ANNEX 7: REPORT OF THE SEVENTH MEETING OF THE ADVISORY COMMITTEE, 5-7 SEPTEMBER 2014

Agenda item 1: Welcoming Remarks

1. The Chair of the Advisory Committee (AC), Dr. Jack Frazier, thanked all participants for having made a tremendous effort to travel all the way to Germany. He encouraged everyone to express their sincere opinions during the meeting. IOSEA Coordinator, Douglas Hykle, welcomed participants to Bonn and introduced his assistant, Ms. Pishum Migraine, who was tasked with recording the minutes of the meeting. Upon request, he explained the absence of the two Advisory Committee members, Dr. Shanker and Mr. Chokesanguan, who were unable to attend because of other work commitments.

Agenda item 2: Admission of observers and adoption of the agenda

2. After the admission of two observers, the meeting participants (Appendix I) briefly introduced themselves. Following discussion, the provisional agenda (Appendix II) was adopted after a number of organisational amendments were introduced by the Chair, who emphasised the need for the Committee to prioritise areas in need of recommendations for consideration by the Signatory States. It was agreed that the following agenda points would receive particular attention: Site Network (item 6.6), Summary of by-catch issues (item 6.7), and Technical Support/Capacity-building (item 6.8). Other important issues such as illegal take and trade, social issues/human dimensions of conservation (item 6.9), and standardarisation/harmonisation (item 6.10) could be covered only briefly. The Secretariat drew attention to four agenda items it had proposed for inclusion, since they would be considered at the Meeting of Signatory States and would benefit from the Committee's advice: Overview of IOSEA implementation (item 6.1); Marine turtle genetic stocks (item 6.2); Summary of illegal take/trade issues in the IOSEA region (item 6.3); and Recommendations arising from species assessments (item 6.4).

Agenda item 3: Overview of arrangements for the Seventh Meeting of the Signatory States (SS7)

3. The Coordinator provided a brief overview of the arrangements for the subsequent 4-day Meeting of the Signatory States. He anticipated the participation of about 50 delegates from 25 countries, noting that several important Signatory States would likely not be represented. A small number of nongovernmental and private sector organisations were expected to attend. It had been hoped that the CITES Secretariat would send a representative to participate in the discussions on illegal trade, but this was not possible because of other commitments. While participants from a number of countries had experienced difficulties securing visas enabling them to travel to Germany, mainly due to the lateness of their applications, the Secretariat had received good cooperation from the German authorities to try to expedite the visa process.

Agenda item 4: Summary of objectives of the present meeting of the Advisory Committee

4. The schedule provided for a two-day meeting to complete most of the agenda items, including the formulation of recommendations for the Signatory States which are captured in this meeting report. The third day was reserved principally for discussion of the nominations to the IOSEA Marine Turtle Site Network – the results of which are appended to the report. Dr. Frazier welcomed arrangements made for the Western Indian Ocean – Marine Turtle Task Force to hold discussions, among other things, on the socio-economic and cultural aspects of marine turtle conservation, during a separate meeting to be held simultaneously on Day 3 at the same venue.

Agenda item 5: Review of past work of the Advisory Committee and its members since the 6th Meeting of the IOSEA Signatory States

5. The Chair drew attention to the Objective of the IOSEA Memorandum of Understanding (MT-IOSEA/SS.7/Inf. 02) and also the mandate of the Advisory Committee as described in its Terms of Reference (MT-IOSEA/SS.7/Doc.13) to remind the members of their broad responsibilities. He emphasised the need for the Committee to concentrate its efforts on issues expressly stated in these core texts. He opined that these fundamental activities should be better addressed by determining priorities as well as diversifying the membership of the Committee. He provided a compilation summarised activities of AC members since the last meeting of the Signatory States (Appendix III).

