Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia

Distr. GENERAL

MT-IOSEA/SS.5/Doc. 6
Agenda item 7a

29 December 2011

SIXTH MEETING OF THE SIGNATORY STATES
Bangkok, Thailand, 23-27 January 2012

OVERVIEW OF IOSEA MOU IMPLEMENTATION

SYNTHESIS OF NATIONAL REPORTS AS AT 23 DECEMBER 2011

Introduction

Signatory States to the *Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia* are encouraged to submit an annual report describing their implementation of the Memorandum. A standard reporting template and an Online Reporting Facility were developed to enable Signatory States to submit their reports through the internet and to revise them at their convenience, whenever new information comes to light.

The present document builds on the comprehensive analyses prepared in 2006 and 2008 of the measures put in place by Governments to conserve marine turtles and their habitats of the Indian Ocean and South-East Asia region. Almost all of the 33 IOSEA Signatory States have supplied information to contribute to the analysis. Though these reports are not all complete, and the quality of the information provided varies from one country to another, one can nevertheless gain a fairly broad understanding of strengths and weaknesses in reporting and implementation across this vast region.

The inherent value of such a detailed analysis is that it allows one to go well beyond the typical exercise of reporting, simply for the sake of reporting. It sets a benchmark against which to measure future progress. It points to areas in which little progress in implementation has been made and where more attention may need to be focussed, in a prioritised manner. Equally important, it describes exemplary practices that might be extended and replicated in other countries, given the necessary resources and appropriate circumstances. The report also fulfils a basic need to exchange information on what has been and is being done in a number of areas, hopefully with a view to avoiding unnecessary duplication of effort.

Above all, this document aims to move beyond merely reporting activities (*outputs*), and instead to focus more attention on the results (*outcomes*) of any interventions made. This requires a detailed line of questioning, for it is only with exhaustive probing that one can assess the real efficacy of the efforts that are being undertaken. In the end, managers will be judged not only on the actions they have taken, but on whether or not these actions have made a real difference to the long-term survival of marine turtles and the habitats on which they depend.

The conservation and management of marine turtles is clearly not only within the realm of governmental responsibility. Indeed, much of the work on the ground is being conducted by countless nongovernmental organisations scattered across the region. While these efforts are captured, to some extent, in some of the national reports there is likely a considerable volume of important activity that is not adequately reflected in this reporting process. To partially compensate for this deficiency, the IOSEA Projects Database, which can be viewed through the IOSEA website (www.ioseaturtles.org) contains a wealth of information on well over 100 projects carried out in about 30 countries of the IOSEA region. While no attempt has been made to integrate the project information, from both non-governmental and governmental sources, in this report, even a cursory review of the database gives a clear impression of the scope of these other activities. Over time, it is hoped that the IOSEA Marine Turtle MoU will serve as a vehicle for better integration of all of these valuable efforts.

The current reporting template is identical to the one used in 2008. Retaining the same basic template facilitates comparison of results from one reporting period to the next. The major subdivisions of the Conservation and Management Plan (i.e. the six main objectives and 24 programmes) have been used to structure the discussion in the following analysis. As in previous meetings, colour-coded matrices have been prepared to illustrate implementation progress in an easily recognizable visual format.

The present paper is divided into three sections. Following the Executive Summary, Part I summarizes the main findings. Part II provides more substantial background information from which the conclusions were drawn. An index of common keywords is provided to make it easier to navigate this part of the document and to locate issues of particular interest. Part III describes the methodology used, including the detailed scoring criteria.

Action requested: Signatory States are invited to make use of this document to identify those conservation and management issues that require more in-depth discussion at the meeting and, thereafter collective follow-up action. It is expected that most of the discussion will focus on Part I, which includes suggestions for improvement of reporting, as well as questions and recommendations for consideration by Signatory States.

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Executive Summary

1. Since the Sixth Meeting of the Signatory States, the membership of the IOSEA Marine Turtle MoU has grown by six countries, bringing the total number of member States to 33. Only a few countries with significant coastlines in the IOSEA region have yet to come aboard.

2. The quality of national reporting varies considerably across the Signatory States, with a handful of members reporting extensively and in considerable detail, while others provide less comprehensive information. However, the gap is narrowing and at least some information is available for all Signatory States except Papua New Guinea and Yemen, which have yet to submit full national reports. In terms of overall implementation, the predominant picture that emerges is that of some progress, albeit limited in scope, across the whole spectrum of the IOSEA Conservation and Management Plan (CMP). The colour-coded matrix at Annex 1 gives a visual representation of the extent of this progress for the collective membership[1].

3. Comparing the results for 2011 and 2008, improvements in implementation/reporting are observed in 13 of the 24 programmes of the IOSEA CMP. Comparing the results for individual member States, 22 of the 27 Signatories (as of 2008) have improved in their implementation/reporting of the CMP – very substantially so, in 14 cases. Overall performance across all 33 Signatory States has improved somewhat (about 12%), but less than might be expected. This can be attributed in large measure to the fact that many of the recent Signatories have yet to complete full reports. If it were not for this temporary situation, the overall programme average would likely have been much higher, compared to 2008.

