FOURTH MEETING OF THE SIGNATORY STATES
Muscat, Oman, 11-14 March 2006

REVIEW OF IMPLEMENTATION PROGRESS

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 required to submit an annual report describing their implementation of the MoU. A standard template and an online reporting facility were developed to enable Signatory States to submit their reports through the internet and to revise them whenever necessary.

The present document builds on the comprehensive analysis prepared in 2005 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 24 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 simply 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 domain 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 some 64 projects carried out in over 20 countries of the IOSEA region. A powerful upgrade of the IOSEA website in 2005 makes it even easier to search for information in the Projects Database using keywords. 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 2005 review of national reports submitted by Signatory States highlighted various aspects of the template itself that were in need of modification. With the agreement of the Signatory States, the Secretariat streamlined the reporting template to reduce as far as possible redundancy and ambiguity in the questions, and added comment boxes to assist Signatory States in the preparation of their reports.

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. The Secretariat has reintroduced a visual aid, first developed for the Second Meeting of the Signatory States (Bangkok, March 2004) to assess implementation at the programme level. Though the colour-coded matrix looks very similar to the one demonstrated in 2004, there is at least one very important difference. At the request of the Signatory States, the entire content of the matrix is now generated by rating every question in the national reports of all Signatory States according to objective criteria that are available for scrutiny (see also Document MT-IOSEA/SS.4/Doc. 8.2).

The present paper is divided into two sections: Part I summarizes the overall findings, while Part II describes the methodology used and offers more substantial background information on which these conclusions were drawn. An index of common keywords is provided below to make it easier to navigate the document and locate issues of particular interest.

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Part I: Executive Summary

General Conclusions

1.   The quality of reporting varies considerably across the Signatory States, with a handful of countries reporting extensively and in considerable detail, whereas a few countries have so far provided only limited information. The majority of countries fall between these two extremes. At least some information is available for all Signatory States except three that have yet to submit a report: Indonesia, Eritrea, and Saudi Arabia.

2.   In terms of implementation, the predominant picture that emerges is that of some progress, albeit limited in scope, across the whole spectrum of the Conservation and Management Plan. A colour-coded matrix (at Annex 1) gives a visual representation of the extent of this progress. The most substantial advances have been made in the areas of identification and documentation of threats; application of best practice to minimise those threats; studies to correct adverse economic incentives; nesting beach management programmes; and education, awareness and information programmes.

3.   Substantial gaps remain for several crucial programmes, notably in the areas of: reduction of incidental capture and mortality; review and enforcement of domestic legislation; securing of resources for implementation*; collaborative* research and monitoring; standardisation of data collection and application of research results to improve conservation practices; *cooperative* management and information exchange; and *cooperative* deterrence of illegal trade. Though there is certain to be under-reporting of actual progress in each of these programmes, real weaknesses in implementation likely exist. A common thread running through a number of these programmes is the need to strengthen cooperation among Signatory States which, of course, is the raison d'être of the Memorandum of Understanding.

Objective I: Reducing direct and indirect causes of marine turtle mortality

4.   Signatory States have made good progress in identifying over 500 discrete sites of relevance to marine turtles, and to categorise them as nesting, feeding and developmental habitats. Improvements made to the online reporting system now allow users to make associations between species and particular habitat types at a given site, to define a site's relative importance, and to indicate a greater number of threat mitigation measures in place at each site. While only a few Signatories have as yet taken advantage of these new features to enhance their data, most have attempted to give a subjective rating of the intensity of about 15 potential threats at each site.

5.   The most prevalent threats of "moderate to strong" intensity appear to be: incidental capture in fisheries, natural threats/predation, egg collection, boat strikes, plastics at sea, artificial lighting, exploitation of live animals at sea, and exploitation of nesting females. Over the coming year, more sophisticated queries of the information in the database are planned. This part of the Online Reporting Facility will be an extremely versatile analytical tool for management purposes as the underlying data are supplemented and refined over time.

6.   Some noteworthy examples of best practice approaches for minimising threats include: Australia's comprehensive National Recovery Plan; Cambodia's programme to foster cooperation with coastal fishing communities; Kenya's inclusive national sea turtle conservation programme; the Philippines' community-based conservation agreements and data-gathering system; Seychelles' stakeholder involvement in nation-wide monitoring programmes; United Republic of Tanzania's conservation education and community involvement approach; and the United States' standardised index site monitoring protocols.

7.   About a third of the Signatory States report on socio-economic studies or activities that have been conducted among communities that interact with marine turtles and their habitats. Signatory States identify a number of adverse economic incentives that contribute to turtle mortality, including lack of affordable alternatives to turtle products and low penalties against illegal harvesting. Among the initiatives being taken to correct them are: Australia's partnership with indigenous communities to address the sustainable harvest of marine turtles; Iran's efforts to use religious edicts to dissuade consumption of

turtle eggs and meat; income-generating schemes in key coastal areas of Pakistan; turtle-based tourism in Seychelles; and South Africa's sustainable livelihoods programme. Further investigation is needed by all Signatories to elicit more information on the underlying causes of threats to and mortality of marine turtles arising from adverse economic incentives.

8.   There is very limited progress reported in the area of reducing incidental capture and mortality, however this is partly explained by a change in the reporting template. The fisheries described in some detail include: shrimp trawls, set gill nets, and anchored fish aggregating devices (FADs). A cross-section of Signatories from all regions report on specific gear types that are thought to have moderate to high impacts on turtles. While the data are presently incomplete, it is expected that useful information will be gleaned from a more complete set of reports in due course. This can serve as a regional contribution towards monitoring implementation of the FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations.

9.   Although illegal fishing was identified as a serious problem by the Third Meeting of the Signatory States, only a half-dozen Signatories have so far cited specific examples of illegal fishing impacting marine turtles. While little information has so far been provided on methods used to minimize incidental capture/mortality of marine turtles, ten Signatories do report using devices that allow the escape of marine turtles. Australia also provides a detailed account of its programme to introduce dehookers and line-cutting kits, as well as training on the release of caught turtles, one of the only Signatories to have done so. Given the paramount importance of minimizing incidental capture and mortality in fisheries, this is another area in which reporting needs to be markedly improved.

10.   About half of the Signatory States report on initiatives undertaken with fisheries industries and management organisations to implement by-catch mitigation measures. The extent to which these initiatives have been undertaken varies among countries. Only a few Signatories are reported to have onboard observer programmes or vessel monitoring systems (VMS) and to carry out inspections. More have conducted training for fishers and/or have produced a variety of educational information materials. With some exceptions, the information provided in relation to this activity is rather superficial and likely under-reports the measures that have actually been undertaken. Only Australia periodically reviews and evaluates these programmes for their efficacy.

11.   A number of Signatory States report on interesting research and development activities in support of bycatch reduction. Australia is continuing its research on more effective TEDs; French and Spanish fleets operating around Seychelles are working on new drifting FAD designs to reduce bycatch. South Africa is experimenting with drumlines to replace bather protection nets and with circle hooks on some longline vessels, and is reviewing prawn trawl bycatch impacts. Studies in United Republic of Tanzania confirm that gillnets, particularly bottom set nets, pose a significant threat to turtles.

12.   With a few exceptions, there appears to be rather little international exchange of information and technical assistance in the area of bycatch mitigation. The United States does have an active programme to exchange TED technical information with all interested countries, and has started programmes to collaborate and share information on longline sea turtle bycatch. In about half of the Signatory States, large scale drift nets are prohibited or not used within national waters.

13.   Almost all of the 20 Signatory States responding have already enacted some legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products. Notwithstanding these legislative provisions, about 70% of the Signatory States responding have traditional consumption of turtle meat and eggs. Six Signatory States report a moderate to high level of harvest, with comparable levels of impact. About two-thirds of the Signatory States have established management programmes that include limits on levels of intentional harvest, and several provide specific details. Only a few Signatories have management agreements already in place, or being negotiated, with other concerned States in relation to sustainable levels of traditional harvest.

14.   Most Signatory States identify a number of economic uses and cultural values of marine turtles, the most prevalent being meat and egg consumption, followed closely by eco-tourism benefits.