Agenda item 6: Summary of the objectives of the7th Meeting of the IOSEA Signatory States

(a) Overview of IOSEA MoU Implementation and Site-based Information

6. The Coordinator introduced the "Overview of IOSEA MoU Implementation" (document MT-IOSEA/SS.7/Doc. 6), which provided an exhaustive analysis of the national reports submitted by Signatory States. It was complemented by a second document containing "Site-Based Information on Species, Habitats, Threats and Mitigation Measures" (document MT-IOSEA/SS.7/Doc.6.1). The SS7 meeting would be asked to focus mainly on the executive summary and Document 6, Part I, which summarised the main findings. Among the many observations, suggestions and recommendations put forward by the Secretariat, he highlighted a number of issues for which Advisory Committee/SS7 feedback was sought, corresponding to the points in the table of Part I[1]. At the suggestion of Dr. Tiwari, it was agreed that the points should be taken up in the course of the discussion of the corresponding agenda items, with a review done at the end of the meeting to see whether anything was missed. In relation to national reporting, the observer from South Africa recommended that the report template include a temporal dimension, so as to clarify when turtle conservation activities are current as opposed to past; and Dr. Miller suggested that the questions in the national report template pertaining to illegal trade and take be revised and strengthened. Later, the Secretariat suggested that those who complete the reports could be requested to include annotations to indicate the year in which the information was entered; and that the instructions in the sections on illegal take/trade could be elaborated further to indicate more precisely what a comprehensive response should include.

(b) Marine Turtle Genetic Stocks

7. Dr. Limpus presented the main conclusions of a paper he co-authored with Dr. FitzSimmons, concerning marine turtle genetic stocks of the Indo-Pacific (document MT-IOSEA/SS.7/Doc. 10.2), to be considered by the Meeting of the Signatory States. He noted that while the Site Network nomination process had concentrated on nesting beaches, other areas associated with all marine turtle life stages, such as foraging areas and migratory corridors, are also important for the purpose of assessing and ensuring the viability of turtle stocks. While the maps presented in the paper clearly illustrate areas in need of more genetic sampling and research, the Committee agreed that these findings on genetic stocks needed to be translated into concrete recommendations for follow-up activities by Signatory States, particularly in relation to collaborative research and management. For instance, it was suggested that data collection should be intensified through regional collaboration, and technical support offered to less developed countries, as well as through partnerships with five recognised genetics laboratories. Also, the genetics work could be linked more closely with the Species Assessments and the Site Network process, which could help to identify index beaches and priority foraging areas. The meeting agreed to form a working group to develop succinct recommendations, as follows.

[1] 1. Descriptions of exemplary approaches; 3. Adverse incentives; 14. Critical review of management programmes; 20. Analysis of international flipper tag data; 24. Species assessment (for green turtles; 26. Standardisation/harmonisation of methods; 27. Review of education/awareness initiatives; 28. Alternative livelihood opportunities; 36. Training effectiveness and synergy. *(Numbers refer to the corresponding paragraphs in the table in Part I of document MT-IOSEA/SS.7/Doc.6, which the Secretariat introduced in the meeting.)*

8. In order to understand the distribution of turtles away from the nesting beach using genetic analysis, it is essential to identify genetic characteristics of the nesting populations.

- Signatory States should prioritize which genetic stocks need identification at nesting and foraging areas and, where possible, on the high seas;
- The species assessments & site network process should inform the prioritization of genetic analysis of populations;
- The Secretariat will assist countries with contact addresses for applying for CITES permits;
- The Advisory Committee will assist with contacts for laboratories specializing in sea turtle genetics.

(c) Summary of illegal take/trade issues in the IOSEA region

9. After discussing briefly the comprehensive review of illegal take and trade prepared by the Secretariat (document MT-IOSEA/SS.7/Doc. 10.1), the Committee recommended that the Secretariat try to raise the profile of marine turtle trade issues among intergovernmental organisations / networks that focus on other aspects of wildlife crime and to collaborate more closely with CITES, ASEAN-WEN and TRAFFIC. The Secretariat could also give more visibility to marine turtle trade issues on the IOSEA website, for example by posting announcements on meetings organised by CITES and TRAFFIC, and featuring exemplary legislative and enforcement actions carried out by Signatory States. It was proposed that the existing paper, which could serve as an entry point to the topic, should be updated and submitted to CITES COP17, to be held in South Africa in 2016. The observer from the United States noted that the Secretariat of the Inter-American Sea Turtle Convention was already collaborating closely with CITES and that a joint approach could be productive. The Committee agreed that more consideration should be given to the issue of marine turtle poaching and trade in the Site Network proposal evaluation process. It was suggested that one way to achieve this would be to request more explicit mention of turtle exploitation and poaching in the section pertaining to threats affecting marine turtles in the vicinity of the site, and to revise the evaluation criteria accordingly.