4. 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 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, which can probably attributed to much improved reporting of activities by a couple of its members. In contrast South-East Asia+ 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 saw one of the biggest improvements (at least in terms of reporting) since 2008.

5. Most Signatory States now provide very good introductions to their national reports, describing the marine turtle species they harbour, as well as some of the challenges facing their conservation. After all, it is the turtles that connect the diverse countries that participate in IOSEA. Many countries reportedly attach greatest importance to the conservation of green and hawksbill turtles, while less common species – such as the leatherback, olive ridley and loggerhead – figure high in the priorities of a more select group of Signatory States.

6. Signatories have done well to describe "best practice" approaches they have undertaken to reduce threats to marine turtles and their habitats; to document a range of socio-economic studies examining the relationship between resource users and the turtle populations with which they interact; and to put in place measures to counteract adverse economic incentives that contribute to turtle mortality. Some have undertaken initiatives to identify and facilitate a range of alternative livelihoods, though these have not been described in sufficient detail to assess their efficacy.

7. Substantial advances have been made in the reporting of fisheries potentially interacting with turtles, notably shrimp trawls, set gill nets and longlines, as well as measures aimed at reducing incidental capture and mortality. Most Signatories have undertaken interesting research and development activities in support of bycatch reduction, though much of this appears to have been done without a wider regional perspective in mind. Signatories have made a start at identifying illegal fishing

[1] It should be noted that the following analysis does not refer the substantial body of information contained in the IOSEA Online Reporting Facility pertaining to species, habitats, threats and mitigation measures. These site-based data are reviewed separately in document MT-IOSEA/SS.6/Doc. 6.1.

practices that impact turtles, ranging from illegal direct take to use of prohibited gear and destructive fishing methods.

8. The reports of Signatories paint a collective picture of the important economic uses of marine turtles, the most prevalent being meat consumption, followed by eco-tourism benefits, egg consumption, and cultural/traditional significance. Virtually all countries have enacted legislation to prohibit direct harvest and domestic trade in turtles and derivatives, though many are faced with the conundrum that traditional consumption of meat and eggs still occurs.

9. Almost all of the Signatory States have a suite of measures in place to minimise or reduce the mortality of eggs, hatchlings and nesting females, including monitoring programmes, extensive education/awareness activities, and debris removal and beach clean-up.

10. Most Signatories have undertaken research and monitoring of turtle populations (some boasting programmes of several decades), with impressive advances made in recent years in flipper tagging and satellite tracking to help elucidate migration routes; as well as characterisation of the genetic identity of turtle populations. Some of this work is reflected in extensive lists of literature, ranging from peer-reviewed journals, internal reports and workshop proceedings.

11. Very good progress has been made to prioritise national conservation and management activities, and also to identify issues for which international cooperation is considered essential. At least a dozen Signatory States have prepared national action plans and many others are working towards this goal. Many offer candid insights into the effectiveness or otherwise of national policies and laws.

12. Though there is certain to be under-reporting of actual progress in each of the programmes of the IOSEA Conservation and Management Plan, weaknesses in implementation likely exist as well. Gaps remain in several crucial programmes. Though considerably improved, better documentation, implementation and coordination of measures to reduce incidental capture and mortality is needed – including more experimentation with appropriate combinations of hook design, bait, gear specification and fishing practices.

13. Only a few Signatory States appear to have measures in place to protect critical habitat outside of established protected areas and little information is given to suggest that these habitats have so far been clearly identified. Less than half of the Signatories are engaged in sea grass habitat monitoring and recovery. All sub-regions would benefit from more cooperative management actions, standardisation/harmonisation of data collection and a more systematic exchange of technical information among Signatory States.

14. Most Signatories have yet to adequately articulate resource needs and mobilise resources both for domestic implementation and for overall coordination. Adequate funding for domestic turtle conservation programmes and IOSEA institutional funding remains an important challenge, but here too, important advances have been made since 2008 – with more countries sharing in the operational costs alongside traditional donors whose voluntary contributions have sustained IOSEA since its inception.

15. Finally, a common thread running through all of the programmes of the CMP is the need to strengthen cooperation among Signatory States which, of course, is the raison d'être of the IOSEA Memorandum of Understanding.

