



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

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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 reporting 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 represents the most comprehensive analysis ever undertaken 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 20 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 ultimately to move beyond simply reporting activities (outputs), and instead to focus more attention on the results (outcomes) of any interventions made. In that regard, no apology is made for the level of detail requested in some of the lines 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 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, a compilation of projects contained in the IOSEA Projects Database, available for viewing through the IOSEA website, will be appended to this document. While no attempt will be made to integrate that information, from both nongovernmental and governmental sources, a cursory review will give 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.

This first exercise to review the national reports submitted by Signatory States has also highlighted various aspects of the reporting template itself that are in need of modification. In its current design, the reporting template seeks to reflect as far as possible all of the activities contained in the Conservation and Management Plan and to remain faithful to the phrasing used in that fundamental text. It is clear, however, that there is some inherent duplication and lack of clarity within the CMP that ought to be filtered out in the design of the reporting template. To that end, the Secretariat is undertaking a separate exercise that will consolidate and clarify a number of the questions, and remove a number of them that do not provide useful information, so as to address a number of concerns raised by Signatory States.

In the following analysis, 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. The Secretariat hopes to be in a position, before the Meeting of Signatory States, to prepare a separate matrix that will assess reporting and implementation progress in each of the Signatory States across the same range of programmes.

Executive Summary

Reducing direct and indirect causes of marine turtle mortality

Signatory States have made good progress to identify about 225 discrete sites of relevance to marine turtles, and to categorise them as nesting, feeding and developmental habitats. Most have attempted to give a subjective rating of the intensity of about 15 potential threats at each site. 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. Designation and management of protected areas is the most prevalent measure in place to mitigate these threats. Restrictions on vehicle traffic, modification of fishing gear, tourist management, predator control, nest protection, and artificial light control are among the other measures adopted. The IOSEA Online Reporting Facility has been set up to conduct rather sophisticated queries of these data. It will be an extremely versatile analytical tool for management purposes as the underlying data are supplemented and refined over time.

Some examples of best practice, that provides structure to conservation and management activities, include Australia’s comprehensive national recovery plan and the United States’ standardised index site monitoring protocols. About half of the Signatory States indicated community participation as an important approach for conserving and managing marine turtle populations, and many have conducted socio-economic studies among communities that interact with marine turtles. A Philippines’ study provides some interesting and important results, demonstrating the value of such work.

Signatory States identified economic incentives that need to be corrected in order to help reduce turtle mortality, among them: adjustments to the price of regular meat, income-generating activities to reduce poverty, alternative livelihoods, income from eco-tourism, banning the use of eggs in traditional medicine, and compensating fishermen for damaged nets. This area requires further investigation in all Signatories to elicit more information on the underlying causes of threats to and mortality of marine turtles.

More than half of the Signatory States have developed some gear, device and/or other technique to minimise incidental capture of marine turtles, including devices that allow turtles to escape. Fewer Signatory States employ spatial or seasonal closure of fishing activities to minimise incidental capture. A number of other measures have also been considered or adopted including: closure of beaches to vehicle traffic, encouraging fishermen to release turtles, banning of mechanized fishing and drift nets, and different hook types. Only Australia and United States have exchanged information and/or provided technical assistance to other Signatory States to promote implementation of by-catch mitigation measures.

Most Signatory States have undertaken initiatives with fisheries industries and management organisations to implement various mitigation measures, such as introducing turtle excluder devices (TEDs), establishing observer programmes, banning destructive fishing techniques, and establishing protected areas. Australia appears to be most advanced in this regard, having worked collaboratively to adopt a national policy on fisheries by-catch and various other initiatives.

Many Signatory States have conducted workshops to educate fishers, have on-board observer programmes or vessel monitoring systems/inspections, or have conducted training programmes for TEDs and longline practices. Very few have developed net retention or recycling schemes. Australia is, however, developing mitigation activities in relation to marine debris and is investigating the potential for recycling nets.

Almost all Signatory States have enacted legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products. Nonetheless, about 70% of the Signatory States responding still have some cultural/traditional consumption of turtle meat, as well as consumption of eggs. Four Signatories reported a moderate to high level of traditional harvest of marine turtles, with high levels of impact. Turtles are still used for economic purposes (i.e. for their shell) and for traditional medicine in some Signatory States. About half of the Signatory States have established management programmes that include limits on levels of intentional harvest. Australia and Seychelles provide notable examples. Only a

few have management agreements already in place with other concerned States in relation to sustainable levels of traditional harvest (e.g. Australia and Philippines, with neighbouring non-Signatory States).

