Unknown |
| Bahrain | | |
| Bangladesh | Relatively Low | Relatively Low |
| Cambodia | Relatively Low | Relatively Low |
| Comoros | Moderate | Moderate |
| Eritrea | Moderate | Moderate |
| France | Moderate | Moderate |
| India | Relatively Low | Relatively Low |
| Indonesia | Moderate | Moderate |
| Islamic Republic of Iran | Moderate | Moderate |
| Jordan | | |
| Kenya | Moderate | Moderate |
| Madagascar | Moderate | Moderate |
| Malaysia | Unknown | Unknown |
| Maldives | Relatively High | Relatively High |
| Mauritius | Unknown | Unknown |
| Mozambique | Relatively High | Unknown |
| Myanmar | Relatively Low | Unknown |
| Oman | Relatively Low | Relatively Low |
| Pakistan | | |
| Papua New Guinea | Unknown | Unknown |
| Philippines | Moderate | Moderate |
| Saudi Arabia | Relatively Low | Relatively Low |
| Seychelles | Relatively High | Relatively High |
| South Africa | Relatively Low | Relatively Low |
| Sri Lanka | Relatively High | Relatively High |
| Thailand | Relatively Low | Relatively Low |
| United Arab Emirates | | |
| United Kingdom | | |
| United Republic of Tanzania | Moderate | Moderate |
| United States | | |
| Viet Nam | Relatively Low | Relatively Low |
| Yemen | Unknown | Unknown |

Key: Relatively High | Moderate | Relatively Low | Unknown | None | No Response

**Comparison of level of impact and level of harvest
in Signatory States responding to question**
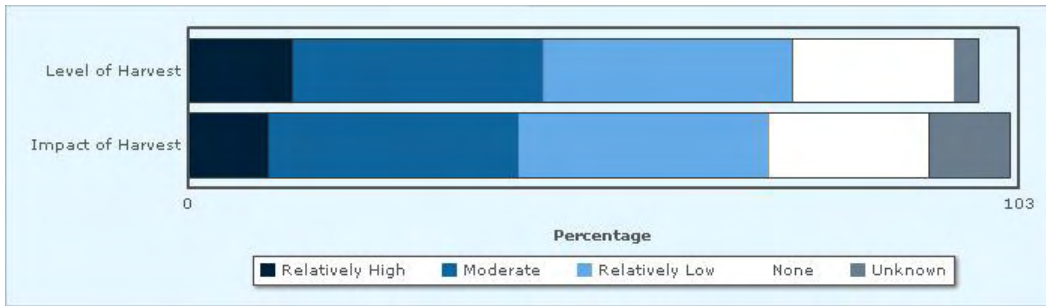
**1.6 Development of nesting beach management programmes**

**General tendency:** Some progress, but limited in scope
**Notable responses:** India, Philippines, Seychelles, South Africa, Sri Lanka, United Kingdom, Viet Nam

*Nesting beach management*

24.     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 (Table 7). Over 90 percent have monitoring programmes: Australia, Bangladesh, France, India, Iran, Kenya, Mozambique, Seychelles, South Africa, Sri Lanka, United Kingdom, and United Republic of 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, Mozambique, Pakistan, Philippines, Seychelles, South Africa and United Republic of Tanzania among those offering notable examples.  About two-thirds have regulations on the location and design of buildings and are working to reduce light pollution; however (with some exceptions) 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 comparable percentages (53 and 67 percent, respectively); and specific examples of predation problems and controls on vehicles are given.  Re-vegetation of frontal dunes is occurring in about 40% of the Signatories responding, with some examples provided by Australia, Bangladesh, France, India, Madagascar, Philippines, Seychelles, United States and Viet Nam.  Generally speaking, the national reports would be much more informative if the descriptions of particular activities were more thorough.

25.     As shown by the colour-coding scheme in Table 7a, the reporting template now provides scope for assessing the effectiveness these measures, if only subjectively, and many Signatories have begun to add these details.  These "self-assessments" may be of little practical value, but it does give Signatories an opportunity to identify and describe particularly effective programmes in their country; and also to draw attention to certain aspects in need of improvement or perhaps external assistance.  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 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*

26.     About two-thirds 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). This question 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.

Table 7

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

**Activity Report**

**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)

| | Monit'g | Educ'n | Egg Reloc'n | Pred. Control | Restrict Vehicle | Remove Debris | Dune Re-veg. | Building Reg'ns. | Light Red'n |
|---|---|---|---|---|---|---|---|---|---|
| Australia | | | | | | | | | |
| Bahrain | | | | | | | | | |
| Bangladesh | | | | | | | | | |
| Cambodia | | | | | | | | | |
| Comoros | | | | | | | | | |
| Eritrea | | | | | | | | | |
| France | | | | | | | | | |
| India | | | | | | | | | |
| Indonesia | | | | | | | | | |
| Islamic Republic of Iran | | | | | | | | | |
| Jordan | | | | | | | | | |
| Kenya | | | | | | | | | |
| Madagascar | | | | | | | | | |
| Malaysia | | | | | | | | | |
| Maldives | | | | | | | | | |
| Mauritius | | | | | | | | | |
| Mozambique | | | | | | | | | |
| Myanmar | | | | | | | | | |
| Oman | | | | | | | | | |
| Pakistan | | | | | | | | | |
| Papua New Guinea | | | | | | | | | |
| Philippines | | | | | | | | | |
| Saudi Arabia | | | | | | | | | |
| Seychelles | | | | | | | | | |
| South Africa | | | | | | | | | |
| Sri Lanka | | | | | | | | | |
| Thailand | | | | | | | | | |
| United Arab Emirates | | | | | | | | | |
| United Kingdom | | | | | | | | | |
| United Republic of Tanzania | | | | | | | | | |
| United States | | | | | | | | | |
| Viet Nam | | | | | | | | | |
| Yemen | | | | | | | | | |

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.)

| Key | Excellent | Good | Low | Not rated or unknown | Not applicable | No mitigation measure | No response |
|---|---|---|---|---|---|---|---|