Cultural/traditional significance also ranked highly in several Signatories. Consumptive use of turtles for shell, traditional medicine and fat also occurs, but is less common. A more sophisticated analysis of these values may be possible once more complete information is provided.

15.   Almost all of the Signatory States report on one or several measures in place to minimise or reduce the mortality of eggs, hatchlings and nesting females. Two-thirds have regulations on the location and design of buildings, aimed at protecting nesting beaches. About half of them have programmes to clean up beaches and remove debris that could impede nesting, and are re-vegetating frontal dunes and working to reduce light pollution. Slightly fewer use education and awareness programmes to try to minimise mortality of eggs, hatchlings and nesting females. Restricting vehicle access and predator control are also practiced, but only by about a third of those reporting. Interestingly, only six Signatory States report using egg relocation and hatcheries as a management tool, though this probably understates the real world situation.

16.   Only about one-third of the Signatory States indicate that they have undertaken a recent evaluation of the effectiveness of their nest and beach management programmes, and few provide any details of these reviews. In general, it is unclear that programmes are being critically examined, according to certain measurable success criteria, to determine whether or not they are achieving conservation objectives.

Objective II: Protecting, conserving and rehabilitating marine turtle habitats

17.   Only a few Signatory States appear to have measures in place to protect critical habitat outside of established protected areas, and not all of these are fully implemented. 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. A similar number monitor water quality, either generally or in localised areas. Only a few appear to have carried out impact assessments specifically addressing marine turtles. More generally, it is less clear whether or what steps are taken to protect water quality near turtle habitats, including from marine debris. In almost all of the Signatory States, some measure is in place to prohibit the use of poisonous chemicals and explosives, and most provide details of the legislation or regulations and inspection regimes.

18.   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 reefs. Most Signatory States describe their activities in this regard, at least superficially. Activities mentioned include monitoring and rehabilitation actions, upgrading of legal protection status, development of recovery plans, relocation of sewage outfalls, reduction of specific threats, and conduct of education and awareness activities. Most of the Signatory States are making some effort to recover degraded mangrove habitats, and about half of them describe these programmes in more detail. Sea grass habitat recovery is apparently being undertaken in very few countries, for example through regular monitoring, as well as regulation of dredging activities and coastal development.

Objective III: Improving understanding of marine turtle ecology and populations

19.   About two-thirds of Signatory States reporting have conducted baseline studies on marine turtle populations and their habitats. Most respondents cite the relevant literature, ranging from peer-reviewed journals to proceedings and workshops. Almost all Signatory States are reported to have long-monitoring programmes in place or planned for priority marine turtle populations (only Cambodia, Madagascar, and Mauritius do not) and provide varying levels of detail. About half of these (Australia, Oman, Philippines, Seychelles, South Africa, United States, Viet Nam) have programmes of 10 years or longer.

20.   Only Australia, Seychelles, United Kingdom and United States have at some point carried out analyses to characterise the genetic identity of their marine turtle populations, while several other Signatories have collected or contributed samples for eventual use in such research.

21.   Almost all Signatory States have employed tagging to identify migration routes; most provide some details of this work including, in a few cases, information on tag recoveries. About half have carried out genetic studies; most elaborate on the nature of these studies and a few give indications of additional

sampling needs. Just under half of the Signatory States reporting have carried out satellite tracking studies, for the most part opportunistically, but the numbers of turtles tracked are relatively small. The level of detail provided about past activities is generally insufficient to assess the extent to which tagging, satellite tracking and genetic sampling has actually helped to identify migration routes.

22. Very few Signatory States report having carried out studies of marine turtle population dynamics and/or survival rates; more have carried out some research on the frequency and pathology of diseases of marine turtles. Under half of the Signatory States indicate that they are promoting the use of traditional ecological knowledge in research studies. Most of these countries provide some additional information on the nature of this work, though it tends to be limited. Only Australia has indicated supporting publications.

23. About half of the Signatory States report having conducted studies on genetic identity that involved *international* collaboration. Slightly more Signatories report having undertaken collaborative studies on conservation status, migration, and other biological and ecological aspects. However, the extent to which these studies can be characterised as involving international collaboration is often unclear.

24. Several Signatory States are participating in other regional or sub-regional action plans that identify priority research and monitoring needs. These include a memorandum of understanding between the Islamic Republic of Iran and the United Arab Emirates with recommendations on collaborative marine turtle work; a regional action plan being implemented under PERSGA; the Philippines-Malaysia Turtle Islands Heritage Protected Area initiative; a Marine Turtle Conservation Strategy and Action Plan for the Western Indian Ocean; the ASEAN Marine Turtle MoU; cooperative research under SEAFDEC; and the SEASTAR2000 project in South-East Asia.

25. 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. Loggerhead turtles figure high on the lists of three Signatories: Australia, Madagascar and Viet Nam. Green turtles figure high on the lists of 5 Signatories: Islamic Republic of Iran, Jordan, Philippines, Seychelles (some islands), and United Kingdom. Hawksbill turtles figure high in the lists of 5 Signatories: Islamic Republic of Iran, Jordan, Seychelles (some islands), Sri Lanka, and United Kingdom; Leatherback turtles figure high in the lists of South Africa, Sri Lanka and Viet Nam.

26. About one-third of the Signatory States are reportedly reviewing research and monitoring results periodically and evaluating them for their efficacy. Signatory States were also asked to describe how research results are being applied to improve management practices and mitigation of threats; though the question is a valid one, it may be challenging for many Signatories to answer at this time.

27. About two-thirds of the Signatory States have taken some initiative to standardise methods and levels of data collection – mostly at national, rather than sub-regional levels. Very few indicate that they often exchange scientific and technical information and expertise with other Range States; more typically, such exchanges are characterised as occasional. The most common means of disseminating data to other Range States are publications (scientific journals, websites, brochures, newsletters etc), followed by international meetings, workshops and training courses.

Objective IV: Increasing public awareness and enhancing public participation

28. Virtually all of the Signatory States reporting have to some extent collected, developed, and/or disseminated diverse educational materials, and many have developed and implemented mass media information programmes through television, radio, documentaries, and/or newspapers. Australia, Kenya, Pakistan, Philippines, Seychelles, Sri Lanka, and Viet Nam appear to have been especially active in this area. Among the target groups: students, teachers and local/fishing communities appear to have received the most attention; followed by the media, policy makers and tourists. The fishing industry, military and policy, and scientists received the least attention. Over half of the Signatory States reporting have some form of community learning establishment.

29. Nearly two-thirds of the Signatory States have undertaken initiatives to identify and facilitate alternative livelihoods, including income-generating activities, for local communities. The initiatives include: aquaculture, seaweed culture and apiculture; handicraft production; artisan re-training and

compensation; work as rangers and marine park staff; beach monitoring/nest protection; tourism activities; mangrove rehabilitation; and provision of soft loans.

30.   Most 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, participation in research and conservation programmes, as well as in planning processes. Almost all of the Signatory States that responded report some participation 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.

Objective V: Enhancing national, regional and international cooperation

31.   About two-thirds of the Signatory States have mechanisms in place and cooperate with other States to try to deter international illegal trade. Collaborators include CITES Management Authorities/CITES Secretariat, Interpol, domestic or foreign customs services, airport and port authorities, wildlife agencies, and various NGOs. Similar numbers have undertaken a national review of compliance with CITES obligations in relation to marine turtles, and have their own CITES training programmes for relevant authorities or participate in those of other bodies.

32.   Almost all Signatory States have some measure in place to prevent, deter and eliminate domestic illegal 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 Signatories are beach patrols and regular monitoring, education and awareness programmes aimed at coastal communities, and prosecution of cases and imposition of fines. Very few Signatory States appear to have exchanged information or raised certain compliance and/or trade issues in bilateral discussions or international forums. None mentioned any particular impediments to identifying illegal trade routes or deterring illegal trade, although such illegal trade is known to occur.

33.   Just over half 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. Five Signatory States already have national action plans in place, and a similar number are working to finalise such plans. Three Signatories do not have a national action plan *per se*, but have incorporated measures through specific project activities or at particular sites. Overall, progress is being made in this area though there is still limited information 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 regular reviews of their national plans for turtle conservation.