(d) Recommendations arising from species assessments

10. Introducing document MT-IOSEA/SS.7/Doc. 9, the Coordinator recalled the preliminary follow-up actions that had been drawn up, based on the species assessments that had been developed under the aegis of the Advisory Committee in recent years, namely for the leatherback (document MT-IOSEA/SS.7/Inf.10) and the loggerhead (document MT-IOSEA/SS.7/Inf.11). The meeting formed two working groups of four members each to evaluate priorities for work arising from the information and management gaps identified in the respective species assessments, to prepare more concrete proposals for consideration by the Signatory States during the sub-regional consultations at SS7. With regard to the leatherback turtle (for which 4 brief priority project concepts were developed), the Committee proposed four actionable project concepts to be undertaken: in Sri Lanka, where monitoring and sampling is needed; in places where there is egg relocation and hatcheries (particularly in Malaysia and Thailand); in places where coastal management practices (e.g., dune stabilization) are of concern; and in Indonesia, where there is poorly documented widespread, low density nesting (Appendix IV). The working group dealing on the loggerhead assessment presented three project concepts to: elucidate hatchling production rates and post-hatchling dispersal in the Indian Ocean; elucidate nesting activity on Socotra Island (Yemen), mainland Oman, and Sri Lanka; and elucidate vulnerability of nesting beaches in the IOSEA region (Appendix V). All project proposals were endorsed by the Committee, before submitting them for consideration by the Signatory States. It was suggested that in subsequent stages of the process, the Secretariat should seek funding from other partner organisations such as NGOs.

11. With reference to the priority species/management units in need of conservation action listed by Signatory States in their national reports and presented in the Secretariat's Overview of IOSEA Implementation, the Committee noted the value of developing comparable assessments for other species. After discussing the merits of developing assessments for either green or hawksbill turtles, recognising the significant effort that had gone into the preparation of the most recent loggerhead assessment, and taking into account recent/ongoing assessment work of other bodies, it was agreed that the next IOSEA assessment should focus on hawksbill turtles. Drs. Limpus, Hamann and Miller volunteered to form a committee to take the work forward intersessionally.

(e) Thematic Workshop I: Potential solutions to light pollution: technology, management and regulation

12. The Coordinator announced that the workshop planned for the second day of the SS7 meeting might have to be cancelled, as the main organiser had just notified him of his inability to participate. After further consultation, it was agreed that an abbreviated 45-minute workshop would go ahead with contributions from Drs. Limpus and Hamann supporting the main collaborator in the original workshop plan, Dr. Kellie Pendoley. A second workshop on stakeholder engagement, being organised by Dr. Peter Richardson, was unaffected by the change in plans. Dr. Limpus sought an assurance that for future workshops associated with Meetings of the Signatory States, the Advisory Committee would be consulted earlier in the planning process and given an opportunity to suggest topics for workshops and contribute expertise. The issues of predation/egg loss and use of hatcheries were among the topics raised.

Review of pending commitments of the Advisory Committee

(f) Site Network

13. The Advisory Committee acknowledged the important efforts invested by some of its members, as well as by the Secretariat, towards the development of the IOSEA Site Network over the past decade. It was regretted that many late submissions from Signatory States, some of which were received only a few days before the Meeting, had prevented the evaluation process from being as equitable and effective as it could have been otherwise, and had failed to appreciate and honour the large amount of time and resources dedicated by the Advisory Committee to this voluntarily exercise. On the other hand, the Chair commended the United Republic of Tanzania for having submitted the first candidate site within the timeframe defined at the Sixth Meeting of the Signatory States. The Committee welcomed the Secretariat's suggestion to invite a constructive discussion at the SS7 Meeting of the challenges faced by Focal Points in meeting their collective commitments.