**Relative Effectiveness of Mitigation Measures**
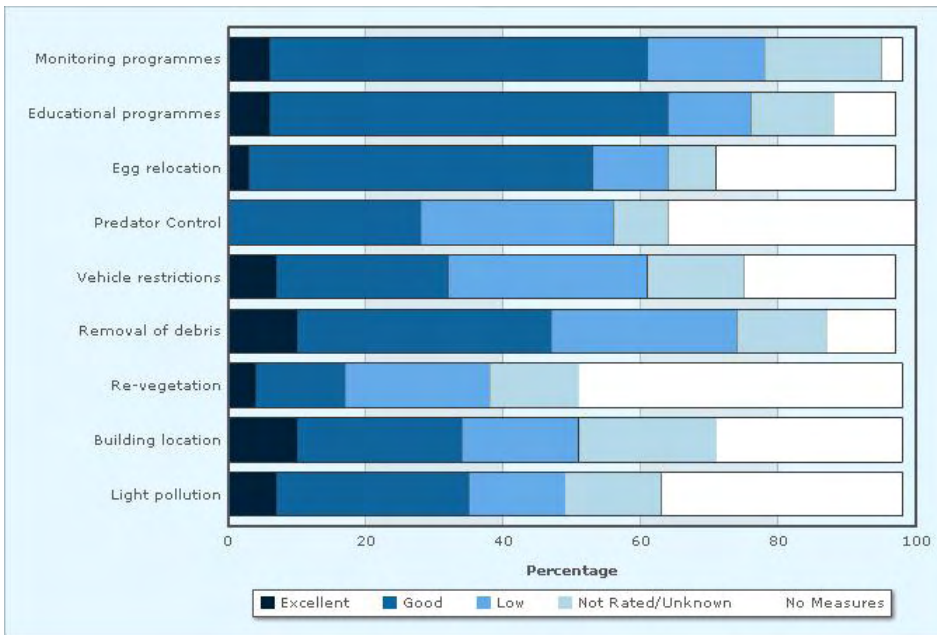
**OBJECTIVE II: PROTECTING, CONSERVING AND REHABILITATING MARINE TURTLE HABITATS**

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

**General tendency:** Some progress, but limited in scope
**Notable responses:** Australia, France, Viet Nam

*Critical habitats outside protected areas*

27.    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), little information is given to suggest that these habitats have been clearly identified.  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.  Other initiatives include community participation and awareness, alternative livelihoods, cash incentive and award schemes, eco-tourism and other monitoring activities (eg. Kenya, Sri Lanka, Viet Nam).  The level of detail in most of the responses is insufficient to assess what is actually being done, and this may be a reflection of the difficulty of achieving adequate protection outside of established areas.

*Coastal development impacts and mitigation*

28.    About two-thirds of the Signatory States responding carry out assessments, to varying degrees, of the environmental impact of marine and coastal development and other human activities.  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 in the framework of an Integrated Coastal Zone Management Project.  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 requires all touristic and other industrial scale developments to file environmental audit reports.  Similarly, Pakistan and Philippines have EIA requirements for major development projects in environmentally sensitive areas.   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.

29.    A similar percentage 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 and Tanzania, among others.  India, Indonesia, Myanmar and Saudi Arabia mention some monitoring done near turtle habitat (e.g. for marine debris, logs), but these actions appear to have been spatially/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. 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:** France, India, Indonesia, Philippines, South Africa

30. About two-thirds 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. France, India, Philippines and Seychelles, Sri Lanka and Viet Nam are among those countries providing detailed information on projects being implemented. Notably, the coral reefs in Eritrea, South Africa and United Kingdom are reported to be in near pristine condition, and not in need of rehabilitation.

31. Over 80% 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: India, Indonesia, Iran, Mauritius, Oman, Pakistan, Philippines, Saudi Arabia, and Viet Nam. The importance of these habitats to marine turtles is generally not mentioned. In contrast, less 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, Philippines, Thailand, and Viet Nam also mention efforts which in which they are involved, if only on a localised scale.

**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 (improvement since 2008)
**Notable responses:** Australia, France, Seychelles, United Kingdom

*Published literature*

32.    Almost all of the Signatory States cite literature relevant to marine turtle research and conservation in their country, ranging from peer-reviewed journals to reports and proceedings of workshops. Many of the lists are quite extensive (e.g. Australia, France, India, Indonesia, Kenya, Mozambique, and Seychelles), 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 should try to supplement their existing entries.

*Long-term monitoring*

33.    Most (well over 90%) of the Signatory States are reported to have long-monitoring programmes in place or planned for priority marine turtle populations, for which varying levels of detail are provided. Bahrain and Mauritius are 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, Mozambique, Oman, Saudi Arabia, Seychelles, South Africa, Sri Lanka, Thailand, United Arab Emirates, United Kingdom and United Republic of Tanzania fall into this category.  The programmes in Australia, France, Oman, and Seychelles are especially remarkable for their longevity.  There is good reason to believe that dedicated programmes in several other countries, which commenced in the last 5 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 mention, as appropriate, the species concerned and whether there have been any breaks in data collection.

*Genetic studies*

34.    Australia, France, India, Indonesia, Philippines, Seychelles, Thailand, United Kingdom, United States and Viet Nam all report having carried out or having participated in analyses to characterise the genetic identity of their marine turtle populations.  About a dozen more Signatories (Comoros, Islamic Republic of Iran, Kenya, Madagascar, Malaysia, Mozambique, Myanmar, Oman, South Africa, Sri Lanka, and United Republic of 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 Genetics Directory added to the IOSEA website in 2008.

*Tagging studies*

35.    Almost all Signatory States responding have employed tagging to try to identify migration routes. Most provide some details of this work including, in a few cases, information on tag recoveries and plans for future activities.  Exceptionally, India, Indonesia, Kenya, Seychelles, United Kingdom and United Republic of Tanzania present brief conclusions drawn from this work (Tanzania being especially informative).  The IOSEA reporting system offers an ideal platform for consolidating all information on regional 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*

36.     Over two-thirds of the Signatory States responding (a marked increase since 2008) have carried out satellite tracking studies, for the most part opportunistically.  It should be noted that the IOSEA Satellite Tracking Metadatabase (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 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.  Some respondents provide limited information on certain aspects of this work, such as species tracked, location, year, type of transmitter etc.  A few mention briefly the results obtained, publications arising from the work, and future planned activities. In general, though, 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. A basic template being developed for the Western Indian Ocean – Marine Turtle Task Force might help to standardise information requirements in this regard. 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.

*Population dynamics and survival rate studies*

37.     Just 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 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.