Part I: Summary of main findings, suggestions for improvement of reporting, questions/recommendations for consideration by Signatory States

Summary of main findings, by objective	Paragraph references in Part II	Suggestions for improvement of reporting	Questions/recommendations for consideration by SS
Objective I: Reducing direct and indirect causes of marine turtle mortality ***Exemplary approaches / protocols*** 1. Some noteworthy approaches for minimising threats to marine turtles and their habitats include: Australia's comprehensive national Recovery Plan, its broad partnership with Indigenous communities, as well as wide-ranging research and conservation projects; 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 on La Réunion and 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), 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; Tanzania's incentive-based approaches to monitoring and conservation; and the United States' standardised nesting and foraging area monitoring protocols, and ground-breaking work in the areas of mitigation of light pollution and bycatch reduction.	2		The Signatory States mentioned and others with exemplary approaches to share might consider writing up more detailed descriptions of 1-2 pages each, which could be compiled into a single collective volume.
Socio-economic studies 2. About two-thirds of the Signatory States[2] report on socio-economic studies or activities that have been conducted among communities that interact with marine turtles and their habitats. Among them: development of community-driven approaches to turtle	3		With cooperation from Signatory States, an effort should be made to compile

[2] Note: In Part I, all references to the "Signatory States" means the Signatory States that actually responded to a particular question, unless noted otherwise.

management in Australia; studies of turtle consumption/use in Bangladesh; 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 (from 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 marine protected areas in the United Arab Emirates; numerous studies in Tanzania addressing resource-use by coastal communities, economic value of turtle products and 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.			published accounts of socio-economic studies or activities and make them freely available on the IOSEA website, wherever possible, or provide references/ online links.
Adverse economic incentives 3. 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 that continue or expand harmful forms of fishing, black markets, and poverty/basic nutritional needs, etc. Many Signatories describe steps being taken to try to investigate and correct various adverse economic incentives: 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; 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 and schemes to involve communities (including former poachers) in eco-tourism activities and nest protection.	4	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, as examples of good practice that might be considered for adaptation/adoption elsewhere.	Consideration might be given to elaborating on this cursory assessment of adverse incentives, by commissioning a project that would conduct more in-depth country-by-country analyses, and attempt to highlight solutions that might be replicated.

Fisheries interactions 4. Reporting of the relative level of fishing effort and impact on marine turtles of selected fisheries has continued to improve since 2008. The fisheries described in some detail include: shrimp trawls, set gill nets, fish aggregating devices (FADs), purse seines, longlines, driftnets, and other miscellaneous fisheries. 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. Shrimp trawls were reported by 10 Signatory States to have a "relatively high" impact. Set gill nets were reported by 15 Signatories to have a "moderate to relatively high" impact (notably Iran, Kenya, Tanzania); while longlines were reported to have comparable impacts in 10 Signatories (notably Cambodia, Indonesia, South Africa and United States). Other fisheries such as purse seines and FADs were generally reported to have less impact on marine turtles.	5 – 8	While reporting has strenghthened in some countries, there is still considerable room for improvement (e.g. to document the scale of the fisheries, operational coverage, and extent of interactions with turtles etc.)	Do these findings point to the need for more in-depth assessments of certain fisheries in certain countries? Would any Signatory State or partner organisation be in a position to contribute to an overall assessment of TED implementation in the IOSEA region?
5. About three-quarters of the Signatories cite specific examples of illegal fishing in the IOSEA region that may impact marine turtles. Examples include illegal, unregulated and unreported take of turtles, illegal fishing by foreign vessels, illegal trawling and use of gillnets out of season, continued use of explosive and other destructive fishing methods, and cross-border poaching in protected areas by foreign longliners and trawlers.	9		Some of these known cases are fairly well-documented (e.g. illegal take of turtles in South-East Asia). A region-wide project might be commissioned to pull all of the available information together in a single volume that would give a clearer picture of the extent of the problem of illegal fishing in relation to marine turtles.
Reduction of incidental capture and mortality 6. Reporting on methods of minimizing incidental capture and mortality of marine turtles has continued to improve since 2008, however implementation remains weak in some areas. Eighteen Signatories have apparently initiated training programmes in appropriate handling of incidentally caught turtles. About one-third of all Signatories reporting have initiated programmes requiring the use of devices that allow the escape of	10 – 14 19		Most of the activities have been reported superficially and appear to have been conducted in isolation, whereas a more coordinated,

marine turtles, however the success of implementation varies. Many countries report on the reluctance of fishers to install TEDs. Only a third of the Signatories reporting 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. About two-thirds of the Signatories responding exercise spatial and temporal control of fishing activities, and a comparable percentage manage fishing effort. However, several countries point out that these controls are primarily directed at fisheries management and are not specifically intended to address turtle by-catch. More than half of the Signatory States have legislative prohibitions against the use of driftnets in national waters. Less clear from most of the responses is the practical enforcement of the legislative measures that are already in place.			concerted effort (at least at a sub-regional level, as is practiced to some extent in South-East Asia) might yield better results and benefit from economies of scale.
7. There is substantial reporting and actual implementation of other fisheries-related programmes that may contribute to minimizing incidental capture and mortality of marine. Well over half of the Signatories have some form of onboard observer programme. About half report the use of vessel monitoring systems. Most Signatories have systems in place for inspections at ports and landing sites. While 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. Nearly all Signatories have conducted training for fishers and/or have produced a variety of educational information materials. On the downside, only half of them indicate that they periodically review and evaluate these various mitigation measures and programmes for their efficacy.	15 – 16	In most cases, it would be helpful if these descriptions were further elaborated, 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.	
Research and development 8. More than 80 percent of the Signatory States report on interesting research and development activities in support of by-catch reduction. More than half of the Signatories have exchanged information and technical assistance internationally in this area. 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	17		