Monitoring and protection, education and awareness programmes, and legislation are among the most common measures to minimise or reduce the mortality of eggs, hatchlings and nesting females. Other measures include: predator control, community involvement, egg relocation/hatchery programmes, beach clean-ups, light pollution reduction, and guarding of beaches. In general, more information is needed to assess the extent and effectiveness of these activities. It would appear that only a handful of Signatory States have carried out reviews of their nesting beach management programmes.

Protecting, conserving and rehabilitating marine turtle habitats

Many of the Signatory States carry out assessments of the environmental impact of marine and coastal development, including some that specifically address marine turtles. A majority have regulations regarding design and location of buildings in relation to the shoreline. However, relatively few have regulations on the use of artificial lighting or the transit of vehicles in nesting areas. Several Signatory States have other activities to manage and regulate the use of beaches and dunes, including beach closure/controlled access, controls during nesting seasons, repossession of major nesting areas lost to tourism, prohibition of hunting and harassment of wildlife, and various awareness-raising activities.

Efforts are being made to re-vegetate frontal dunes at nesting beaches, and to remove debris that could impede turtle nesting and hatchling production. Seychelles, in particular, reports on extensive work in various locations; while programmes in Australia, Pakistan and Philippines are reported to have benefited marine turtle conservation. A majority of Signatory States monitor water quality, but it is less clear what steps are taken to protect water from land-based and maritime pollution. About half of the Signatories appear to have incentives or initiatives to assure adequate protection of critical habitat outside of established protected areas, though not all are fully implemented.

Most of the Signatory States are monitoring their coral reefs and/or are making an effort at some level to recover degraded reefs. Activities mentioned include monitoring and rehabilitation, upgrading of legal protection status, development of recovery plans, relocation of sewage outfalls, reduction of specific threats, and education and awareness activities. Most are also making some effort to recover degraded mangrove and sea grass habitats, but the primary effort by most countries is directed towards mangrove reforestation. Sea grass habitat recovery is apparently being undertaken in only a few countries.

Improving understanding of marine turtle ecology and populations

Almost all Signatory States have conducted baseline studies on marine turtle populations and their habitats. Most have monitoring programmes in place, though more information is needed on their duration, continuity and species focus. Most Signatory States have employed tagging to try to identify migration routes, while fewer have undertaken genetic and satellite tracking studies. The level of detail provided about these activities is generally insufficient to assess the extent to which they are serving their intended purpose. Only a few Signatory States have carried out studies of marine turtle population dynamics and/or survival rates. About half conducted research on the frequency and pathology of diseases of marine turtles, though the intensity of the research and data collection is variable. About half of the Signatory States report having promoted the use of traditional ecological knowledge in research studies.

A number of sub-regional initiatives are described that help to identify priority research and monitoring needs (e.g. SEASTAR, SEAFDEC, TIHPA). Many Signatory States have undertaken collaborative studies on genetics, conservation status, migration, and other biological and ecological aspects; however the extent to which this work is truly collaborative is difficult to assess on the basis of the limited information provided.

Signatory States provide complete or partial information on their priority marine turtle populations in need of conservation actions, as well as population trends. Many are using research results to improve the efficacy of management actions, threat mitigation measures, hatchery management practices, and measures to prevent habitat loss.

Half of the Signatory States have attempted to standardise methods and levels of data collection, however only a few clearly have an agreed protocol in place. 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 and international meetings or workshops. Fewer than half of the Signatory States compile data on marine turtle populations of a regional interest.

Increasing public awareness and enhancing public participation

Most of the Signatory States have collected, developed, and/or disseminated diverse educational materials. A more complete and descriptive inventory might give a better sense of whether new initiatives are needed and whether any materials already produced might be used, or adapted for use, in other countries. Many have information or interpretative centres focussing on marine turtles, and have developed mass media information programmes through television, radio, documentaries, and/or newspapers. More information is needed to assess their impact on the general public and their suitability for replication elsewhere. Many Signatories have developed and conducted education and awareness programmes for policy makers, teachers, schools, fishing communities and the media. Other groups targeted include indigenous and local communities, military and civilian personnel, scientists, and tourists.

Many Signatory States have their own, or contribute to other, websites or newsletters to facilitate networking and information exchange. Although few have done so yet, many Signatories indicated that they would be in a position to contribute data on marine turtle populations, nesting, migration and projects to a web-based information resource (i.e. now established through the IOSEA website).