*Disease studies*

38.     Only about a third of the Signatory States responding 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 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*

39.     Almost three-quarters of the Signatory States reporting (a modest increase since 2008) 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).  Bangladesh, Eritrea, India, Kenya, Madagascar, Oman, Philippines, Saudi Arabia, Seychelles, Sri Lanka and Viet Nam are among those providing brief examples.  Australia, France, Pakistan, Sri Lanka and United Republic of 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:** Partial implementation, good progress (a further substantial improvement since 2008)
**Notable responses:** Australia, France, Jordan, Myanmar, Seychelles, South Africa, Thailand, United Republic of Tanzania, Viet Nam

*Regional or sub-regional action plans*

40.     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); 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, Maldives; SACEP's Marine Conservation and Protected Areas programme (mentioned by Bangladesh); a regional action plan being implemented under PERSGA, involving Jordan and 7 other countries; the Nairobi Convention/IOSEA Western Indian Ocean – Marine Turtle Task Force (mentioned by France, South Africa, United Kingdom); the 1996 IUCN Marine Turtle Conservation Strategy and Action Plan for the Western Indian Ocean (cited by France, Seychelles and United Republic of Tanzania); the South Western Indian Ocean Fisheries Project (SWIOFP) mentioned by France, Mauritius, and Tanzania; and the WIOLAB 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 Bycatch (IOTC/WPEB) was mentioned by France. The Islamic Republic of Iran, India, and Seychelles also mention bilateral arrangements in place or planned with neighbouring countries.  Other Signatories 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.

*Collaborative studies and monitoring*

41.     Signatory States were requested to identify collaborative studies and monitoring that have elicited *international* cooperation (as opposed to strictly *national or local* activities).  Almost 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 3.13 of the reports.  About three-quarters have reportedly undertaken collaborative studies on migration (often involving tagging and tag returns, and satellite tracking).  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 (a further, major improvement since 2008)
**Notable responses:** Australia, France, India, Indonesia, Seychelles, South Africa, Thailand

*Priority marine turtle populations*

42.     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.  **Green turtles** figure high on the list of 17 Signatories: Bahrain, Bangladesh,

Comoros, Eritrea, France, Indonesia, Islamic Republic of Iran, Jordan, Madagascar (southwest), Maldives, Mauritius, Pakistan, Philippines, Seychelles (some islands), United Arab Emirates, United Kingdom and United Republic of Tanzania.  **Hawksbill turtles** figure high in the list of 13 Signatories: Bahrain, Bangladesh, France, Islamic Republic of Iran, Jordan, Madagascar (northwest), Maldives, Seychelles (some islands), Sri Lanka, Thailand, United Arab Emirates, United Kingdom, and United Republic of 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*

43.    Over half of the Signatory States are reportedly reviewing research and monitoring results periodically and evaluating them for their efficacy; but only 6 or 7 provide additional information that suggests that these reviews occur regularly and may have led to programmatic changes.  For example, Australia, Indonesia, Jordan, South Africa, Thailand and United Arab Emirates 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.  A number of Signatory States provide somewhat informative responses, among them: Australia, Bahrain, Bangladesh, France, India, Indonesia, Malaysia, Maldives, Saudi Arabia, Seychelles, South Africa, United Arab Emirates, and United Republic of Tanzania, and United States.  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)
**Notable responses:** Australia, Comoros, France, Seychelles, South Africa, United States

### *Standardisation of data collection*

44.    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.  Comoros, Eritrea, France, India, Indonesia, Jordan, Kenya, Madagascar, Mauritius, Myanmar, Philippines, Saudi Arabia, Seychelles, South Africa, United Kingdom, United Republic of 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*

45.    Nearly three-quarters (20) of the Signatory States responding occasionally exchange scientific and technical information and expertise with other Range States.  Three – Australia, Comoros, France, 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.

46.    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 France, India, Philippines, Seychelles, South Africa and Thailand. 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.

47. 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. The responses of several 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)
**Notable responses:** Australia, France, Philippines, Seychelles

*Education and awareness materials*

48.     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, India, Indonesia, Kenya, Philippines, Seychelles, Sri Lanka, 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*

49.     Among the recognized target groups: students and local/fishing communities appear to have received the most attention (by about 80-90 percent of the Signatories reporting); followed by teachers and the media (about 70% of Signatories), tourists (64%), 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 about 40-45% of Signatories responding.  The limited focus of awareness and education campaigns on the fishing industry and indigenous groups (both about 30%) may be noteworthy.  Australia, France, Indonesia, Myanmar, Seychelles, South Africa and United Kingdom are among those providing interesting insights into their respective programmes.

*Community learning establishments*

50.     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 (diminished activity relative to 2008)
**Notable responses:** Australia, Philippines, South Africa, United Republic of Tanzania, Viet Nam

51.     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); general tourism activities (Kenya, Madagascar, Sri Lanka), wildlife watching (Pakistan); provision of soft loans (Philippines); artisan re-training and compensation (Seychelles); beach monitoring/nest protection (Malaysia, South Africa, United Republic of Tanzania), and handicraft skill development and credits for conversion to aquaculture, agricultural or forest activities (Viet Nam).  In general, it is difficult to assess the efficacy of the programmes mentioned or their potential for replication elsewhere from the limited information presented.

**4.3 Promotion of public participation**

**General tendency:** Some progress, but limited in scope
**Notable responses:** Australia, Kenya, Madagascar, Seychelles, Sri Lanka, Viet Nam

*Stakeholder involvement*

52.    Almost all 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.  Other particularly informative responses were provided by Bangladesh, France, India, Indonesia, Jordan, Kenya, Mozambique, Philippines, Seychelles, South Africa, and Sri Lanka.  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 (describing 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*

53.    Almost all 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: 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; creation of a national level network of turtle conservation groups in India, constituted of local and community-based coastal organisations;  establishment of a broad-based national sea turtle conservation group in Kenya, known as KESCOM; private sector turtle conservation activities in Maldives; Seychelles' encouragement of the private sector and coastal residents to become involved in conservation projects, including monitoring; South African parastatal, NGO and private sector involvement under the aegis of a new national turtle conservation policy; establishment of national turtle conservation steering committees in Bangladesh, Sri Lanka and United Republic of Tanzania; targeted government and corporate funding for conservation initiates by the United Kingdom; and collaboration among relevant Government agencies and NGOs, in Pakistan, Philippines, Viet Nam and United States.