has data collection programmes in place for incidental capture of turtles; two Indian institutes have been 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 Tanzania confirm that gillnets, particularly bottom set nets, pose a significant threat to turtles. The United States' National Marine Fisheries Service has programs that contribute to the research and development of bycatch reduction devices for sea turtles.			
Economic uses and cultural values 9. Almost all of the Signatory States list a number of economic uses and cultural values of marine turtles, the most prevalent being meat consumption (71%), followed by eco-tourism benefits (60%), egg consumption (53%), cultural/traditional significance (41%) and use of shell (40%). This meat consumption is rated to be of "moderate to high" prevalence by eight Signatories. Egg consumption is reported to be "high" in three Signatories and "moderate" in five. Only six Signatory States provide details of their eco-tourism programmes centered on marine turtles, even though this activity is reported to occur at some level in many of the Signatories responding. Some interesting examples of cultural/traditional significance are given. Turtle shell products are reported in only a dozen countries, mostly at low levels.	20		Should it be a priority for Signatory States to try to get a better idea of the impacts of meat and egg consumption on their turtle populations? What information is already available that could contribute to a wider assessment, by management units?
Direct harvest and domestic trade 10. 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. Notwithstanding these legislative provisions, traditional consumption of turtle meat and/or eggs occurs in about three-quarters of the	21		Where possible, Signatory States should provide the Secretariat with hard or soft copies of the relevant sections of domestic legislation for reference purposes.

Signatory States, and is reported to be "moderate to high" in about 40 percent of these. Only Bahrain, Jordan, Malaysia, Pakistan, Saudi Arabia, Thailand, United Arab Emirates, United Kingdom, and United States report no traditional harvest of turtles for meat.			
11. 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. 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 helped to reduce threats to turtles. Only a few Signatory States have management agreements already in place with their neighbours in relation to sustainable levels of traditional harvest of marine turtles.	22 – 23		
Nesting beach management 12. Almost all of the Signatory States have a suite of measures in place to minimise or reduce the mortality of eggs, hatchlings and nesting females. Over 90 percent have monitoring programmes. Debris removal and beach clean-up is practiced in nearly as many Signatory States, but in many cases the frequency and extent of the activities appear to be limited. About 90 percent of the Signatories have education/awareness programmes. About two-thirds have regulations on the location and design of buildings and are working to reduce light pollution. Nearly 60 percent of the Signatories report	24	Generally speaking, the national reports would be much more informative if the descriptions of particular activities were more thorough.	The issue of mitigation of light pollution, which has not been dealt with in any depth by IOSEA, warrants closer attention by Signatory States.

using egg relocation and hatcheries as a management tool; while predator control and restricting vehicle access and are also practiced by a similar proportions.			
13. Signatory States offer subjective self-assessments of the effectiveness these measures. While the exercise may have limited practical value, it gives Signatories an opportunity to identify and describe particularly effective programmes; and also to draw attention to certain elements in need of improvement or perhaps external assistance. About two-thirds of the Signatory States indicate that they have undertaken a recent evaluation of the effectiveness of their nesting beach management programmes. However, a significant number appear not to have incorporated this important review process in their national marine turtle conservation efforts.	25 – 26	Countries with multiple jurisdictions might find it helpful/necessary to use 'comment boxes' to elaborate or refine their responses with a view to presenting sub-national differences.	
Objective II: Protecting, conserving and rehabilitating marine turtle habitats ***Critical habitat outside of established protected areas*** 14. Only a few Signatory States appear to have measures in place to protect critical habitat outside of established protected areas and little information is given to suggest that these habitats have so far been clearly identified. Several countries mention future plans with regard to their protection. In Australia, measures are centred on community-based approaches to sustainable management. France has adopted 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. The limited level of detail in most of the responses may be a reflection of the difficulty of achieving adequate protection outside of established areas.	27		The proposed IOSEA Site Network might be germaine to this discussion, as it could serve to highlight the importance of critical sites outside of established protected areas.