34.   All of the Signatory States reporting have listed one or more local management issues for which international cooperation is considered necessary to some extent.   Several issues were identified in more or less equal number: training and capacity building; identification of turtle populations/migration routes; illegal fishing, poaching and illegal trade in turtle products; and tagging/satellite tracking. Enforcement/patrolling of territorial waters and hunting/harvest by neighbouring countries, though not identified by as many Signatory States, were rated as having relatively high urgency in terms of a need for international cooperation.

35.   Most of the Signatory States note some mechanism that is, or might potentially be, used to enhance cooperation in marine turtle conservation and management at the sub-regional level, including for example: ASEAN-SEAFDEC, CBD, CITES, FAO, ROPME, and WIOMSA, as well as specific working groups, exchange programmes, memoranda of understanding, and collaborative forums.

36.   Five Signatory States report having developed or are participating in networks for cooperative management of shared populations. Australia is collaborating with Indonesia, Papua New Guinea, Timor-Leste and SPREP, through various instruments. Only Australia, Oman and Philippines have indicated involvement in the establishment of transboundary marine protected areas.

37.   The most common capacity-building need identified is for trained personnel, followed by equipment and infrastructure, and programmatic support. It would be useful for Signatory States for which this

question is relevant to indicate what their existing capacity 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.

38.   About two-thirds of the Signatory States have carried out some training in marine turtle conservation and management techniques. Australia, Seychelles, and Viet Nam describe rather extensive activities undertaken in this area. A similar number have established one or several partnerships with universities, relevant organisations, and research institutions nationally and/or internationally.

39.   About one-third 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. High fines and information gathering systems contribute to the effectiveness of Iranian laws, however logistical challenges remain. Mauritius notes the difficulty of protecting turtle habitats on remote islets. 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.   In South Africa and Sri Lanka, the regulatory systems in place are reported to be effective. United Republic of Tanzania notes a number of legislative deficiencies, as well as insufficient capacity for enforcement.

40.   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. However, only a few Signatories elaborate on what this entails. Six 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).

Objective VI: Promoting and supporting implementation

41.   Six Signatories are reported to have encouraged other States to sign the Memorandum of Understanding. Eight of the existing Signatory States indicated they are currently favourable to amending the MoU to make it a legally-binding instrument; while six were not in favour.

42.   Australia, United Kingdom and United States have provided substantial funds to the Secretariat for its operations, for organising meetings and for project implementation including Year of the Turtle activities. Australia documents its contributions in detail. The United States has indicated that its Marine Turtle Conservation Act would in future provide a mechanism to support implementation of specific projects. Only Australia, Islamic Republic of Iran, and Sri Lanka make some reference to domestic sources of funding for implementation of marine turtle conservation activities at national levels.   All Signatory States are encouraged to document the resources that have been mobilised for implementation of marine turtle conservation activities. About two-thirds of the Signatory States responding have solicited funds from, or have sought partnerships with, other Governments, major donors, industry, private sector etc for marine turtle conservation activities. The sponsors/partners include, among others: UNDP, World Bank, GEF, WWF, WCS, Conservation International, and various other corporate donors and private foundations (including petroleum and gas industries, hotels, private companies etc).

43.   Signatory States were requested to identify the conservation and management activities that they consider to be among the highest priorities for action. Almost all responded, 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 (in parentheses), the six highest priorities identified by the Signatory States are: conducting targeted studies on marine turtles and their habitats (14); establishing or strengthening education and information programmes (12); capacity-building, training and partnerships (11); establishing habitat protection and conservation measures (9); reducing incidental capture and mortality (8); and developing beach management programmes (7). Many other programmes were mentioned, but with less frequency (see also Annex 2).

44.   Seven Signatory States have explored the use of economic instruments for the conservation of marine turtles and their habitats. Few details are provided, but eco-tourism is cited as common theme. Examples include: eco-certification of tourism operations; turtle and nest adoption programmes; revenue-

generating eco-tourism activities; soft loans to affected families; and promotion of alternative livelihoods, such as aquaculture.

45.   Most of the Signatory States reporting have designated a lead agency responsible for coordinating national marine turtle conservation and management policy. However, only a few indicate that the roles and responsibilities of government agencies related to marine turtle conservation and management are clearly defined. A similar number report having conducted a review of the roles and responsibilities of government agencies, but few details are provided.

Part II: Detailed analysis

46.   To provide a visual overview of implementation progress to date, the Secretariat prepared a colour-coded matrix listing each of the 24 programmes of the CMP on one axis and the 24 Signatory States on the other (Annex 1). As reported in Document MT-IOSEA/SS.4/Doc. 8.2, a rating system was devised to evaluate the information provided in reports submitted by Signatory States and contained in Online Reporting Facility.   Six categories were drawn up to summarize the findings at the programme level, as follows:

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

47. 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 for each programme are indicated on the far right hand side of the matrix. These are skewed slightly negatively because the averages include the three Signatories that have yet to submit any report. While it may be interesting to examine the results for any given Signatory State, this has value only so far as it may help to identify areas where a given Signatory 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 that programme more effectively.

48. The matrix displays consolidated results at the level of each programme, whereas the underlying analysis is done at the finer, question level. Thus, each 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. The evaluation criteria that were used to generate the matrix are subject to review and amendment, based on comments requested from the Signatory States. As such, the ratings in the matrix should be considered as provisional until such time as the criteria are agreed.

49. One of the strengths of the programming behind the Online Reporting Facility is that the national reports can be rated very efficiently and the results fed into the evaluation matrix automatically. Once the national reports have been evaluated, the colour-coded matrix can be generated within just a couple of minutes.

50. The general review of implementation that follows has been prepared by analysing the actual responses of Signatory States to each of the approximately 80 questions in the national report template. In other words, the commentary has been prepared largely independent of the colour-coded evaluation matrix; though the two should complement and support each other.

51. In the following analysis, a number of caveats must be borne in mind:

- o Where information has not been provided in relation to a given programme, this does not necessarily mean that activities have not taken place in a given country; rather this is indicative that reporting systems need to be improved. This is most certainly the case in Signatories that have not updated their reports in recent months;

o 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.

OBJECTIVE I: REDUCING DIRECT AND INDIRECT CAUSES OF MARINE TURTLE MORTALITY

1.1 Identification of sites, threats and mitigation measures

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Myanmar, Viet Nam

52.   The national report template allows Signatory States to list by name the nesting beaches, feeding grounds and developmental habitats important for marine turtles in their country. Space is provided to list the species occurring at each site and to identify the nature and intensity of a range of about 15 threats potentially impacting those sites.

53.   The Online Reporting Facility is already set up to conduct rather sophisticated and powerful searches in this regard. Its potential can be demonstrated with a few illustrations of the countless number of queries one can generate. For example, one can query the system to identify:

  o   all sites in Australia where both *Caretta caretta* and *Chelonia mydas* are present;
  o   all sites in the Western Indian Ocean characterised as feeding and developmental habitats;
  o   all sites in the South-East Asia region where exploitation of nesting females is "strong" or the exploitation of live animals at sea is "strong"; and
  o   all sites in Seychelles where there is "little or no" threat of sand mining.

In time, as the data are supplemented and refined, the Online Reporting Facility will be an extremely versatile analytical tool for management purposes.

Site identification

54.   Signatory States have now identified over 500 discrete sites and have categorised them in terms of the habitat types listed above, more than double the number in the system a year ago. Some Signatories have begun to provide geographic coordinates for individual sites, which might make it possible in future to link the sites to the IOSEA Interactive Mapping System (IMapS) and/or to other versatile mapping tools such as 'Google Earth'.

55.   An important innovation has been introduced in the revised Online Reporting Facility. In the past, the reporting template did not allow users to associate a particular species with a particular habitat type. For example, a site might be identified as having nesting habitat and as having *Chelonia mydas* present, but one could not make a definitive link between *Chelonia mydas* and a particular habitat type at that site. The new template allows for such associations to be made so that, for example, a site can be identified as having developmental habitat for *Caretta caretta*. A few Signatory States have begun to make these species-habitat type associations. As more linkages are entered, the search feature of the Online Reporting Facility will be enriched thus aiding research, analysis of data and decision-making.