**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, Indonesia, Seychelles

*Illegal international trade*

54.    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, 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; and 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, 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*

55.    Almost all 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 (Islamic Republic of Iran, Kenya, Philippines, United States), education and awareness programmes aimed at coastal communities (Eritrea, Pakistan, View Nam); training of law enforcement personnel (Sri Lanka); investigation of poaching reports (United States); monitoring of ports, airports and other areas where illegal trade may occur (Philippines); cooperation with other agencies, such as the customs service (Australia); and prosecution of cases and imposition of fines for violations (Indonesia, Mauritius, South Africa, United Republic of 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*

56.    Very few Signatory States (e.g. Australia, Comoros, Kenya, 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.  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:** Partial implementation, good progress (further improvement in reporting since 2008)
**Notable responses:** Australia, France, Indonesia, Jordan, Mauritius, Philippines, Saudi Arabia, Seychelles, South Africa, Sri Lanka, United Kingdom, United Republic of Tanzania

*Key management measures / national action plans*

57.    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.  Thirteen Signatory States (Australia, Comoros, Jordan, Kenya, Malaysia, Maldives, Myanmar, Saudi Arabia, Seychelles, Sri Lanka, United Kingdom, United States, and Viet Nam) already have national action plans in place (an increase of five since 2008).  At least seven other Signatories (Bangladesh, Eritrea, Indonesia, Pakistan, South Africa, Thailand, and possibly United Republic of Tanzania) are working towards national plans, many of which appear to be at an advanced stage of development or review.  Four Signatories (Bangladesh, India, Mauritius, Oman, Philippines) 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.  Six of the Signatories responding – Bahrain, Cambodia, France, Islamic Republic of Iran, Madagascar and United Arab Emirates – reportedly have no national plans; although France and Madagascar mention existing work that could constitute elements of an eventual plan.

58.    Overall, very good progress is being 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.

59.    Signatory States were requested to identify the conservation and management activities that they consider to be among the highest priorities for action. About 90 percent 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 times, noted in parentheses), the eight highest priorities identified by the Signatory States are: **conducting targeted studies on marine turtles and their habitats** (38); **establishing habitat protection and conservation measures** (28); **establishing or strengthening education and information programmes** (21); **capacity-building, training and partnerships** (18); **reducing incidental capture and mortality** (14); **identifying and documenting threats** (11); **enhancing cooperation, information exchange mechanisms** (10); and **enhancing public participation** (9). Many other programmes were mentioned, but with less frequency (Table 8).

60.    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 two Signatory States attached high priority to the development of alternative livelihoods (ranked 20th out of 24 overall), despite the obvious relevance of this area to the sustainability of marine turtle populations.

61.    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

62.    Almost all of the Signatory States responding list one or more local management issues for which they consider international cooperation necessary to some extent (Table 9). **Cooperative research** in several areas (e.g. habitat and genetics studies, tagging/satellite tracking, identification of turtle populations and migration routes) figured prominently, with approximately 25 Signatories rating international cooperation as "important or essential" in these areas. This was followed closely by **training/capacity building, illegal fishing in territorial waters**, **enforcement/patrolling of territorial waters**, and **development of gear technology**. There was not much to distinguish between several other important issues, which were identified with more or less equal frequency (e.g., hunting/harvest by neighbouring countries, poaching/illegal trade in turtle products, alternative livelihood development).

63.    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 United Kingdom have done), the findings could be the basis for a more informed discussion about priorities for international collaboration.

### 5.3 Enhancement of information exchange and cooperative management

**General tendency:** Very limited progress (but further improvement since 2008)
**Notable responses:** Australia, France, Philippines

### Other mechanisms for sub-regional cooperation

**Table 8. Signatory States' highest conservation and management priorities (ref. para. 113)**

| Programme (from the CMP) | No. | Signatory States attaching high priority to the programme |
|---|---|---|
| 3.1 Conduct targeted studies on marine turtles / habitats | 38 | Australia, Bangladesh x 2, Cambodia x 3, Eritrea, France, Indonesia, Islamic Republic of 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, United Arab Emirates x 4, United Kingdom x 2, Viet Nam |
| 2.1 Establish habitat protection/conservation measures | 28 | Australia x 4, Bangladesh, Cambodia x 2, Eritrea, France, Indonesia, Islamic Republic of Iran x 2, Kenya x 2, Madagascar x 2, Malaysia x2, Mauritius, Mozambique, Pakistan, Philippines x 3, Thailand, United Arab Emirates x2, Viet Nam |
| 4.1 Establish / strengthen education, information programmes | 21 | Bangladesh, Cambodia, Comoros, Eritrea, France, Indonesia, Jordan, Kenya, Madagascar, Mauritius, Mozambique, Myanmar, Pakistan, Philippines, Saudi Arabia, Seychelles, South Africa, United Arab Emirates, United Kingdom, United Republic of Tanzania , Viet Nam |
| 5.4 Capacity building, training, partnerships | 18 | Bangladesh, Cambodia, Comoros, Eritrea, France, Kenya, Mauritius, Mozambique, Myanmar, Oman, Pakistan, Philippines, Seychelles x 2, South Africa, Sri Lanka x 2, Viet Nam |
| 1.4 Reduce incidental capture and mortality | 14 | Australia, Eritrea, France, India, Kenya, Malaysia, Mozambique, Myanmar, Seychelles, South Africa, Thailand, United Kingdom, United Republic of Tanzania , Viet Nam |
| 1.1 Identify and document threats | 11 | France, Indonesia, Islamic Republic of Iran x 2, Mauritius, Mozambique, Myanmar, Oman, Philippines, United Arab Emirates, Viet Nam |
| 5.3 Enhance cooperation, information exchange mechanisms | 10 | Bangladesh, Comoros, France, Kenya, Mozambique, Myanmar x 2, Seychelles, Sri Lanka, United Arab Emirates |
| 4.3 Enhance public participation | 9 | Australia, Comoros, Eritrea, France, Mauritius, Mozambique, Myanmar, Seychelles, Thailand |
| 1.5 Prohibit direct harvest/ domestic trade, except for traditional use | 8 | Australia, Eritrea, France, Indonesia, Madagascar, Malaysia, x2, United Republic of Tanzania |
| 1.6 Develop nesting beach management programmes | 8 | Australia, Cambodia, Indonesia, Islamic Republic of Iran, Oman, Sri Lanka, United Kingdom, United Republic of Tanzania |
| 2.2 Rehabilitate degraded habitats | 8 | Australia, Cambodia, France, Indonesia, Jordan, Kenya, Myanmar, Seychelles |
| 6.3 Seek additional resources to support implementation | 8 | Comoros, Eritrea, France, Indonesia, Jordan, Mauritius, Mozambique, Seychelles |
| 1.2 Identify/apply best practices | 7 | Bangladesh, Comoros, Eritrea, Indonesia, Islamic Republic of Iran, Madagascar, Philippines |
| 1.3 Conduct studies to correct adverse incentives | 5 | Bangladesh, Madagascar, Myanmar, Oman, 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 |
| 3.2 Conduct collaborative research / monitoring | 5 | Australia, France, Oman, Philippines x 2 |
| 5.1 Cooperate to enforce trade regulations | 5 | Myanmar x 2, Philippines, Saudi Arabia, Seychelles |
| 3.3 Analyse/use data to improve conservation practices | 4 | France, Islamic Republic of Iran, Philippines x 2 |
| 4.2 Develop alternative livelihood opportunities | 2 | France, Philippines |
| 5.2 Develop/implement action plans | 2 | France, 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 |