Coastal development impacts and mitigation 15. About two-thirds of the Signatory States carry out assessments of the environmental impact of marine and coastal development and other activities; but few report having carried out impact assessments specifically addressing marine turtles. A similar percentage monitor water quality, either generally or in localised areas, though these efforts also tend not to be specific to marine turtle habitat. It is less clear what Signatories have done to actually protect or improve water quality near turtle habitats, including removal of marine debris. Almost all Signatory States have measures in place to prohibit the use of poisonous chemicals and explosives; however effective enforcement is reported to be problematic in many countries.	28		
16. About two-thirds of the Signatory States are monitoring their coral reefs and/or are making an effort at some level to recover degraded coral habitats. 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. Reefs in Eritrea, South Africa, and United Kingdom are reported to be in near pristine condition and not in need of rehabilitation. Over 80 percent of the Signatory States are making some effort to recover degraded mangrove habitats, but the importance of these habitats to marine turtles is generally not mentioned. In contrast, less than half of the Signatories are engaged in sea grass habitat monitoring and recovery, with Australia being the most active.	30 – 31		Should Signatory States be paying more attention to the protection and rehabilitation of sea grass beds? Is there more scope for international collaboration and sharing of knowledge?
Objective III: Improving understanding of marine turtle ecology and populations ***Research and monitoring*** 17. Almost all of the Signatory States cite literature relevant to marine turtle research and conservation in their country, ranging from peer-reviewed journals to internal reports and proceedings of workshops. Many of the lists are quite extensive and provide a good starting point for a more comprehensive bibliography.	32 – 33	A few Signatories could improve their references to bring them up to a comparable standard; others that are known to have conducted extensive research should supplement the existing entries.	

Most Signatories are reported to have long-monitoring programmes in place or planned for priority marine turtle populations. On closer examination, it appears that only about half of the mentioned programmes are of 10 years or longer duration. The programmes in Australia, France, Oman and Seychelles are remarkable for their longevity. There is reason to believe that programmes in several other countries, started 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 the species concerned and whether there have been any breaks in data collection.	An attempt should be made to make a compilation of information from known index beaches; and to propose suitable index beaches in countries where none has been designated as yet.
18. 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 have collected or have contributed samples for use in ongoing research. The extent to which this work is being coordinated is unclear.	34		Consideration should be given to consolidating major findings in comprehensive overview document. As a starting point, experts are encouraged to contribute basic details of genetics work to the Genetics Directory on the IOSEA website.
19. Almost all Signatory States have employed flipper tagging to try to identify migration routes. The findings presented by United Republic of Tanzania are especially informative. The IOSEA reporting system offers an ideal platform for consolidating all information on regional tag recoveries. Over two-thirds of the Signatory States have carried out satellite tracking studies, a marked increase since 2008. Australia, France, India, Oman and Thailand appear to have been particularly active. Elsewhere, the number of turtles tracked is relatively low. Some provide information on certain aspects of this work, and a few mention the results obtained, publications, and future planned activities. In general, the information provided on satellite tracking studies is insufficient to assess the efficacy of tagging and satellite tracking studies overall or to help guide the direction of future work.	35 – 36	If it is not feasible for Signatories to include specific details of international flipper tag recoveries in their national reports, specific references should be given to published reports where this information may be readily obtained (e.g. through the online IOSEA Bibliography Resource).	Consideration might be given to developing a paper that consolidates all known information on regional tag returns, from published and unpublished sources. The IOSEA Satellite Tracking Metadatabase has more detailed and up-to-date information on satellite tracking projects conducted in and around the Indian Ocean; and will be used as a basis for a workshop at SS6.

20. 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. It is difficult to judge the nature and scientific value of the work undertaken based on the limited information supplied. Australia, France, South Africa, United Kingdom and United States appear to have done the most extensive work in this area. About a third of the Signatory States have carried out some research on the frequency and pathology of diseases of marine turtles, such as fibropapilloma. Australia, Indonesia, and United States appear to have conducted the most rigorous investigations in this regard. Almost three-quarters of the Signatory States indicate that they are promoting the use of traditional ecological knowledge in research studies; and most provide some additional information on the nature of this collaboration.	37 – 38	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. In general, it would be helpful if all Signatories were to cite published and unpublished reports in each of the research areas mentioned, and describe the nature of the work undertaken in more detail.	
Collaborative work 21. More than half of the Signatory States are participating in other regional or sub-regional action plans that identify priority research and monitoring needs, and many cite specific examples. Almost two-thirds of the Signatory States report having conducted studies on genetic identity that involved collaboration and partnerships with other countries. About three-quarters have reportedly undertaken collaborative studies on migration, often involving tagging and satellite tracking.	40 – 41	In general, the quality and amount of detail in the responses in these sections vary greatly, making it difficult to interpret the information provided. The degree to which these studies can be characterised as involving *international* collaboration (with unique added benefits) is sometimes unclear.	
Priority species/populations 22. Most of the Signatories give a list of priority species/populations in need of conservation action and about two-thirds include census or trend data in support of their selection. Green turtles figure high in the lists of 17 Signatories; Hawksbill turtles (13	42	If answered comprehensively, the responses to this query have the potential to help guide the	The number of Signatory States listing Green turtles as a high priority for conservation might suggest