14. The meeting developed a working document summarising the evaluation status of the ten Site Network proposals submitted by Signatory States. (An eleventh, incomplete proposal submitted informally by Thailand had not been transmitted to the Committee, as the proponent indicated that they would not be in a position to finalise the submission on time.) Clarification was needed about the formal endorsement of two of the proposals, submitted by Comoros and the Philippines, respectively. With regard to the latter, it was decided that the deadline for confirmation of the nomination status could not be extended beyond 6 September. With regard to the proposal by Comoros, it was later confirmed that indeed the document had the full endorsement of the government.

15. The Committee agreed to designate a 'mentor' from among the members present for each Site Network proposed, to provide feedback to proponents to help them strengthen their proposal during and/or after IOSEA SS7. With a view to improving the quality of nomination proposals submitted to future Meetings, and simplifying the process, it was also agreed that advisory assistance should be offered to proponents during the completion phase of the Site Information Sheets, but that such "pre-submission" mentors should serve only as resource persons and not be involved in the writing of the proposal.

16. Considering the Site Network proposals that had already been reviewed, the Committee observed a lack of understanding among certain proponents of some of the required elements, and suggested that the Site Information Sheet template be revised to clarify some sections. The Chair emphasised that approved Site Network proposals would be fundamental for not only developing the network, but also for raising support and recognition of the process; hence approved proposals must serve as exemplary "show pieces" for the following stages of its development. The Secretariat reiterated its commitment to undertake editorial revisions of the submitted proposals to correct linguistic or organisational deficiencies, without affecting their substance, prior to their publication on the IOSEA website. Similarly, related Site Network information materials such as the template, evaluation criteria and website page might benefit from repackaging as to make them more attractive to potential donors.

Procedure for review and evaluation of proposals

17. With reference to document MT-IOSEA/SS.7/Doc. 7, and considering the exceptional situation generated by numerous late submissions, the Secretariat proposed a decision-making framework to assist the Advisory Committee to reach conclusions about the evaluations of the proposals under consideration, with a view of making clear recommendations to the Meeting of Signatory States. After lengthy discussion, the methodology was amended to include an additional category, and to include deadlines for re-submission of proposals depending on their status category. The Committee rejected as impractical the possibility of inter-sessional evaluation and endorsement of Site Network proposals submitted by Signatory States. It was agreed that the suggested evaluation framework (Appendix VI) should be submitted to the Meeting of Signatory States for review and final endorsement, with the understanding that the guidelines constituted a unique, one-time arrangement for the present meeting, in order to deal with the problem of proposals that had been submitted late. It was further agreed that, once the Advisory Committee had reached consensus on a final recommendation with respect to each of the nomination proposals, the designated mentors should contact the proponents to encourage any necessary revision of their proposal, during or after the Signatory State meeting. This initial interaction might be scheduled after SS7 agenda item 8a (Network of Sites of Importance for Marine Turtles) had been introduced.

Procedure for follow-up review and evaluation of approved sites

18. The Chair alerted the meeting that in the future there was likely to be a need for re-evaluation of sites within the Network and raised the question of when and how this process might be dealt with, and against which criteria – an issue that had also been mentioned by audience members in a number of briefing sessions in which the Secretariat had participated over the last year. However, the question had not yet been formally raised or discussed among the Signatory States. The Committee recognised the value of periodically re-evaluating sites once the implementation process had been initiated, but considered it premature at this stage of the Site Network's development to enter into detailed discussion of the matter. An appropriate time frame would need to be agreed for assessing trends in abundance of nesting/foraging turtles, as well as changes in management practices and/or human pressures at particular sites. It was proposed that this discussion, including consideration of a reporting template for network sites, be taken up at the next Meeting of Signatory States (SS8).

Evaluation and follow-up

19. The Committee discussed the modalities for evaluating the nominated site network proposals, making use of a modified version (Appendix VII) of the draft Evaluator Rating Sheet annexed to the IOSEA Site Network Evaluation Criteria (MT-IOSEA/SS.7/Doc. 7, Annex 1). The final review was to be considered by the Committee before mid-day, 7 September, with two independent reviewers from the Advisory Committee assigned to each proposal. The rating sheets would be annotated with commentary explaining the rationale for each score. It was further agreed that reviewers would note any particular difficulties encountered with the Evaluation Criteria or Site Information Sheet template, with a view to documenting and discussing them collectively at the end of the review process. In this

regard, Dr. Limpus noted that marine turtle abundance is not in all cases a suitable criterion for assessing the importance of a site, such as in the case of smaller management units. The Committee suggested that, in the future, Signatories proposing sites with small but significant nesting populations (in terms of management units) invest efforts in developing complementary arguments to justify the inclusion of such sites in the IOSEA Site Network.