Table 9

![Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding](header)

**Activity Report**

**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]**

**Importance of international cooperation in these issues**

| | Illegal Fishing | Incidental Capture | Patrol Waters | Hunting | Trade | Gear Technol | Pollution |
|---|---|---|---|---|---|---|---|
| Australia | | | | | | | |
| Bahrain | | | | | | | |
| Bangladesh | | | | | | | |
| Cambodia | | | | | | | |
| Comoros | | | | | | | |
| Eritrea | | | | | | | |
| France | | | | | | | |
| India | | | | | | | |
| Indonesia | | | | | | | |
| Islamic Republic of Iran | | | | | | | |
| Jordan | | | | | | | |
| Kenya | | | | | | | |
| Madagascar | | | | | | | |
| Malaysia | | | | | | | |
| Maldives | | | | | | | |
| Mauritius | | | | | | | |
| Mozambique | | | | | | | |
| Myanmar | | | | | | | |
| Oman | | | | | | | |
| Pakistan | | | | | | | |
| Papua New Guinea | | | | | | | |
| Philippines | | | | | | | |
| Saudi Arabia | | | | | | | |
| Seychelles | | | | | | | |
| South Africa | | | | | | | |
| Sri Lanka | | | | | | | |
| Thailand | | | | | | | |
| United Arab Emirates | | | | | | | |
| United Kingdom | | | | | | | |
| United Republic of Tanzania | | | | | | | |
| United States | | | | | | | |
| Viet Nam | | | | | | | |
| Yemen | | | | | | | |

| | Training | Livelihood dev'ment | Pop'n ID | Migration routes | Tagging satellite | Habitat studies | Genetic studies |
|---|---|---|---|---|---|---|---|
| Australia | Important | Essential | Important | Important | Important | Important | Essential |
| Bahrain | Limited Importance | Not Important | Limited Importance | Essential | Important | Limited Importance | Important |
| Bangladesh | Essential | Essential | Important | Important | Important | Essential | Essential |
| Cambodia | | | | | | Essential | No Response |
| Comoros | Essential | Essential | Essential | Essential | Essential | Essential | Essential |
| Eritrea | Essential | Essential | Limited Importance | Essential | Essential | Essential | Important |
| France | Essential | Essential | Important | Essential | Essential | Essential | Important |
| India | Essential | Essential | Essential | Essential | Essential | Essential | Essential |
| Indonesia | Essential | Important | Essential | Essential | Essential | Essential | Essential |
| Islamic Republic of Iran | Important | No Response | Essential | Essential | Essential | Essential | Essential |
| Jordan | Limited Importance | No Response | Important | Important | Important | Important | Important |
| Kenya | Essential | Essential | Essential | Essential | Essential | Essential | Essential |
| Madagascar | Important | Important | Important | Important | No Response | Essential | Important |
| Malaysia | Important | Important | Important | Important | Important | Essential | Important |
| Maldives | Essential | Important | Essential | Essential | Important | Essential | Limited Importance |
| Mauritius | Essential | Limited Importance | Essential | Essential | Essential | Essential | Essential |
| Mozambique | No Response | No Response | No Response | No Response | No Response | No Response | No Response |
| Myanmar | Important | Essential | Important | Important | Important | Important | Important |
| Oman | Important | Important | Essential | Important | Limited Importance | Important | Important |
| Pakistan | Essential | Important | Essential | Essential | Essential | Important | Essential |
| Papua New Guinea | No Response | No Response | No Response | No Response | No Response | No Response | No Response |
| Philippines | Important | Essential | Important | Important | Important | Essential | Essential |
| Saudi Arabia | Limited Importance | Not Important | Limited Importance | Essential | Limited Importance | Important | Important |
| Seychelles | Important | Important | Important | Essential | Important | Important | Important |
| South Africa | Essential | Limited Importance | Essential | Important | Essential | Essential | Essential |
| Sri Lanka | Important | Important | Important | Important | Important | Important | Important |
| Thailand | Essential | No Response | Important | Important | Important | Essential | Important |
| United Arab Emirates | Important | No Response | Not Important | Limited Importance | Limited Importance | Limited Importance | Important |
| United Kingdom | | | Essential | Essential | Important | Important | Essential |
| United Republic of Tanzania | Important | Important | Limited Importance | Important | Essential | Essential | Essential |
| United States | Important | Important | Important | Important | Limited Importance | Important | Important |
| Viet Nam | No Response | No Response | No Response | No Response | No Response | No Response | No Response |
| Yemen | No Response | No Response | No Response | No Response | No Response | No Response | No Response |

| Key | Essential | Important | Limited Importance | Not Important | No Response |
|---|---|---|---|---|---|

64.    Most 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: APEC (cited by United States); 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 France); 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); the Nairobi Convention/IOSEA Western Indian Ocean – Marine Turtle Task Force (cited by Eritrea, France, Mauritius, South Africa); the Pacific Regional Environment Programme (cited by Australia); PERSGA (cited by Bahrain, Eritrea); ROPME (cited by Bahrain, Islamic Republic of Iran, Jordan, Oman); SAARC (cited by India); SACEP (cited by Bangladesh); the Sulu-Sulawesi Marine Ecoregion initiative (cited by Indonesia); the Southwest Indian Ocean Fisheries Project (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, 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*

65.    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, 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 o 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; and South Africa is engaged with Mozambique in the creation of a transboundary park.  The United States mentions a bilateral arrangement outside of the IOSEA region.

*Regional Fishery Bodies*

66.    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 (virtually unchanged since 2006)
**Notable responses:** Australia, France, Seychelles, United States, Viet Nam

*Capacity-building and resource needs*

67.    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. South Africa mentions the importance of collaborating with scientists outside of the region to provide expertise that does not currently exist in-country. A number of respondents identify a need for equipment and infrastructure, such as patrol boats, 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.

68. In general, Eritrea, France, Mozambique, Myanmar and Philippines 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.