Signatories); Leatherback turtles (8 Signatories); Olive ridley turtles (5 Signatories); and Loggerhead turtles (3 Signatories). NB: A few Signatory States accord equal priority to all species.		direction of future collective actions, by identifying species/ populations most in need of attention, as well as countries that share common concerns.	that the species should be next candidate for the preparation of an overall species assessment.
Practical application and communication of research results 23. Over half of the Signatory States reportedly review research and monitoring results periodically and evaluate them for their efficacy; but only 6 or 7 provide additional information that suggests that these reviews are undertaken regularly and have resulted in programmatic changes. A number of Signatory States describe how research results are being applied to improve management practices and mitigation of threats. 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.	43		Signatory States are encouraged to arrange periodic (independent) evaluations of their research, monitoring and management programmes, to ensure that desired objectives are being realised. Possibly this is an area in which the IOSEA Advisory Committee could assist.
24. Nearly three-quarters of the Signatory States have taken some initiative to standardise methods and levels of data collection – though mostly at national, rather than sub-regional levels. Nearly three-quarters of the Signatory States occasionally exchange scientific and technical information and expertise with other Range States, but only three reportedly do so often (systematically). The remainder rarely or never exchange information and expertise. Generally, it is not clear that vehicles for sharing information are targeted at other Range States in order to convey information that might be valuable for supportive conservation/management actions (e.g. related to ongoing research, new findings, innovative techniques, unusual levels of turtle mortality, potential threats, etc.). 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. All Signatories could improve their reporting in these areas.	44 – 47	Signatories that have adopted standardised methods, including data collection sheets, should provide details and copies to the Secretariat, for posting on the IOSEA website.	Signatory States might consider brainstorming on how to promote and improve standardisation/harmonisation of methods within and between regions, where this is not already being done.

Objective IV: Increasing public awareness and enhancing public participation ***Education and awareness*** 25. Virtually all of the Signatory States responding have collected, developed, and/or disseminated diverse educational materials specifically focussing on marine turtle conservation. Australia, India, Indonesia, Kenya, Philippines, Seychelles, Sri Lanka, and Viet Nam appear to have been especially active. Students, local/fishing communities, teachers and the media appear to have received the most attention, followed by tourists, and policy makers. Navy/military personnel and scientists appear to have received lesser attention. The limited focus of awareness and education campaigns on the fishing industry is noteworthy.	48 – 50	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.	It might be an interesting project for an intern to prepare an overview report of the education/awareness initiatives undertaken in each country, with a view to highlighting novel ideas; as well as demonstrating possible gaps and weaknesses, as well as any obvious duplication of effort.
Alternative livelihood opportunities 26. About 60 percent of the Signatory States have undertaken initiatives to identify and facilitate alternative livelihoods, including income-generating activities, for local communities. The range of initiatives include: conversion to aquaculture, agricultural or forest/horticultural activities; mangrove rehabilitation; beach monitoring/nest protection; turtle-based ecotourism and management; artisan re-training and compensation; handicraft production; and provision of soft loans. 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 (next section) to elaborate on them further.	51	Programmes should be described in more detail and including time frames, cost etc.; mentioning challenges that were faced/overcome, as well as insurmountable difficulties; overall effectiveness of the programmes; and give an indication of their potential for replication elsewhere.	As an extremely important topic of interest to many Signatory States, one that is not well addressed by national reporting, relevant Signatory States are encouraged to prepare separate 1-2 page summaries of the alternative livelihood programmes undertaken, highlighting strengths and weaknesses.

Stakeholder involvement 27. 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; and almost all report some collaboration in marine turtle conservation from Government institutions, NGOs, and the private sector. A number of efforts are noteworthy: funding of various nongovernmental initiatives in Australia through a National Heritage Trust, as well as the establishment of a national turtle recovery group; creation of a national network of turtle conservation groups in India, Kenya's broad-based national sea turtle conservation group, 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; 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 several countries; and collaboration among relevant Government agencies and NGOs in some countries.	52 – 53	Same comment as for alternative livelihoods	Same comment as for alternative livelihoods
Objective V: Enhancing national, regional and international cooperation ***Combating illegal trade*** 28. Three-quarters of the Signatory States responding have mechanisms in place and cooperate with other States to try to deter illegal international trade. 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. About three-quarters of the Signatories reportedly have undertaken a national review of their compliance with CITES obligations in relation to marine turtles. A similar number of countries have their own CITES training programmes or participate/cooperate in those of other bodies; but only a handful provide details. No Signatory mentioned any particular impediments to identifying illegal trade routes or deterring illegal trade, although such illegal trade is known to occur.	54, 56		Issues surrounding illegal trade (internal and international) of turtles and turtle products are generally under-reported; and need closer examination by Signatory States.