56.   Another change introduced in the system allows users to give a subjective indication of the importance of a particular habitat type at a given site, relative to other sites within the same country. As users have begun to enter data, it has become apparent that there is a desire to enter these 'relative importance' data at the level of species (for example, to indicate the relative importance of a particular habitat type at a given site for a particular species). As the system cannot presently accommodate this level of detail, further consideration needs to be given to whether it can be modified to serve this purpose.

Threat identification

57.   A majority of Signatories have attempted to give a subjective rating of the intensity of threats at each site. Details can be found in the Online Reporting Facility. Overall, the data are fairly preliminary and of varying quality. The subjective nature of the threat ratings means that caution must be exercised when interpreting the data.

58.   No attempt has been made here to analyse the threat data in detail, but the general overview prepared in 2005 suggests that the most prevalent threats (in terms of numbers of sites affected by threats of

moderate to strong intensity) are: incidental capture in fisheries, natural threats/predation, egg collection, boat strikes, plastics at sea, artificial lighting, exploitation of live animals at sea and exploitation of nesting females. Less prevalent are threats such as: agricultural/urban development, coastal erosion, inshore pollution, vehicles, and sand mining. Subject to availability of resources, it is planned to develop the necessary analytical tools for these 'site-threat' data in the next phase of the project.

Mitigation of threats

59.   In the new reporting template and Online Reporting Facility, the list of possible mitigation measures to reduce threats to marine turtles at particular sites has been expanded to a maximum of twelve, including such things as egg relocation, regulations on building location, vehicle restrictions, predator control etc. As only a few Signatory States have started to fill in the new categories of information, no attempt has been made to analyse these data for the present meeting. This new section should, however, be very informative in the future.

1.2 Identification and application of best practices to minimise threats

General tendency: Partial implementation, good progress
Notable initiatives: Australia, Cambodia, Kenya, Philippines, Seychelles, South Africa, United Kingdom, United Republic of Tanzania, United States

60.   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. Noteworthy initiatives described in some detail include: Australia's comprehensive National Recovery Plan; Cambodia's programme to foster cooperation with coastal fishing communities; Kenya's inclusive national sea turtle conservation programme; Philippines' community-based conservation agreements and data-gathering system; Seychelles' stakeholder involvement in nation-wide monitoring programmes; South Africa's strategic conservation framework; United Kingdom's successful combination of approaches to help recover turtle populations; United Republic of Tanzania's monitoring, conservation education and community involvement approach; and the United States' standardised index site monitoring protocols.

1.3 Correction of adverse incentives that contribute to turtle mortality

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Islamic Republic of Iran, Jordan, Philippines, Seychelles, South Africa

61.   This question having been reformulated in the new template, only about half of the Signatory States identified various adverse incentives contributing to turtle mortality – lack of affordable alternatives to turtle products and low penalties against illegal harvesting being among the most common ones. A few 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; Iran's efforts to use religious edicts to dissuade consumption of turtle eggs and meat; Pakistan's income-generating schemes in key coastal areas; development of turtle tourism programmes in Seychelles; South Africa's sustainable livelihoods programme and restrictions on coastal development. However, in general, this question has not been answered in depth by most of the Signatories – at least not to the extent of reporting in detail on practical approaches that have shown some measure of success.

62.   About a third of 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: a three-year study in Australia that will include a component to examine the socio-economic factors impacting levels of traditional harvest; a 2003 study of sea turtles and local people conducted in Islamic Republic of Iran; an environmental, cultural and social assessment of a fisher community in Jordan; several broad initiatives under way or planned in Kenya; studies in Pakistan on the dependence of coastal communities on marine ecosystems; an in-depth social and institutional assessment for the Philippines' Turtle Islands in 1998; studies in Seychelles to evaluate public attitudes towards turtle conservation and

the socio-economic importance of marine resources; and various pertinent reports produced in United Republic of Tanzania.

1.4 Reduction of incidental capture and mortality

General tendency: Very limited progress reported
Notable initiatives: Australia

63.   The reporting template was significantly modified in 2005 to accommodate questions that would help Signatory States to simultaneously meet reporting commitments in relation to the FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations. The data collection requirements for some of the new questions are substantial. So far less than a third of the Signatory States have attempted to provide comprehensive information. They include: Australia, Islamic Republic of Iran, Jordan, Philippines, Seychelles, South Africa and United Republic of Tanzania. The fisheries described in some detail include: shrimp trawls, set gill nets, anchored fish aggregating devices (FADs), purse seine, longline, driftnet, and other miscellaneous fisheries. The data are incomplete and therefore have not been analysed for the time being. However, it is expected that useful information will be gleaned from a more complete collection of reports. Therefore, Signatory States are encouraged to give priority to completing sections 1.4.1 and 1.4.2 of their reports.

64.   Signatory States were requested, for the first time in 2005, to give a subjective indication of the relative level of fishing effort and impact on marine turtles of the named fisheries. About one-third of the Signatories reporting have attempted to make such an assessment. With some exceptions, the information provided appears to be anecdotal and should be interpreted in that light until supported by more rigorous study. In general, the level of reporting in this area needs considerable improvement.

65.   Australia declined to indicate levels of effort or impact, citing the large number of fisheries operating in that country and lack of accurate information. However, Australia provides a detailed account of its trawl fishery and on the reduction in turtle bycatch observed after the introduction of turtle excluder devices. The impacts of gill net fisheries have not been quantified, but are thought to be relatively low compared to other fisheries. Bycatch of leatherback turtles is reported in certain tuna and billfish fisheries, and these have received increased attention in terms of further study and mitigation techniques.

66.   In many of the other countries that provided information, the impacts of the named fisheries are considered negligible (low or none) or unknown, with some exceptions. In Jordan and in the Islamic Republic of Iran, the impact of set gill nets is considered to be moderate and high, respectively. Jordan also reports a moderate impact of longlines, based on interviews with fishermen and other reports. In the Philippines, nets designed to catch turtles are reported to be highly used, and their impacts high; the same is true for fish corrals, which tend to result in live captures of turtles as well. In South Africa, shrimp trawls and set gill nets are reported to have moderate impacts, while longlines are reported to have high impact. In Sri Lanka, longline effort and impacts are said to be high. United Republic of Tanzania provides very detailed information on the use and impacts of set gill nets, which are though to pose a major threat to all species of turtle found there. Incidental capture in shrimp trawls has not been quantified, but is thought to pose a significant threat to turtles and their habitat.

67.   Although illegal fishing was identified as a serious problem by the Third Meeting of the Signatory States, only a half-dozen Signatories (Australia, Islamic Republic of Iran, Philippines, Seychelles, South Africa, United Kingdom) have so far cited specific examples of illegal fishing impacting marine turtles. These include illegal, unregulated and unreported (IUU) take of turtles in northern Australian waters; continued use of explosive and obnoxious devices in the Philippines; harpooning of turtles at sea in Seychelles; across-border poaching in protected areas by foreign longliners and trawlers in South African waters; and illegal fishing mainly for beche de mer in the BIOT archipelago. An Australian study revealed that the great majority of discarded gill and trawl nets found in northern Australian waters, and considered to be a high risk threat to turtles, were from foreign fishing fleets. The difficulties of addressing the problem of illegal fishing are mentioned, notwithstanding some attempts to deal with it.

68.	Several additional methods of minimizing incidental capture/mortality of marine turtles in fishing activities have been added to the potential list of mitigation measures for Signatory States to report on. These may 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. Very little information has so far been provided in this regard. However, ten Signatories report using devices that allow the escape of marine turtles. Australia also provides a detailed account of its programme to introduce dehookers and line-cutting kits, as well as training on the release of caught turtles, one of the only Signatories to have done so. Given the paramount importance of minimizing incidental capture and mortality in fisheries, this is another area in which reporting needs to be markedly improved, even if it serves only to demonstrate that few countries have been able to implement the full range of mitigation measures.