*Training*

69. Most of the Signatory States responding have carried out some training in marine turtle conservation and management techniques. Australia, Eritrea, France, India, Myanmar, Seychelles, Viet Nam and United States 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. In general, 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*

70. Over three-quarters of the Signatory States responding (a higher proportion than 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, France, India, Indonesia, Jordan, Kenya, Myanmar, Oman, Seychelles, and South Africa, Viet Nam, and United States are also among those providing brief explanations of specific partnerships. 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 (major improvement in reporting since 2008)
**Notable responses:** Australia, France, Islamic Republic of Iran, Philippines, Seychelles, South Africa

*Effectiveness of national policies and laws*

71. 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 notes the difficulty in quantifying effectiveness due to the lack of information on status of different populations, but 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, Sri Lanka), but enforcement in many countries is

problematic on account of limited resources. Bangladesh, Comoros, Indonesia, Kenya are among those reporting resource limitations affecting implementation or enforcement. In the Islamic Republic of Iran, a lack of equipment and staff, and the large number of sites to control pose logistical challenges. 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 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. United Republic of 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

72.    About two-thirds 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, United Kingdom). France provides 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

73.    Ten 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; differences in legal specifications of fishing mesh sizes (Kenya);  variable cross-border cooperation and enforcement, depending on the issue and boundary (Malaysia); general cooperation and collaboration issues (Myanmar); enforcement of environmental laws at community level in some areas (Oman); identifying effective communication channels with neighbouring countries (South Africa); and lack of standardized guidelines for the management of hatcheries (View 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 (but diminished activity relative to 2008)
**Notable responses:** Australia, France, Indonesia, Kenya, United Kingdom, United States

### Broadening MoU membership

74.    Notwithstanding the interest that Signatory States have in soliciting their neighbours to join and participate actively in the implementation of the Memorandum of Understanding, fewer than a dozen Signatories (Australia, Bahrain, Bangladesh, Eritrea, France, Indonesia, Philippines, Saudi Arabia, United Kingdom, United States and Viet Nam) are reported to have recently encouraged, or to have plans to encourage, other States to sign the agreement. 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 (e.g.

China, Japan, Republic of Korea) of importance to marine turtle conservation in the region remain outside the agreement and might be actively encouraged to consider involvement.

*Amending the Memorandum of Understanding*

75.    Ten Signatory States (36 percent) indicated they are currently favourable to amending the MoU to make it a legally-binding instrument; while and identical percentage was not in favour, and eight had no view.  These results are similar to findings made in 2008.  Only 13 Signatories voiced 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: 9 (27 percent) were in favour, 4 (12 percent) opposed and 12 (36 percent) had no view.  A few Signatories offer brief explanations for their current positions.

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

**General tendency:** Very limited progress (but substantial improvement since 2008)
**Notable responses:** Australia, South Africa, United Kingdom, United States

76.    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, Mauritius, Myanmar, Oman, and Thailand) have also made important contributions since 2008. Australia documents its contributions in detail.  The United States indicated 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.  Bangladesh, Myanmar and Viet Nam describe mitigating circumstances.  It should be noted that this is the only question in the reporting template where the rating took account of information available to the Secretariat that was not necessarily mentioned in the national report.

**6.3 Resources for domestic implementation**

**General tendency**: Very limited progress
**Notable responses**: Australia, France, Indonesia, Philippines

77.    About 18 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*

78.    About three-quarters 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. 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 France/Mayotte has done) so that lessons might be learned from these experiences.

*Use of economic instruments*

79.    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. Few details are provided, but promotion of eco-tourism is cited as common theme.  Examples include: eco-certification of tourism operations in the Great Barrier Reef Marine Park (Australia); turtle and nest adoption programmes (Kenya); revenue-generating eco-tourism activities (Comoros, Madagascar, Oman, Pakistan, Philippines, Viet Nam); soft loans to affected families (Philippines), and promotion of alternative livelihoods, such as aquaculture (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)

*Lead and supporting agencies*

80.    Most of the Signatory States responding have designated a lead agency responsible for coordinating national marine turtle conservation and management policy.  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 a handful of Signatory States (e.g. France, Indonesia, Jordan, Maldives, Mozambique, Saudi Arabia, and South Africa) acknowledged 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*

81.    Less than a third of the Signatories report having conducted a review of the roles and responsibilities of government agencies, and few details are provided.  Of the 70 percent that had not conducted or completed such a review, several reported that it was contemplated (e.g. Madagascar, Myanmar, Seychelles, South Africa, Thailand); while a few indicated that there was no need for further review apparently because the mandates were already clear (e.g. France, India, Indonesia, Pakistan, United Kingdom, and United States).

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

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

Column headers (Programme vs. Signatory States):

Australia, Bahrain, Bangladesh, Cambodia, Comoros, 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, Thailand, United Arab Emirates, United Kingdom, United Rep. Tanzania, United States, Viet Nam, Yemen, Overall Programme Average

| Programme | Overall Programme Average | Grouping |
|---|---|---|
| 1.1 Overview given of species, habitats, achievements, challenges | 75 | REDUCE MORTALITY |
| 1.2 Best practices identified / applied to minimize threats | 54 | |
| 1.3 Studies conducted to correct adverse incentives | 46 | |
| 1.4 Fisheries interactions identified Incidental capture/mortality reduced | 39 | |
| 1.5 Turtle uses & values identified; legislation / management in place | 58 | |
| 1.6 Nesting beach management programmes developed | 46 | |
| 2.1 Habitat protected / monitored | 39 | CONSERVE HABITAT |
| 2.2 Degraded habitats rehabilitated | 44 | |
| 3.1 Basic species and habitat-related studies conducted | 44 | CONDUCT RESEARCH |
| 3.2 Collaborative research and monitoring conducted | 50 | |
| 3.3 Research results applied; management priorities identified | 54 | |
| 3.4 Data collection standardised/ information exchanged | 42 | |
| 4.1 Education, information programmes implemented | 45 | ENHANCE AWARENESS / PARTICIPATION |
| 4.2 Alternative livelihood opportunities developed | 36 | |
| 4.3 Public / private sector involvement encouraged | 38 | |
| 5.1 Trade regulations cooperatively enforced | 34 | ENHANCE INTERNATIONAL COOPERATION |
| 5.2 Mgmt. issues identified; national actions prioritised | 50 | |
| 5.3 Cooperative mgmt. and information exchange enhanced | 26 | |
| 5.4 Capacity building / training strengthened | 46 | |
| 5.5 Legislation reviewed; enforcement strengthened | 44 | |
| 6.1 New members solicited; MoU status considered | 51 | PROMOTE IMPLEMENTATION |
| 6.2 Secretariat / Advisory Committee supported | 25 | |
| 6.3 Resources sought for domestic implementation | 30 | |
| 6.4 Government coordination / cooperation improved | 54 | |
| OVERALL AVERAGE: Signatory State | 45 | |