20. The conclusions of the Advisory Committee's deliberations are summarised in Appendix VIII. The Committee acknowledged that irrespective of the recommendations offered by the Advisory Committee to the Meeting of Signatory States for consideration and endorsement, the final decision about which sites should be included in the IOSEA Site Network ultimately rests with the Signatory States.

Financial and logistical support

21. The Chair reminded the meeting that at SS6 there had been an agreement to begin the process of seeking financial support for Site Network development and implementation. The Coordinator further explained that the Site Network Resolution of SS6 called for the establishment of "a steering committee to seek financial support for the implementation of the Site Network and to consider other operational issues that may arise intersessionally", the Coordinator mentioned his attempts, in consultation with the United States Focal Point, to lay the groundwork for such a steering committee. Preliminary contacts had been made with foundations that might have an interest in the Site Network, with nongovernmental organisations with expertise in fund-raising and, most recently, with corporate interests that might eventually see the Site Network as a worthy investment for funds that are part of mandatory conservation offset schemes. The Committee emphasised the urgent need for all of these avenues to be pursued more actively in the months following the meeting, with the active participation of the Signatory States.

(g) Summary of by-catch issues in the IOSEA region

22. With reference to document MT-IOSEA/SS.7/Doc. 10.4, the Coordinator drew attention to the analysis the Secretariat had prepared of national reports submitted by member States of the Indian Ocean Tuna Commission (IOTC). The review demonstrated and underlined the importance for IOSEA to further develop partnerships with IOTC, which had shown interest in marine turtle by-catch issues in the Indian Ocean in the recent past, as evidenced by a dedicated resolution on the subject (12/04). The IOTC Scientific Committee had recommended collaboration with IOSEA to improve data collection and to offer specialised training to increase post-release survival rates of marine turtles. The Coordinator urged the Committee to take advantage of these opportunities to enhance IOSEA's involvement in by-catch mitigation efforts, for instance by contributing papers to the IOTC's Working Party on Ecosystems and Bycatch (WPEB). The observer from the United States offered to investigate, within her own organisation (NOAA), the possibility of collaborating with IOTC/IOSEA in delivery of technical support, such as marine turtle-related observer training. For its part, the Advisory Committee expressed its willingness to consider favourably IOTC requests for technical advice, subject to financial support and availability.

23. The Advisory Committee noted that by-catch issues were problematic to deal with due to a paucity of data and lack of standardisation of certain parameters, as well as their complex nature, stemming from different marine turtle species, fishing gear and levels of fishing effort (industrial/artisanal, domestic/international) involved. Hence, the organisation of a single technical workshop may not be effective to adequately address by-catch issues. Instead, the Committee encouraged Signatories to develop partnerships with a variety of NGOs to involve them further in by-catch data collection and in the implementation of mitigation measures at the ground level in artisanal fisheries. This complementary approach could be pursued without additional financial commitment from the Signatories. The meeting also suggested that Signatory States begin addressing by-catch issues in the countries and locations that are identified as priority areas in the species assessments. It

was noted that one of the candidates nominated to serve on the Advisory Committee has a fisheries background, which would enhance the Committee's overall ability to interact with these bodies.

24. The Committee recommended that the Secretariat improve the visibility of by-catch issues by making use of opportunities offered by the IOSEA website. This could be achieved by adding a section on by-catch on the home page (including an updated version of Doc. 10.4.) and linking to relevant videos and other information material produced by other organisations (for example in Australia and the United States). The meeting also briefly reviewed a PhD proposal focused on the impacts of fisheries activities on marine turtles in the Indian Ocean. Such initiatives, coming from academia, provide additional, robust information, and the Chair strongly encouraged other similar proposals that should produce much-needed information, from Committee members or other researchers.