69.	About half of the Signatory States report on initiatives undertaken with fisheries industries and management organisations to implement by-catch mitigation measures. The extent of these initiatives varies among countries. Australia appears to be most advanced, having adopted a National Policy on Fisheries Bycatch. In terms of specific programmes or measures, Australia, Kenya and South Africa give details of their onboard observer programmes. Only four Signatories (Australia, Islamic Republic of Iran, Kenya, and South Africa) report the use of vessel monitoring systems (VMS) or inspections at sea, in port or at landing sites. About a half-dozen Signatories have conducted training for fishers and/or have produced a variety of educational information materials. Several report on port arrangements for the disposal of shipborne waste. With some exceptions, the information provided in relation to this activity is rather superficial and likely under-reports the measures that have actually been undertaken. Only Australia periodically reviews and evaluates these programmes for their efficacy, carrying out 6-monthly assessments of implementation and reviewing each fisheries bycatch action plan every two years.

70.	A number of Signatory States report on interesting research and development activities in support of bycatch reduction. 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. French and Spanish fleets operating around Seychelles are working on new drifting FAD designs to reduce bycatch. South Africa is experimenting with drumlines to replace bather protection nets and with circle hooks on some longline vessels, and is reviewing prawn trawl bycatch impacts. Studies in United Republic of Tanzania confirm that gillnets, particularly bottom set nets, pose a significant threat to turtles.

71.	With a few exceptions, there appears to be rather little international exchange of information and technical assistance in the area of bycatch mitigation. Australia, through the Australian Maritime College, has conducted research and training on TEDs in Kuwait, and has sponsored community-based conservation work in Papua New Guinea. In 2004, Kenya organised a general marine turtle workshop for countries of the Western Indian Ocean region. Sri Lanka, through the NGO 'TCP', has distributed its by-catch survey findings internationally. The United States has an active programme to exchange TED technical information with all interested countries, and has started programmes to collaborate and share information on longline sea turtle bycatch. Viet Nam is collaborating and exchanging information with SEAFDEC and various international NGOs.

72.	In about half of the Signatory States, large scale drift nets are prohibited or are not used within national waters. A small number of Signatories apparently have no legislative or practical measures in place to prohibit their use, however no further explanation is given.

1.5 Prohibition of direct harvest and domestic trade

General tendency: Some progress, but limited in scope
Notable initiatives: Islamic Republic of Iran, Philippines, Seychelles, South Africa, United Kingdom

73.	Fifteen Signatory States list a number of economic uses and cultural values of marine turtles, the most prevalent being meat and egg consumption, followed closely by eco-tourism benefits, in virtually all of those reporting. Cultural/traditional significance ranked highly in several Signatories. Consumptive use of turtles for shell, traditional medicine and fat also occurs, but is less common. Although Signatories

now have the possibility of attaching a relative importance to each of these values (from high to low), only a few have done so. A more sophisticated analysis may be possible once the data are more complete.

74.   Almost all of the 20 Signatory States responding have already enacted some legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products – except for Bangladesh which is currently considering an amendment to its wildlife act. Islamic Republic of Iran drew attention to the fact that, in 2005, the Environment High Council doubled fines for killing of turtles and harvesting of eggs (to about $670 and $225, respectively). Notwithstanding the legislative provisions mentioned above, about 70% of the Signatory States responding have traditional consumption of turtle meat and eggs. Only Myanmar, Pakistan, Thailand, United Kingdom and United States report no traditional harvest.

75.   Six Signatory States (Comoros, Islamic Republic of Iran, Kenya, Madagascar, Philippines, Seychelles and Sri Lanka) report a moderate to high level of harvest, with comparable levels of impact. Cambodia, Oman, South Africa and Viet Nam all report both low levels and impact of such harvest. In Australia, the levels and impact of traditional harvest are said to be unknown or at least not quantified accurately, and more research in this area is needed.

76.   About two-thirds of the 17 Signatory States that responded indicate that they have established 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. 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.

77.   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. Australia provides details of relevant agreements with Indonesia and Papua New Guinea. Philippines has a bilateral agreement with Malaysia, and intends to deal with the issue of sustainable harvest in the framework of a separate MoU with Indonesia and Malaysia.

1.6 Development of nesting beach management programmes

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Philippines, Seychelles, Sri Lanka, United Kingdom

78.   Almost all of the Signatory States report on one or several measures in place to minimise or reduce the mortality of eggs, hatchlings and nesting females. Two-thirds have regulations on the location and design of buildings, aimed at protecting nesting beaches. About half of them have programmes to clean up beaches and remove debris that could impede nesting, are re-vegetating frontal dunes, and are working to reduce light pollution. Slightly fewer use education and awareness programmes to try to minimise mortality of eggs, hatchlings and nesting females. Restricting vehicle access and predator control are also practiced, but only by about a third of those reporting. Interestingly, only six Signatory States (Australia, Islamic Republic of Iran, Philippines, Sri Lanka, Thailand and Viet Nam) report using egg relocation and hatcheries as a management tool, though this probably understates the real situation.

79.   The reporting template now provides scope for assessing the effectiveness these measures, if only subjectively, but only a few Signatories have begun to add these details. Australia notes that there may be considerable variability in the effectiveness of these measures across different jurisdictions within the same country, making it difficult for such a large country to make a general self-assessment. A 'comments box' allows Signatories to elaborate further, where necessary, which may help to overcome this difficulty.

80.   Only about one-third of the Signatory States indicate that they have undertaken a recent evaluation of the effectiveness of their nest and beach management programmes, and few provide any details of these reviews. The question aims to find out whether programmes are being critically examined to determine, according to certain measurable success criteria, if they are having a positive effect in terms of conserving turtles; but it appears to have been misinterpreted. In general, there is little evidence of best practice in this regard.

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 initiatives: Australia, Kenya, Philippines, Seychelles, South Africa, Sri Lanka, United States, Viet Nam

81.   Only a few Signatory States appear to have measures in place to protect critical habitat outside of established protected areas, and not all of these are fully implemented. These initiatives range from legal frameworks to law enforcement, education, community participation, alternative livelihoods, awards, cash incentive schemes, eco-tourism and other monitoring activities. However, the level of detail in most of the responses is insufficient to assess what is actually being practiced, and this may be a reflection of the difficulty of achieving adequate protection outside of established areas.

82.   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. Only a few appear to have carried out impact assessments specifically addressing marine turtles. About two-thirds of Signatory States monitor water quality, either generally or in localised areas. Australia provides detailed information in this regard. More generally, it is less clear whether or what steps are taken to protect water quality near turtle habitats, including from marine debris. In almost all of the Signatory States, some measure is in place to prohibit the use of poisonous chemicals and explosives, and most provide details of the legislation or regulations, and inspection regimes.

2.2 Rehabilitation of degraded habitats

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Mauritius, Philippines, Seychelles, South Africa, Sri Lanka, United Kingdom, Viet Nam

83.   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 reefs. Most Signatory States describe their activities in this regard, at least superficially. Activities mentioned include monitoring and rehabilitation actions, upgrading of legal protection status, development of recovery plans, relocation of sewage outfalls, reduction of specific threats, and conduct of education and awareness activities. Seychelles provides very detailed information.

84.   Most of the Signatory States that responded are making some effort to recover degraded mangrove habitats, and about half of them describe these programmes in more detail, including location and effectiveness. Sea grass habitat recovery is apparently being undertaken in very few countries, for example through regular monitoring, as well as regulation of dredging activities and coastal development.

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
Notable initiatives: Australia, Philippines, Seychelles, South Africa, United Kingdom

85.   About two-thirds of the Signatory States have conducted baseline studies on marine turtle populations and their habitats. Most respondents cite the relevant literature, ranging from peer-reviewed journals to proceedings and workshops, but it is unclear whether these lists are comprehensive. It would be useful if all Signatories States were to maintain lists of relevant literature and include them in their national reports (as Oman, Seychelles and Australia, among others) have done, at least in part.