Legend:

- 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

## EVALUATION MATRIX: Western Indian Ocean, as at 23 December 2011

| 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 | | | | | | | | | | | 93 |
| 1.2 Best practices identified / applied to minimize threats | | | | | | | | | | | 65 |
| 1.3 Studies conducted to correct adverse incentives | | | | | | | | | | | 58 |
| 1.4 Fisheries interactions identified Incidental capture/mortality reduced | | | | | | | | | | | 43 |
| 1.5 Turtle uses & values identified; legislation / management in place | | | | | | | | | | | 67 |
| 1.6 Nesting beach management programmes developed | | | | | | | | | | | 50 |
| 2.1 Habitat protected / monitored | | | | | | | | | | | 45 |
| 2.2 Degraded habitats rehabilitated | | | | | | | | | | | 53 |
| 3.1 Basic species and habitat-related studies conducted | | | | | | | | | | | 55 |
| 3.2 Collaborative research and monitoring conducted | | | | | | | | | | | 61 |
| 3.3 Research results applied; management priorities identified | | | | | | | | | | | 60 |
| 3.4 Data collection standardised/ information exchanged | | | | | | | | | | | 55 |
| 4.1 Education, information programmes implemented | | | | | | | | | | | 48 |
| 4.2 Alternative livelihood opportunities developed | | | | | | | | | | | 45 |
| 4.3 Public / private sector involvement encouraged | | | | | | | | | | | 45 |
| 5.1 Trade regulations cooperatively enforced | | | | | | | | | | | 37 |
| 5.2 Mgmt. issues identified; national actions prioritised | | | | | | | | | | | 60 |
| 5.3 Cooperative mgmt. and information exchange enhanced | | | | | | | | | | | 28 |
| 5.4 Capacity building / training strengthened | | | | | | | | | | | 53 |
| 5.5 Legislation reviewed; enforcement strengthened | | | | | | | | | | | 48 |
| 6.1 New members solicited; MoU status considered | | | | | | | | | | | 51 |
| 6.2 Secretariat / Advisory Committee supported | | | | | | | | | | | 33 |
| 6.3 Resources sought for domestic implementation | | | | | | | | | | | 34 |
| 6.4 Government coordination / cooperation improved | | | | | | | | | | | 63 |
| OVERALL AVERAGE: Signatory State | | | | | | | | | | | 52 |

Programme groupings:
- REDUCE MORTALITY (1.1–1.6)
- CONSERVE HABITAT (2.1–2.2)
- CONDUCT RESEARCH (3.1–3.4)
- ENHANCE AWARENESS / PARTICIPATION (4.1–4.3)
- ENHANCE INTERNATIONAL COOPERATION (5.1–5.5)
- PROMOTE IMPLEMENTATION (6.1–6.4)

Legend:
- 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

## EVALUATION MATRIX: Northern Indian Ocean, as at 23 December 2011

| Programme | Bangladesh | India | Maldives | Pakistan | Sri Lanka | Overall Programme Average | |
|---|---|---|---|---|---|---|---|
| 1.1 Overview given of species, habitats, achievements, challenges | | | | | | 80 | REDUCE MORTALITY |
| 1.2 Best practices identified / applied to minimize threats | | | | | | 55 | |
| 1.3 Studies conducted to correct adverse incentives | | | | | | 48 | |
| 1.4 Fisheries interactions identified Incidental capture/mortality reduced | | | | | | 37 | |
| 1.5 Turtle uses & values identified; legislation / management in place | | | | | | 58 | |
| 1.6 Nesting beach management programmes developed | | | | | | 53 | |
| 2.1 Habitat protected / monitored | | | | | | 38 | CONSERVE HABITAT |
| 2.2 Degraded habitats rehabilitated | | | | | | 45 | |
| 3.1 Basic species and habitat-related studies conducted | | | | | | 44 | CONDUCT RESEARCH |
| 3.2 Collaborative research and monitoring conducted | | | | | | 35 | |
| 3.3 Research results applied; management priorities identified | | | | | | 60 | |
| 3.4 Data collection standardised/ information exchanged | | | | | | 28 | |
| 4.1 Education, information programmes implemented | | | | | | 52 | ENHANCE AWARENESS / PARTICIPATION |
| 4.2 Alternative livelihood opportunities developed | | | | | | 45 | |
| 4.3 Public / private sector involvement encouraged | | | | | | 53 | |
| 5.1 Trade regulations cooperatively enforced | | | | | | 32 | ENHANCE INTERNATIONAL COOPERATION |
| 5.2 Mgmt. issues identified; national actions prioritised | | | | | | 45 | |
| 5.3 Cooperative mgmt. and information exchange enhanced | | | | | | 22 | |
| 5.4 Capacity building / training strengthened | | | | | | 47 | |
| 5.5 Legislation reviewed; enforcement strengthened | | | | | | 55 | |
| 6.1 New members solicited; MoU status considered | | | | | | 53 | PROMOTE IMPLEMENT-ATION |
| 6.2 Secretariat / Advisory Committee supported | | | | | | 15 | |
| 6.3 Resources sought for domestic implementation | | | | | | 33 | |
| 6.4 Government coordination / cooperation improved | | | | | | 58 | |
| OVERALL AVERAGE: Signatory State | | | | | | 45 | |

Legend:
- No information or no progress reported
- Very limited progress
- Some progress, but limited in scope
- Partial implement-ation, 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