About two-thirds of the Signatory States have undertaken some initiative to involve stakeholders and local communities in the planning and/or implementation of conservation and management measures. It would be worthwhile to describe these programmes in more detail, mentioning the challenges that were faced and overcome, their overall effectiveness and potential for replication elsewhere. Almost all of the Signatories note participation in research and conservation efforts by Government institutions, NGOs, the private sector and/or general community – with notable examples provided by Australia, Kenya and Seychelles. Various incentives schemes commonly used to encourage public participation are also described.

Initiatives have been undertaken to identify and facilitate alternative livelihoods, including income-generating activities, for local communities. They include aquaculture and seaweed culture, apiculture, artisan re-training, handicraft skill development, mangrove rehabilitation, agriculture, fishing and marine ranching programmes, provision of soft loans, and eco-tourism.

Enhancing national, regional and international cooperation

Many Signatory States collaborate with CITES, Interpol, customs services, airport and port authorities, wildlife agencies and NGOs to identify illegal trade routes for marine turtle products. Other steps include reviews of compliance with CITES obligations in relation to marine turtles, and participation in CITES training programmes. Only a few Signatory States appear to have exchanged information or raised compliance and/or trade issues in bilateral discussions or international fora.

Almost all Signatory States have measures in place to prevent and deter domestic illegal trade in marine turtle products. Seychelles has provided detailed information in this regard. Many 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. Several report having encountered problems in ensuring compatible application of laws across and between jurisdictions.

Among the local management issues for which international cooperation is considered necessary are: illegal fishing in territorial waters/international trade, incidental capture of turtles by foreign fleets, harvest of turtles by neighbouring countries, aspects of management and enforcement/patrolling of territorial

waters, and fishing gear technology. Other issues identified as requiring international cooperation include marine pollution/debris, basic research, training/capacity-building, development of alternative livelihoods, and long-term funding. These represent a useful collection of ideas that could serve as a starting point for a more thorough discussion about priorities for international collaboration.

A number of other mechanisms were cited as having potential to facilitate cooperation in marine turtle conservation and management at a sub-regional level. Several Signatory States have taken steps to secure data on incidental capture and/or to encourage Regional Fishery Bodies to adopt marine turtle conservation measures within EEZs and on the high seas. Australia provides an informative response in this regard. Relatively few Signatory States have developed or are participating in networks for cooperative management of shared populations, and only two (Australia and Philippines) indicated involvement in the establishment of transboundary marine protected areas with other countries.

Many Signatory States have conducted training workshops. Australia, Seychelles and Viet Nam describe rather extensive activities undertaken in this area. It is less clearly stated how coordination is achieved regionally. It would be helpful if the activities undertaken were described in more detail to demonstrate where synergies might be created through joint activities.

A number of Signatories have taken steps towards developing a set of key management measures to be used as a basis for more specific national action plans. Informative responses were provided by Australia, Viet Nam and United Kingdom, among others. Overall, limited information is available on the extent to which the provisions of the IOSEA Conservation and Management Plan have been incorporated into more specific plans at the national level. Only a few Signatories appear to have regular reviews of their national plans. Many Signatory States achieve national coordination through various governmental institutions, national committees or other organisations – examples from Australia and Bangladesh are noteworthy. Many Signatories have established one or more partnerships with universities, relevant organisations, and research institutions nationally and/or internationally.

The most common capacity-building need identified is for trained personnel, followed by equipment and infrastructure, and programmatic support. It may be useful for Signatory States for whom 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 due to lack of such resources.

Promoting and supporting implementation

Almost all Signatory States have designated a lead agency responsible for coordinating national marine turtle conservation and management policy, and have undertaken initiatives to encourage cooperation within and among government and non-government sectors. Many have conducted a review of the roles and responsibilities of government agencies related to marine turtle conservation and management. Australia, Philippines and United States have encouraged other States to sign the MoU. Six of the existing Signatories have expressed a preference for it to become a legally-binding instrument in the future.

Australia, United Kingdom and United States have provided funds to the Secretariat for its operations, meetings and website, and for project implementation. Additional resources for implementation activities at national level clearly exist, but are largely undocumented. Funding for marine turtle conservation has also been solicited and received from a range of sponsors including, among others: UNDP, GEF-World Bank, BP, ROPME, WWF, WCS, and Conservation International. The private sector (e.g. petroleum and gas companies, hotels), tourism-related initiatives, and various private foundations have also provided or generated funds for several Signatory States.

Among the activities considered by Signatory States to be the highest priorities for funding are: strengthening of regional collaboration and partnerships, management issues, education and awareness programmes, capacity building, socio-economic issues, and collection of biological data.