29. Almost all of the Signatory States have measures in place to prevent, deter and eliminate illegal domestic trade in marine turtle products. Seychelles provides the most detail, 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; education and awareness programmes aimed at coastal communities; training of law enforcement personnel; investigation of poaching reports; monitoring of ports, airports and other areas where illegal trade may occur; cooperation with other agencies, such as the customs service; prosecution of cases and imposition of fines for violations; and regular control of legal stocks of shell. A number of Signatories draw attention to gaps or difficulties in enforcement, particularly in remote areas and where there is a dependency on egg harvest for subsistence. Very few Signatory States appear to have exchanged information or raised compliance and/or trade issues in bilateral discussions or international forums.	55 – 56		
Management issues identified; national actions prioritised 30. 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. At least seven other Signatories are working towards national plans, many of which appear to be at an advanced stage of development or review. 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 key management measures at the national level. Only a few Signatories appear to have a requirement for periodic review of their national plans.	57 – 58		Signatory States should, as a matter of routine, submit hard or soft copies of their national action plans to the Secretariat for future reference.
31. Almost all Signatory States identify the conservation and management activities that they consider to be among the highest priorities for action. The five highest priorities are: (1) conducting targeted studies on marine turtles and their habitats; (2) establishing habitat protection and conservation measures; (3) establishing or strengthening education and information programmes; (4) capacity-building, training and partnerships; and (5) reducing incidental capture and mortality. Almost all of the Signatory States list one or	59 – 63	Signatories should explain or further elaborate the priorities they have listed. This would include, where appropriate, more precise information on	A review of these findings might offer some guidance to Signatory States as to areas of work that are good candidates (and priorities) for common action.

more local management issues for which they consider international cooperation necessary. Cooperative research in several areas (habitat and genetics studies, tagging/satellite tracking, identification of turtle populations and migration routes) figured prominently, with most Signatories rating international cooperation in these areas as being "important or essential". This was followed closely by training/capacity building, illegal fishing in territorial waters, enforcement/patrolling of territorial waters, and development of gear technology.		location of the activity, other actors that may need to be involved, and time frames within which the programme of work should ideally be conducted.	
Mechanisms for cooperative management 32. Most of the Signatory States identify 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. However very few, if any, indicate the particular strengths that the named organisations might bring to marine turtle conservation in the IOSEA region or their capacity to take on a broader coordination role. A number of Signatory States report having developed, or are participating in, networks for cooperative management of shared populations. Little information is available on steps taken by Signatory States to encourage Regional Fishery Bodies (RFBs) to adopt marine turtle conservation measures within EEZs and on the high seas.	64 – 66		IOSEA Signatory States that participate in the Indian Ocean Tuna Commission (IOTC), which is taking an increasing interest in marine turtle conservation issues, are encouraging to provide more input into the IOTC deliberations, particularly in relation to fisheries-turtle interactions.
Capacity building / strengthening of training programmes, partnerships 33. Eritrea, France, Mozambique, Myanmar and Philippines are among the countries that gave the most consideration to their current capacity-building and resource needs. In general, among all respondents, the most common capacity-building needs identified are for trained personnel, equipment and infrastructure, and programme support.	67- 68	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.	

34. Most of the Signatory States have carried out some training in marine turtle conservation and management techniques, but (for the most part) it is not clear whether or how this training is coordinated regionally. Australia, Eritrea, France, India, Myanmar, Seychelles, Viet Nam and United States describe rather extensive activities. Over three-quarters of the Signatory States have established one or several partnerships with universities, relevant organisations, and research institutions nationally and/or internationally.	69 – 70	In almost all cases, it would be helpful if respondents were to describe 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.	In general, it would be helpful if Signatory States were to describe their training activities in more detail in order to give a clearer picture of their efficacy and possible need for more intensive activity; and to demonstrate where synergies could be created through joint actions.
Effectiveness of national policies and laws 35. About three-quarters of the Signatory States comment on the effectiveness of national policies and laws concerning the conservation of marine turtles and their habitats. Australia reports that a large majority of actions from its national recovery plan have been completed or are under way, accompanied by major shifts in public perception. France reports a significant reduction in poaching in La Réunion as a result of police actions, increased capacity and improved awareness; whereas effectiveness elsewhere 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 limited motivation and awareness of enforcement personnel exacerbates the problem. The 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,	71		If Signatory State responses were more comprehensive, it might be possible to develop a matrix or checklist of generic strengths and weaknesses in implementation of national policies and laws, as a way of illustrating what has worked or not worked, and why. Solutions might be found in the approaches taken in one country that could be applied in another.