86.   Almost all Signatory States are reported to have long-monitoring programmes in place or planned for priority marine turtle populations (only Cambodia, Madagascar, and Mauritius do not) and provide varying levels of detail. On closer examination, however, it appears that only about half of these are programmes of 10 years or longer, based on the information given (Australia, Oman, Philippines, Seychelles, South Africa, United States, Viet Nam). It would be useful if all Signatories States were to indicate when their monitoring programmes began and mention, as appropriate, the species concerned (as Australia and South Africa have done) and whether there have been any breaks in data collection.

87.   Only Australia, Seychelles, United Kingdom and United States have at some point carried out analyses to characterise the genetic identity of their marine turtle populations, while several other Signatories (Islamic Republic of Iran, Kenya, Madagascar, Philippines, South Africa) have collected or contributed samples for eventual use in such research.

88.   Almost all Signatory States reporting have employed tagging to identify migration routes; most provide some details of this work including, in a few cases, information on tag recoveries. About half have carried out genetic studies; most elaborate on the nature of these studies and a few (eg Philippines, United Kingdom) give indications of additional sampling needs in order to better understand turtle migration with their region. The level of detail provided about past activities is generally insufficient to assess the extent to which these collective actions are serving their intended purpose. Whether tagging and genetic sampling has actually helped to identify migration routes is not clearly indicated by most countries. More detailed information is needed.

89.   Just under half of the Signatory States reporting have carried out satellite tracking studies, for the most part opportunistically, but the numbers of turtles tracked are relatively small. Most describe at least some aspects of this work, such as species and population tracked, years of tracking, results obtained, publications, type of transmitter, and planned activities. However, the additional information provided by Signatories is insufficient to assess the efficacy of satellite tracking studies overall, or to help orient the direction of future work in this area. All countries conducting such research should supply more information on the results obtained to date, as well as future plans.

90.   Very few Signatory States report having carried out studies of marine turtle population dynamics and/or survival rates; the level of information varies greatly among these countries. Australia and United Kingdom provide the most information and some references.

91.   Just under half of the Signatory States reporting have carried out some research on the frequency and pathology of diseases of marine turtles; a few mention fibropapiloma in particular. The intensity of the research and the data being collected as well as the frequency of data collection is variable; Australia appears to have conducted the most research in this regard. It would be helpful if published and unpublished reports were cited and if the nature of the work undertaken were described in more detail.

92.   Under half of the Signatory States reporting indicate that they are promoting the use of traditional ecological knowledge in research studies. Most of these countries provide some additional information on

the nature of this work, though it tends to be limited. Only Australia has indicated supporting publications. In general, it would be helpful if 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: Very limited progress
Notable initiatives: Jordan, Philippines, Viet Nam

93.   Several Signatory States are participating in other regional or sub-regional action plans that identify priority research and monitoring needs. These include a memorandum of understanding between the Islamic Republic of Iran and the United Arab Emirates with recommendations on collaborative marine turtle work (not yet initiated); a regional action plan being implemented under PERSGA (in which Jordan is participating); the Philippines-Malaysia Turtle Islands Heritage Protected Area initiative; a Marine Turtle Conservation Strategy and Action Plan for the Western Indian Ocean (cited by Seychelles and United Republic of Tanzania); the ASEAN Marine Turtle MoU (cited by Viet Nam); cooperative research under SEAFDEC and the SEASTAR2000 project in South-East Asia (both cited by Thailand and Viet Nam). 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.

94.   About half of the Signatory States report having conducted studies on genetic identity that involved international collaboration. In some cases, details are given under sections 3.13 or 3.14 of the reports. Slightly more Signatories report have undertaken collaborative studies on conservation status, migration, and other biological and ecological aspects (e.g. fisheries by-catch mitigation, determination of sex ratios, captive breeding, disease, and behaviour etc.). However the quality and amount of detail in the responses varies greatly, making it difficult at times to interpret the information provided. The extent to which these studies can be characterised as involving international collaboration is often unclear.

3.3 Analysis and use of data to improve conservation practices

General tendency: Some progress, but limited in scope
Notable initiatives: Australia

95.   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. More than half the Signatories reporting (Australia, Islamic Republic of Iran, Jordan, Kenya, Madagascar, Philippines, Seychelles, South Africa, Sri Lanka, Thailand, United Kingdom and Viet Nam) at least give a list of the priority species/populations and several include census or trend data in support of their selection. Australia, Kenya, and Pakistan accord equal priority to all marine turtle species found in their waters. Loggerhead turtles figure high on the list of three Signatories: Australia, Madagascar and Viet Nam. Green turtles figure high on the list of 5 Signatories: Islamic Republic of Iran, Jordan, Philippines, Seychelles (some islands), and United Kingdom. Hawksbill turtles figure high in the list of 5 Signatories: Islamic Republic of Iran, Jordan, Seychelles (some islands), Sri Lanka, and United Kingdom; Leatherback turtles figure high in the lists of South Africa, Sri Lanka and Viet Nam. If answered comprehensively by all Signatory States, this query has the potential to provide useful information to help orient the direction of future collective actions.

96.   About one-third of the Signatory States are reportedly reviewing research and monitoring results periodically and evaluating them for their efficacy. Only Australia and Jordan provide additional information to indicate that these reviews may have resulted in programmatic changes. Signatory States were also asked to describe how research results are being applied to improve management practices and mitigation of threats (a reformulation of a question asked in the former template). Only Australia provides new information in this regard. This question – which goes to the heart of whether or not research programmes are well-thought out, are being applied practically to help improve conservation outcomes,

and are modified, as necessary, in the light of critical reviews – is a valid one, but it may be challenging for many Signatories to answer at this time.

3.4 Standardisation of data collection and exchange of information

General tendency: Some progress, but limited in scope (bordering on very limited progress)
Notable initiatives: Australia

97.   About two-thirds of the Signatory States have taken some initiative to standardise methods and levels of data collection – mostly at national, rather than sub-regional levels – and most provide at least a brief account of the efforts made in this regard. It may be useful for Signatories that have adopted standardised methods, including data collection sheets, to provide details and copies to the 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.

98.   More than half of the Signatory States occasionally exchange scientific and technical information and expertise with other Range States. Four – Australia, Comoros, United Kingdom and United States – reportedly do so often (systematically).   The remainder rarely or never exchange information and expertise.

99.   The most common means of disseminating data to other Range States are publications (scientific journals, 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 whether these means are targeted specifically towards other Range States, in order to convey information that might be valuable for conservation/management actions (e.g. on ongoing research, new findings, innovative techniques, unusual levels of turtle mortality, potential threats, etc.). The benefits/outcomes actually achieved through such 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.

100. Fewer than half of the Signatory States (eg Australia, Islamic Republic of Iran, Jordan, Kenya, Philippines, Thailand) 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 toward good progress)
Notable initiatives: Australia, Philippines, Seychelles

101. Virtually all of the Signatory States reporting have to some extent collected, developed, and/or disseminated diverse educational materials, and many have developed and implemented mass media information programmes through television, radio, documentaries, and/or newspapers. Australia, Kenya, Pakistan, Philippines, Seychelles, Sri Lanka, and Viet Nam appear to have been especially active in this area. A more complete and descriptive inventory (including titles, brief explanation of content, target audience, years of production, language versions) 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.

102. Among the target groups: students, teachers and local/fishing communities appear to have received the most attention (by about two-thirds of the Signatories reporting); followed by the media, policy makers and tourists (targeted by just under one-half of Signatories).   The fishing industry, military and policy, and scientists received the least attention. Australia, Myanmar, Seychelles and United Kingdom all provide further details of their respective programmes.

103. Over half of the Signatory States reporting have some community learning establishment, variously described as information centres, displays, interpretative centres, "turtle houses", "environmental corners" and "wildlife clubs". It would be useful 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 (as measured, for example, by changes in peoples' behaviour in the vicinity of nesting beaches).