(h) Technical support / Capacity-building

25. Dr. Miller gave an in-depth presentation of the history, methods and challenges faced in the development of the IOSEA Technical Support / Capacity-building Programme. The goal of the programme, as defined in draft document MT-IOSEA/SS.7/Doc. 8, was to strengthen the technical and institutional capacity of the Signatory States in order to better implement the IOSEA Conservation Management Plan (CMP). The Secretariat noted that although the programme had yet to meet its objectives, a number of training workshops had been successfully completed, several further expressions of interest were under consideration, and modest financial support from the United States Marine Turtle Conservation Fund was available for the implementation of small projects. The Committee provided constructive feedback to Dr. Miller with regard to his planned presentation to the Signatory States, which demonstrated the value of the IOSEA Online Reporting System as a means of capturing detailed and useful information from Signatory States.

26. Dr. Tiwari observed that the Technical Support / Capacity-building Programme programme and the Site Network process had the potential to strengthen each other. The former served as an incentive for Signatories in need of capacity building to explain this clearly in their respective Site Network proposals, given that the Site Network process recognised technical support/capacity-building needs, as documented in the Site Information Sheets. The Site Network, in turn, could help to identify which technical support/capacity-building programmes should be implemented as a priority. In that regard, the Committee encouraged Site Network mentors to help proponents identify where the IOSEA Technical Support / Capacity-building Programme could address training needs at their site, as well as help articulate more precisely their actual resource requirements.

27. The Chair opined that the Committee should recognise and give credit to the training programmes already existing throughout the IOSEA region and to support these, through promotion of greater collaboration throughout the region. This would make the implementation of the relatively new IOSEA Technical Support / Capacity-building programme more effective by optimising resources, and strengthening regional cooperation. Other members of the Committee noted that it was the duty of the Advisory Committee to propose options to Signatories where they were needed and requested. The Coordinator suggested that the sub-regional consultations of the Meeting of Signatory States would be an appropriate forum for identifying technical support / capacity-building needs in IOSEA Signatory States. Accordingly, Committee members were assigned responsibility for participating in the different sub-regional groups and clarifying the intentions of the Advisory Committee in developing a Technical Support / Capacity-building Programme, with an ultimate goal of promoting self-sufficiency.

Review of critical yet unaddressed issues

(i) Social issues/human dimensions fundamental to the objectives of the IOSEA

28. The Coordinator briefly introduced MT-IOSEA/SS.7/Doc. 10.3 and Addendum, which had been prepared in response to a need identified by the Sixth Meeting of the Signatory States. The Committee noted the importance of taking account of social issues/human dimensions in marine turtle conservation, but acknowledged the limited capacity within and beyond the Advisory Committee to adequately deal with them. Efforts had been made in the past to recruit members with socio-economic background into the Advisory Committee, with mixed results. The Committee learned that efforts were underway in the Western Indian Ocean – Marine Turtle Task Force (WIO-MTTF) to try to organise a series of workshops on social issues/human dimensions which, if realised, might serve as a way forward for other sub-regions to emulate; this important initiative was applauded by the meeting and further discussion of the topic was expected during the Sub-regional consultations in the coming days. Combined with the inputs prepared for the present Meeting of Signatory States – notably, the comprehensive paper prepared by the Secretariat and a thematic workshop on stakeholder engagement that was planned for 10 September – these efforts constituted positive developments in a challenging area of investigation and management.

(j) Standardisation / harmonisation of technical terms, protocols, methods, reporting, etc.

29. The Chair noted that – bearing in mind core IOSEA documents, such as the Conservation and Management Plan – it is a duty of the Committee to promote regional standardisation of technical terms, protocols, methods and reporting, with a view to enhancing regional cooperation, which is at core of IOSEA's mandate. After lengthy discussion, the Committee recommended that any data collection project conducted in the region should report rigorously on the methodology followed, whatever the method chosen among the many options available. The Coordinator encouraged members to take note of discrepancies or inconsistencies observed in the descriptions provided in Site Network proposals being reviewed. As a first step, the Committee suggested that a glossary of standardised terms might be prepared for inclusion in the IOSEA website. It encouraged the Secretariat to supplement the existing links to various conservation/management manuals already contained in the Electronic Library of the IOSEA website. The Committee agreed that the issue of standardisation/harmonisation should be kept under review.