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.			
36. About two-thirds of the Signatory States have conducted or are conducting a review of policies and laws to address gaps or impediments in relation to marine turtle conservation. Ten report having encountered problems in relation to compatible application of laws and regulations across and between jurisdictions. 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; the detention of non-citizens suspected of committing an offence under the law of one country involving the use of a foreign vessel; differences in legal specifications of fishing mesh sizes; variable cross-border cooperation and enforcement, depending on the issue and boundary; general cooperation and collaboration issues; enforcement of environmental laws at community level in some areas; identifying effective communication channels with neighbouring countries; and lack of standardized guidelines for the management of hatcheries.	72 – 73	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 the start and expected/actual completion dates of the review; and possibly indicating whether there was a specific reason that necessitated the review).	Greater sharing of information among Signatory States about difficulties encountered and solutions arrived at, in relation to the application of laws and regulations, might yield some practical ideas for application elsewhere.
Objective VI: Promoting and supporting implementation ***Institution strengthening*** 37. Fewer than a dozen Signatories are reported to have encouraged, or to have plans to encourage, other States to sign the Memorandum of Understanding. With membership of key States nearly complete, this activity may be relatively less important than in the past. Ten Signatories (36 percent) indicated they are currently favourable to amending the MoU to make it a legally-binding instrument. Only 13 Signatories voiced an opinion in relation to the same question posed over a longer time horizon; and the results were largely inconclusive.	74		Some countries of importance to marine turtle conservation in the region (e.g. China, Japan, Republic of Korea) remain outside the IOSEA agreement. Current Signatory States should actively encourage them to consider involvement.

38. Australia, South Africa, United Kingdom and United States have consistently provided substantial funding over many years towards the operational costs of the Secretariat, for organising meetings and for project implementation. Several other Signatory States have also made important contributions since 2008. 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.	76 – 77	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.	IOSEA institutional support is addressed in document MT-IOSEA/SS.6/Doc. 10
39. 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. The approaches that have been attempted are quite diverse and seem not to be detrimentally competitive across Signatory States. 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 (and also mention unsuccessful cases so that lessons might be learned from these experiences.) Only about eight Signatory States have explored the use of economic instruments for the conservation of marine turtles and their habitats. Few details are provided, but promotion of eco-tourism is cited as common theme.	78 – 79	In general, it would be helpful if Signatories that have used economic instruments were to provide more information (e.g. about 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.	
40. 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. 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 Signatories reported that it was contemplated, while a few indicated that there was no need for further review since the mandates were already clear.	80 – 81		Given that basic inter-agency communication and coordination is fundamental to the success of marine turtle conservation efforts, Signatory States are encouraged to at least identify the various agencies that have some role to play.

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

Programme	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	
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 IMPLEMENT-ATION
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	

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

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	REDUCE MORTALITY
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	CONSERVE HABITAT
2.2 Degraded habitats rehabilitated											53	
3.1 Basic species and habitat-related studies conducted											55	
3.2 Collaborative research and monitoring conducted											61	CONDUCT RESEARCH
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	ENHANCE AWARENESS / PARTICIPATION
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	ENHANCE INTERNATIONAL COOPERATION
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	PROMOTE IMPLEMENT-ATION
6.3 Resources sought for domestic implementation											34	
6.4 Government coordination / cooperation improved											63	
OVERALL AVERAGE: Signatory State											52	

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

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	
1.2 Best practices identified / applied to minimize threats						55	
1.3 Studies conducted to correct adverse incentives						48	REDUCE MORTALITY
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	
3.2 Collaborative research and monitoring conducted						35	CONDUCT RESEARCH
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	
5.2 Mgmt. issues identified; national actions prioritised						45	ENHANCE INTERNATIONAL COOPERATION
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	
6.2 Secretariat / Advisory Committee supported						15	PROMOTE IMPLEMENT-ATION
6.3 Resources sought for domestic implementation						33	
6.4 Government coordination / cooperation improved						58	
OVERALL AVERAGE: Signatory State						45	

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

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	
1.2 Best practices identified / applied to minimize threats											55	
1.3 Studies conducted to correct adverse incentives											40	REDUCE MORTALITY
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	
3.2 Collaborative research and monitoring conducted											60	CONDUCT RESEARCH
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	
5.2 Mgmt. issues identified; national actions prioritised											53	ENHANCE INTERNATIONAL COOPERATION
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	
6.2 Secretariat / Advisory Committee supported											35	PROMOTE IMPLEMENT-ATION
6.3 Resources sought for domestic implementation											36	
6.4 Government coordination / cooperation improved											58	
OVERALL AVERAGE: Signatory State											46	

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

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	
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 IMPLEMENT-ATION
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	

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

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

Programme	Australia	Bahrain	Bangladesh	Cambodia	Comoros	Eritrea	India	Indonesia	Islamic Rep. of Iran	Jordan	Kenya	Madagascar	Mauritius	Myanmar	Oman	Pakistan	Philippines	Saudi Arabia	Seychelles	South Africa	Sri Lanka	Thailand	United Arab Emirates	United Kingdom	United Rep. Tanzania	United States	Viet Nam	Overall Programme Average	
1.1 Overview given of species, habitats, achievements, challenges																												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
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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 IMPLEMENT-ATION
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	

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

Evaluation Matrix: All Signatory States, March 2006