4.2 Development of alternative livelihood opportunities

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Kenya, Pakistan, United Republic of Tanzania, Viet Nam

104. Nearly two-thirds of the Signatory States reporting have undertaken initiatives to identify and facilitate alternative livelihoods, including income-generating activities, for local communities. The initiatives include: aquaculture and seaweed culture (Australia), work as rangers, observers and marine park employees (Jordan), marine waste-based handicrafts and apiculture (Kenya), tourism activities (Kenya, Madagascar, Sri Lanka), mangrove rehabilitation (Pakistan), provision of soft loans (Philippines), artisan re-training and compensation (Seychelles), beach monitoring/nest protection (South Africa, United Republic of Tanzania), and handicraft skill development (Viet Nam).

4.3 Promotion of public participation

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

105. Most 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, participation in research and conservation programmes, as well as in planning processes. Australia describes in detail a number of initiatives undertaken or planned. It would be worthwhile for all Signatory States that have given brief, though very interesting, responses to both of these questions to elaborate further (describing the programmes in more detail and including time frames, cost etc.; mentioning challenges faced/overcome, as well as any insurmountable difficulties; overall effectiveness; potential for replication elsewhere etc.)

106. Among the incentive schemes used widely to encourage public participation are: gifts of T-shirts for tag returns, "public acknowledgement", and certificates or rewards of recognition for efforts made. Other schemes or devices include caps and sunglasses, school notebooks, paid contracts for protection of nesting beaches, educational booklets for children, safe drinking water, money, and guides for turtle projects. It would be helpful if Signatory States were to elaborate on any incentive schemes that have proven particularly effective over time, mention any difficulties that have been encountered/overcome, and indicate approximate annual cost and funding sources.

107. Almost all of the Signatory States that responded report some participation 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, as well as the establishment of a National Turtle Recovery Group; the formation of a broad-based national sea turtle conservation group in Kenya, known as KESCOM; encouragement of the private sector in Seychelles to take on 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 Sri Lanka and United Republic of Tanzania; and close collaboration among relevant Government agencies and NGOs in Viet Nam.

OBJECTIVE V: ENHANCING NATIONAL, REGIONAL AND INTERNATIONAL COOPERATION

5.1 Cooperative enforcement of trade regulations

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Philippines, Seychelles

108. About two-thirds of the Signatory States have mechanisms in place and cooperate with other States to try to deter *international* illegal trade. Many of these provide further details of the nature of these measures. Collaborators include CITES Management Authorities/CITES Secretariat, Interpol, domestic or foreign customs services, airport and port authorities, wildlife agencies, and various NGOs. Similar numbers have undertaken a national review of compliance with CITES obligations in relation to marine turtles, and have their own CITES training programmes for relevant authorities or participate/cooperate in those of other bodies. However, almost no details are provided in this regard.

109. Almost all of the Signatory States that responded have some measure in place to prevent, deter and eliminate *domestic* illegal 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 (Pakistan, View Nam), prosecution of cases and imposition of fines (Mauritius, United Republic of Tanzania).

110. Very few Signatory States (eg Australia, Seychelles, 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. 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 wish to cite (i.e. provide a reference to) existing published reports prepared for CITES purposes, in order to give a more ample explanation.

5.2 Action plans and further international collaboration

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Jordan, Philippines, Seychelles, South Africa, Sri Lanka, United Kingdom, Viet Nam

111. Just over half 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. Five Signatory States (Australia, Kenya, Myanmar, United Kingdom, Viet Nam) already have national action plans in place. At least five other Signatories (Jordan, Madagascar, Pakistan, South Africa, Sri Lanka and possibly United Republic of Tanzania) are working to finalise national plans, which appear to be at an advanced stage of development. Three Signatories (Bangladesh, Philippines, Seychelles) do not have a national action plan *per se*, but have incorporated measures through specific project activities or at particular sites. Of the Signatories responding, Cambodia, Islamic Republic of Iran, Mauritius and Oman reportedly have no national plans and apparently have not taken steps in this direction. The situation in Thailand is unclear.

112. Overall, progress is being made in this area though there is still limited information 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 regular reviews of their national plans for turtle conservation. The principle of incorporating a formal review process, as Australia and Kenya have done, is considered essential.

113. All of the Signatory States reporting have listed one or more local management issues for which international cooperation is considered necessary to some extent. Several issues were identified in more or less equal number: training and capacity building, identification of turtle populations/migration routes, illegal fishing, poaching and illegal trade in turtle products, and tagging/satellite tracking. Enforcement/patrolling of territorial waters and hunting/harvest by neighbouring countries, though not identified by as many Signatory States, were rated as having relatively high urgency in terms of a need for international cooperation.

114. It is difficult to draw any definitive conclusions in this regard because the data are incomplete for many Signatories. Much of the information was supplied in the previous year's report, the format of which did not provide for subjective rating of importance of a given issue. Only about seven Signatories have so far given a more comprehensive statement of their views. Nevertheless, if all Signatories were to answer the question thoroughly, 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
Notable initiatives: Australia

115. 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: ASEAN-SEAFDEC (cited by Myanmar, Philippines), CBD and CITES (both cited by Bangladesh), FAO (cited by Viet Nam), ROPME (cited by Islamic Republic of Iran, Jordan, Oman), 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). It would be helpful if Signatories were to indicate the potential interest and particular strengths that the organisations they mention might bring to marine turtle conservation, as well as their capacity to take on a broader coordination role at the sub-regional level.

116. Five Signatory States (Australia, Oman, Philippines, South Africa, Viet Nam) report having developed or are participating in networks for cooperative management of shared populations. Australia is collaborating with Indonesia, Papua New Guinea, Timor-Leste and SPREP, through various instruments. Only Australia, Oman and Philippines have indicated involvement in the establishment of transboundary marine protected areas. Australia describes an arrangement with Papua New Guinea, while Philippines concluded a memorandum of agreement with Malaysia to create the Turtle Islands Heritage Protected Area (TIHPA) and is a partner in a tri-partite conservation plan for the Sulu-Sulawesi Marine Ecoregion.

117. 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. The responses so far provided to this question (a reformulation of a question from the previous report) are generally not informative; and consideration might be given to deleting it from the template.

5.4 Capacity building / strengthening of training programmes, partnerships

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Jordan, Kenya, Philippines, Seychelles, South Africa, Sri Lanka, Viet Nam

118. 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. South Africa mentions the importance of collaborating with expert scientists outside of the region to provide expertise that does not currently exist in-country.

119. 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 research, educational programmes, conservation awareness, working with fishermen, and developing an eco-volunteer programme. It would be useful for Signatory States for which this question is relevant to indicate what their existing capacity 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.

120. About two-thirds of the Signatory States reporting have carried out some training in marine turtle conservation and management techniques. Australia, Seychelles, and Viet Nam describe rather extensive activities undertaken in this area, including regular specialised training workshops, provision of funds to regional conservation groups for workshops, development of a code of conduct for tourist operators, and production of training manuals etc. In most cases, it would be helpful if the activities undertaken were described in more detail (mentioning time frames, numbers trained, frequency of repetition, titles of publications produced etc.) in order to give a clearer picture of their efficacy and possible need for more intensive activity. This might also help to demonstrate where synergies could be created through joint (e.g. bilaterally or sub-regional) activities. In general, it is not clear whether or how training is coordinated regionally, although mechanisms are known to exist in some sub-regions.

121. Over two-thirds of the Signatory States reporting 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. In almost all cases, it would be helpful respondents were to describe these partnerships in more detail, particularly if they bring any innovative approaches to turtle conservation and management that might be of interest or relevance to other Signatory States, as models of best practice.

5.5 Review of legislation / strengthening of enforcement

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Islamic Republic of Iran, Philippines, Seychelles, South Africa

122. About one-third of the Signatory States comment, in a self-assessment of sorts, 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. Australia cites in particular good progress towards reducing interactions between marine turtles and commercial fishing boats; engagement of indigenous communities in management; monitoring and remedial actions concerning turtle mortality caused by entanglement in marine debris; as well as protocols under development with regard to turtle nesting and tourism. High fines and information gathering systems contribute to the effectiveness of Iranian laws, however lack of equipment and staff, and large numbers of sites pose logistical challenges. Mauritius reports that turtle populations are found on remote islets away from the mainland, making it difficult to protect their habitats. 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. In South Africa, the system in place is reported to be very effective, with high enforcement associated with relatively limited transgressions. The relevant legislation in Sri Lanka is also reported to be effective. 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.