Agenda item 7: Review and evaluation of the Advisory Committee

30. The Chair introduced a questionnaire, which had been discussed earlier in other fora, and had been circulated to members of the Committee before the meeting; to maintain anonymity, the responses to the questionnaire were compiled by a third party. The exercise was intended to collect frank views on how to make the Committee more effective and efficient. Members were invited to review the comments which had been compiled and circulated in a single document. The importance of periodically conducting critical self-evaluations was stressed.

Agenda item 8: Recommendations of the Advisory Committee (Appendix IX)

31. During the course of the meeting there were repeated comments relevant to numerous overarching issues. In particular these included the need to: provide the Signatory States with clear recommendations; set clear priorities; design proposals that are "actionable"; establish and comply with timelines; make use of and inter-link IOSEA initiatives, such as site-based information, species assessments, and site network proposals; recognise the common lack of basic information and ensure the availability of up-to-date, credible information; ensure that spatial, temporal, and organisational/institutional scales are clear; strive for quality control; promote and optimise cooperation at various levels (local, national, bi-national, sub-regional, regional, and beyond) – for example, with the Indian Ocean Tuna Commission; follow-up on and evaluate various initiatives;

show-case the relevance of IOSEA initiatives to those of other programmes; and involve a responsive Advisory Committee in advising at various levels of IOSEA initiatives.

Agenda item 9: Other business

32. The Chair indicated that he had been invited to report orally to the Meeting of the Signatory States on 8 September on the main issues considered during the Advisory Committee meeting and on its proposed recommendations. He invited all members of the Committee to provide written inputs to the present report, to be validated by the Committee.

33. The Committee drew attention again to two issues captured elsewhere in this meeting report, relating to a potential, future workshop on predation issues, and a need to review the IOSEA national report template, in particular in relation to temporal information and illegal trade issues.

Agenda item 10: Closure of the meeting

34. Several members of the Committee expressed their gratitude to the Chair for his investment of time and effort in attempting to ensure efficient communication within the Committee. The Chair congratulated all members of the Committee for their dedication and adjourned the meeting.

LIST OF APPENDICES

Appendix I

LIST OF PARTICIPANTS TO THE SEVENTH MEETING OF THE IOSEA ADVISORY COMMITTEE

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Appendix II

AGENDA OF THE SEVENTH MEETING OF THE IOSEA ADVISORY COMMITTEE

1. Welcoming remarks

2. Admission of observers and adoption of Agenda

3. Overview of arrangements for the Seventh Meeting of Signatory States (SS7) (*Secretariat*)

4. Summary of objectives of the present meeting of the Advisory Committee

5. Review of the work of the Advisory Committee and its members since the 6th Meeting of the IOSEA Signatory States

6. Summary of the objectives of the Seventh Meeting of the IOSEA Signatory States (*Items of particular relevance to the Advisory Committee*)

    (a) Overview of IOSEA MoU Implementation/Site-based Information [**Doc .6, Doc. 6.1**]
    (b) Marine Turtle Genetic Stocks [**Doc. 10.2**]
    (c) Summary of illegal take/trade issues in the IOSEA region [**Doc. 10.1**]
    (d) Recommendations arising from species assessments [**Doc. 9**]
    (e) Thematic Workshop I: Potential solutions to light pollution: technology, management and regulation

    <u>Review of pending commitments of the Advisory Committee</u>

    (f) Site Network [**Doc. 7**]

        Procedure for review and evaluation of proposals
        Procedure for follow-up, review and evaluation of approved sites
        Evaluation and follow-up modifications
        Financial and logistical support

    (g) Summary of bycatch issues in the IOSEA region [**Doc. 10.4**]
    (h) Technical support / Capacity- building [**Doc. 8**]

    <u>Review of critical yet unaddressed issues</u>

    (i) Social issues/human dimensions fundamental to the objectives of the IOSEA MoU [**Doc. 10.3**]
    (j) Standardisation/harmonisation of technical terms, protocols, methods, reporting, etc.

7. Review and evaluation of the Advisory Committee

8. Recommendations of the Advisory Committee

9. Other business

10. Closure of the meeting

Appendix III

RECENT ACTIVITIES (FROM SS6 TO SS7) OF MEMBERS OF THE IOSEA ADVISORY COMMITTEE
(as at September 5)

Ali Al Kiyumi

Administration and management of programmes relevant to marine turtles/protected areas/etc.