## EVALUATION MATRIX: South-East Asia+ , as at 23 December 2011

| 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 | | | | | | | | | | | 63 | REDUCE MORTALITY |
| 1.2 Best practices identified / applied to minimize threats | | | | | | | | | | | 55 | |
| 1.3 Studies conducted to correct adverse incentives | | | | | | | | | | | 40 | |
| 1.4 Fisheries interactions identified Incidental capture/mortality reduced | | | | | | | | | | | 41 | |
| 1.5 Turtle uses & values identified; legislation / management in place | | | | | | | | | | | 56 | |
| 1.6 Nesting beach management programmes developed | | | | | | | | | | | 46 | |
| 2.1 Habitat protected / monitored | | | | | | | | | | | 39 | CONSERVE HABITAT |
| 2.2 Degraded habitats rehabilitated | | | | | | | | | | | 39 | |
| 3.1 Basic species and habitat-related studies conducted | | | | | | | | | | | 47 | CONDUCT RESEARCH |
| 3.2 Collaborative research and monitoring conducted | | | | | | | | | | | 60 | |
| 3.3 Research results applied; management priorities identified | | | | | | | | | | | 53 | |
| 3.4 Data collection standardised/ information exchanged | | | | | | | | | | | 43 | |
| 4.1 Education, information programmes implemented | | | | | | | | | | | 48 | ENHANCE AWARENESS / PARTICIPATION |
| 4.2 Alternative livelihood opportunities developed | | | | | | | | | | | 28 | |
| 4.3 Public / private sector involvement encouraged | | | | | | | | | | | 35 | |
| 5.1 Trade regulations cooperatively enforced | | | | | | | | | | | 40 | ENHANCE INTERNATIONAL COOPERATION |
| 5.2 Mgmt. issues identified; national actions prioritised | | | | | | | | | | | 53 | |
| 5.3 Cooperative mgmt. and information exchange enhanced | | | | | | | | | | | 34 | |
| 5.4 Capacity building / training strengthened | | | | | | | | | | | 52 | |
| 5.5 Legislation reviewed; enforcement strengthened | | | | | | | | | | | 42 | |
| 6.1 New members solicited; MoU status considered | | | | | | | | | | | 53 | PROMOTE IMPLEMENTATION |
| 6.2 Secretariat / Advisory Committee supported | | | | | | | | | | | 35 | |
| 6.3 Resources sought for domestic implementation | | | | | | | | | | | 36 | |
| 6.4 Government coordination / cooperation improved | | | | | | | | | | | 58 | |
| OVERALL AVERAGE: Signatory State | | | | | | | | | | | 46 | |

Legend:
- No information or no progress reported
- Very limited progress
- Some progress, but limited in scope
- Partial implement-ation, 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

## EVALUATION MATRIX: Northwest Indian Ocean, as at 23 December 2011

| Programme | Bahrain | Eritrea | Islamic Rep. of Iran | Jordan | Oman | Saudi Arabia | United Arab Emirates | Yemen | Overall Programme Average | Category |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.1 Overview given of species, habitats, achievements, challenges | | | | | | | | | 66 | REDUCE MORTALITY |
| 1.2 Best practices identified / applied to minimize threats | | | | | | | | | 38 | |
| 1.3 Studies conducted to correct adverse incentives | | | | | | | | | 39 | |
| 1.4 Fisheries interactions identified Incidental capture/mortality reduced | | | | | | | | | 32 | |
| 1.5 Turtle uses & values identified; legislation / management in place | | | | | | | | | 51 | |
| 1.6 Nesting beach management programmes developed | | | | | | | | | 38 | |
| 2.1 Habitat protected / monitored | | | | | | | | | 30 | CONSERVE HABITAT |
| 2.2 Degraded habitats rehabilitated | | | | | | | | | 38 | |
| 3.1 Basic species and habitat-related studies conducted | | | | | | | | | 27 | CONDUCT RESEARCH |
| 3.2 Collaborative research and monitoring conducted | | | | | | | | | 33 | |
| 3.3 Research results applied; management priorities identified | | | | | | | | | 44 | |
| 3.4 Data collection standardised/ information exchanged | | | | | | | | | 34 | |
| 4.1 Education, information programmes implemented | | | | | | | | | 35 | ENHANCE AWARENESS / PARTICIPATION |
| 4.2 Alternative livelihood opportunities developed | | | | | | | | | 31 | |
| 4.3 Public / private sector involvement encouraged | | | | | | | | | 22 | |
| 5.1 Trade regulations cooperatively enforced | | | | | | | | | 26 | ENHANCE INTERNATIONAL COOPERATION |
| 5.2 Mgmt. issues identified; national actions prioritised | | | | | | | | | 38 | |
| 5.3 Cooperative mgmt. and information exchange enhanced | | | | | | | | | 17 | |
| 5.4 Capacity building / training strengthened | | | | | | | | | 29 | |
| 5.5 Legislation reviewed; enforcement strengthened | | | | | | | | | 34 | |
| 6.1 New members solicited; MoU status considered | | | | | | | | | 46 | PROMOTE IMPLEMENTATION |
| 6.2 Secretariat / Advisory Committee supported | | | | | | | | | 9 | |
| 6.3 Resources sought for domestic implementation | | | | | | | | | 16 | |
| 6.4 Government coordination / cooperation improved | | | | | | | | | 38 | |
| OVERALL AVERAGE: Signatory State | | | | | | | | | 34 | |

Legend:
- No information or no progress reported
- Very limited progress
- Some progress, but limited in scope
- Partial implement-ation, 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

## IOSEA Administrative Console

### EVALUATION MATRIX: ALL SIGNATORY STATES, as at 31 JULY 2008

Countries (columns): 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

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

Legend:
- 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

# Evaluation Matrix: All Signatory States, March 2006

Columns (left to right): 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

| Programme | Overall |
|---|---|
| 1.1 Threats identified and documented | 0.38 |
| 1.2 Best practices identified/applied to minimize threats | 0.50 |
| 1.3 Studies conducted to correct adverse incentives | 0.41 |
| 1.4 Incidental capture and mortality reduced | 0.20 |
| 1.5 Direct harvest and domestic trade prohibited | 0.38 |
| 1.6 Nesting beach management programmes developed | 0.41 |
| 2.1 Habitat protection/conservation measures established | 0.34 |
| 2.2 Degraded habitats rehabilitated | 0.36 |
| 3.1 Targeted marine turtle and habitat studies conducted | 0.30 |
| 3.2 Collaborative research/monitoring conducted | 0.24 |
| 3.3 Data analysed/used to improve conservation | 0.28 |
| 3.4 Data collection standardised/information exchanged | 0.29 |
| 4.1 Education, information programmes established | 0.40 |
| 4.2 Alternative livelihood opportunities developed | 0.36 |
| 4.3 Public participation | 0.34 |
| 5.1 Cooperative enforcement of trade regulations | 0.28 |
| 5.2 Action plans developed/implemented | 0.34 |
| 5.3 Cooperative mgmt. and info. exchange enhanced | 0.19 |
| 5.4 Capacity building/training strengthened | 0.37 |
| 5.5 Legislation reviewed/enforcement strengthened | 0.26 |
| 6.1 Efforts undertaken to broaden MoU membership | 0.38 |
| 6.2 Secretariat/Advisory Committee supported | 0.13 |
| 6.3 Resources for implementation sought | 0.24 |
| 6.4 Government coordination/cooperation improved | 0.41 |

Legend:
- 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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