123. About two-thirds of the Signatory States reporting have conducted or are conducting a review of policies and laws to address gaps or impediments in relation to marine turtle conservation. However, only

a few Signatories elaborate on what this entails. 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 review; giving time frames for the initiation of the review as well as its expected/actual completion; and possibly indicating whether there is a specific reason that necessitated the review).

124. Six 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); differences in legal specifications of fishing mesh sizes (Kenya); weaknesses in feedback systems (Myanmar); enforcement of environmental laws at community levels (Oman); unfamiliarity with new legislation (Philippines); identifying effective communication channels with neighbouring countries (South Africa); and lack of standardized guidelines for the management of hatcheries (View Nam).

PROMOTING AND SUPPORTING IMPLEMENTATION

6.1 Efforts undertaken to broaden MoU membership

General tendency: Some progress, but limited in scope
Notable initiatives: Australia, Kenya

125. Notwithstanding the interest that Signatory States have in encouraging their neighbours to join and participate actively in the implementation of the Memorandum of Understanding, only six Signatories (Australia, Kenya, Philippines, South Africa, United States and Viet Nam) are reported to have encouraged other States to sign the agreement.

126. Eight Signatory States indicated they are currently favourable to amending the MoU to make it a legally-binding instrument; and while six were not in favour. Only seven Signatories responded to the same question posed in a different way (assuming the amendment process were to occur over a longer time horizon). The results were inconclusive.

6.2 Support for Secretariat / Advisory Committee and IOSEA implementation

General tendency: Very limited progress
Notable initiatives: Australia, United Kingdom, United States

127. Three Signatory States (Australia, United Kingdom and United States) have provided substantial funds to the Secretariat for its operations, for organising meetings and for project implementation including Year of the Turtle activities. Australia documents its contributions in detail. The United States has indicated that its Marine Turtle Conservation Act would in future provide a mechanism to support implementation of specific projects.

6.3 Resources for implementation

General tendency: Very limited progress
Notable initiatives: Australia

128. Only Australia, Islamic Republic of Iran, and Sri Lanka make some reference to domestic sources of funding for implementation of marine turtle conservation activities at national levels. All Signatory States are encouraged to document the resources that have been mobilised for implementation of marine turtle conservation activities.

129. Signatory States were requested to identify the conservation and management activities that they consider to be among the highest priorities for action. Almost all responded, 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 (in parentheses), the six highest priorities identified by the Signatory States are: conducting targeted studies on marine turtles and their habitats (14); establishing or strengthening education and information programmes (12); capacity-building, training and partnerships (11); establishing habitat protection and conservation measures (9); reducing incidental capture and mortality (8); and developing beach management programmes (7). Many other programmes were mentioned, but with less frequency (see Annex 2).

130. 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. A challenging area of work requiring more resources and time might be accorded less attention than one that is easier to implement with visible results. By way of example, only one Signatory State attached high priority to the development of alternative livelihoods (ranked 20th out of 24), despite the obvious relevance of this area to the sustainability of marine turtle populations.

131. 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 timeframes within which the programme of work should ideally be conducted.

132. About two-thirds of the Signatory States responding have solicited funds from, or have sought partnerships with, other Governments, major donors, industry, private sector etc for marine turtle conservation activities. The sponsors/partners include, among others: UNDP, World Bank, GEF, WWF, WCS, Conservation International, and various other corporate donors and private foundations (including petroleum and gas industries, hotels, private companies etc). 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 so that lessons might be learned from these experiences.

133. Seven Signatory States have explored the use of economic instruments for the conservation of marine turtles and their habitats. Few details are provided, but 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 (Madagascar, Oman, Pakistan, Philippines, Viet Nam); soft loans to affected families (Philippines), and promotion of alternative livelihoods, such as aquaculture (Viet Nam). 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, numbers of people taking part, benefits to local communities etc.); and to comment more generally on their efficacy and cost-effectiveness, including any mitigating factors – such as increased disturbance, degradation of habitat etc.

6.4 Government coordination/cooperation

General tendency: Some progress, but limited in scope (tending toward good progress)

134. Most of the Signatory States reporting have designated a lead agency responsible for coordinating national marine turtle conservation and management policy. A few (Islamic Republic of Iran, Jordan, Madagascar, Sri Lanka) are apparently working towards that end through internal consultations. However, only a few Signatory States (Australia, Bangladesh, Philippines, United Kingdom) indicate that the roles and responsibilities of government agencies related to marine turtle conservation and management are clearly defined. A similar number report having conducted a review of the roles and responsibilities of government agencies, but few details are provided. The remainder had not conducted or completed such a review.

Remarks

135. Two Signatory States (Australia, Pakistan) would prefer a briefer reporting format. Australia, Kenya, and Seychelles indicate that some redundancy remains in certain questions, which leads to repetition in responses. Mauritius and Seychelles had difficulty responding to some questions either because of perceived ambiguity or difficulty applying a YES/NO response. Seychelles suggests that current responses be logged so that progress can be measured at a later date.

Annex 2. Signatory States' highest conservation and management priorities (ref. para. 129)

Programme (from the CMP)	No. SS	Signatory States attaching high priority to the programme
3.1 Conduct targeted studies on marine turtles / habitats	14	Bangladesh, Cambodia, Islamic Republic of Iran, Jordan, Kenya, Madagascar, Mauritius, Myanmar, Philippines, South Africa, Sri Lanka, Thailand, United Kingdom, Viet Nam
4.1 Establish / strengthen education, information programmes	12	Bangladesh, Cambodia, Jordan, Kenya, Madagascar, Mauritius, Myanmar, Philippines, Seychelles, South Africa, United Kingdom, Viet Nam
5.4 Capacity building, training, partnerships	11	Bangladesh, Cambodia, Kenya, Mauritius, Myanmar, Oman, Philippines, Seychelles, South Africa, Sri Lanka, Viet Nam
2.1 Establish habitat protection/conservation measures	9	Australia, Cambodia, Islamic Republic of Iran, Kenya, Madagascar, Mauritius, Philippines, Thailand, Viet Nam
1.4 Reduce incidental capture and mortality	8	Australia, Kenya, Myanmar, Seychelles, South Africa, Thailand, United Kingdom, Viet Nam
1.6 Develop nesting beach management programmes	7	Australia, Bangladesh, Cambodia, Islamic Republic of Iran, Oman, Sri Lanka, United Kingdom
1.1 Identify and document threats	6	Islamic Republic of Iran, Mauritius, Myanmar, Oman, Philippines, Viet Nam
2.2 Rehabilitate degraded habitats	6	Australia, Cambodia, Jordan, Kenya, Myanmar, Seychelles
3.4 Standardise data collection / exchange information	5	Madagascar, Mauritius, Philippines, Sri Lanka, Thailand
1.3 Conduct studies to correct adverse incentives	4	Bangladesh, Madagascar, Oman, Philippines
4.3 Enhance public participation	4	Mauritius, Myanmar, Seychelles, Thailand
5.3 Enhance cooperation, information exchange mechanisms	4	Bangladesh, Kenya, Seychelles, Sri Lanka
5.5 Review legislation / strengthen enforcement	4	Bangladesh, Cambodia, Kenya, Madagascar
6.3 Seek additional resources to support implementation	4	Bangladesh, Jordan, Mauritius, Seychelles
1.2 Identify/apply best practices	3	Islamic Republic of Iran, Madagascar, Philippines
3.2 Conduct collaborative research / monitoring	3	Bangladesh, Oman, Philippines
5.1 Cooperate to enforce trade regulations	3	Myanmar, Philippines, Seychelles
1.5 Prohibit direct harvest/ domestic trade, except for traditional use	2	Australia, Madagascar
3.3 Analyse/use data to improve conservation practices	2	Islamic Republic of Iran, Philippines
4.2 Develop alternative livelihood opportunities	1	Philippines
5.2 Develop/implement action plans	1	South Africa
6.1 Broaden MoU membership	1	South Africa
6.2 Support Secretariat, Advisory Committee	0	None
6.4 Improve government coordination	0	None