Legislations, laws and monitoring:

- Royal Decree (114/2001) and Royal Decree (6/2003) that protect wild species of sea turtles (locally)
- Ranger employed by Ministry of Environment and Climate Affairs (MECA) to patrol in protected areas (locally)
- Regional protection of sea turtles which are known to migrate to other countries beaches or coast
- Regional cooperation in research for sea turtles, especially genetic studies
- The Environment Society of Oman (ESO) has been managing a Marine Turtle Conservation Programme since 2008 that focuses on Loggerhead Turtles on Masirah Island. Additional regional work has been done on Hawksbill Turtles at the Damaniyat Islands in collaboration with the Ministry of Environment and Climate Affairs (MECA) and EWS-WWF.

Education and training relevant to marine turtle research and conservation

With regards to awareness and education the following has been done by MECA and the other important partners:

- Awareness campaigns in local schools and women societies.
- Visitors center was constructed in Masirah Islands and Ras al Hadd Natural Reserve
- Community Outreach projects done by the ESO on Masirah Island such as:
    - The Annual Masirah Festival which takes place at the beginning of the loggerhead nesting season;
    - The deployment of signage and public information posters on Masirah island promoting turtle conservation.
    - ESO hired three local field assistants on Masirah Island since 2009 (initially hired as part-time but now part of the full time staff of the organization). The Fields Assistants have been receiving continuous training and capacity building on monitoring, field surveying, satellite tagging, data collection and management. They are involved in other conservation projects targeting the Egyptian Vulture and the Arabian Humpback Whale species, which enhances their field skills.
- Outreach activities have been initiated on Masirah Island, notably:
    - Masirah Annual Turtle Festivals in 2010, 2011, 2012 and 2013
    - Signage deployment including turtle conservation messages on the Damaniyat Islands in 2012 and on Masirah Island in 2014

Fund-raising relevant to marine turtle programmes and other activities

Oman does not hold fundraising campaigns specific to marine turtle programmes.

Policy development relevant to marine turtle research, conservation, education, and training

Locally:

- Formation of a national committee of sea turtle conservation projects in the Sultanate of Oman by ministerial decision (85/2013), which aims throng its specification to enhance sea turtle conservation in the Sultanate of Oman.
- Declaration of Natural Reserves: Ras Al Hadd Sea Turtle Natural Reserve was proclaimed by Royal Decree No.25/96. It aims to protect marine turtles ,their nesting sites and eco-tourism
- Establishment of a visitor center at Ras Al Jinz in 2008

Internationally:

- The Sultanate ratified on 16 March 2004 the Memorandum of Understanding for the protection and management of marine turtles and their habitats in the Indian Ocean and South East Asia (IOSEA), which became effective for Oman on 1June 2004

Research activities relevant to marine turtles

The following papers have been published on sea turtle studies since 2011:

- Al-Bahry, S. N, Mahmoud, I.Y., Melghit, K., Al- Amri, I. (2011). Analysis of Elemental Composition of the eggshell before and after Incubation in the Loggerhead Turtle *Caretta caretta* in Oman .*Microscopy and Microanalysis*, 17, 1-9.
- Mahmoud, I. Y., Al-kindi, A. Y., Khan, T., Al-Bahry, S. N. (2011). Detection of Low Plasma Esradiol Concentration in Nesting Green Turtles (*Chelonia mydas*) by HPLCM-Ms. *Journal of Experimental Zoology Part A: Ecological Genetic and Physiology*, 315, 170-174.
- Ba-Omar, T., Mahmoud, I., Al-Hiani, T., Al-Bahry, S.N. (2011). Microscopic Study of the development of the optic Cup of the green turtle, *Chelonia mydas* in Oman. *Microscopy and Microanalysis* 17 (S2), 210-211.
- Al-Bahry, S. N., Al-Zadjali, M.A., Mahmoud, I.Y., Elshafie, A.E. (2012). Biomonitoring marine habitat in reference to antibiotic resistant bacteria and amplicillin resistance determinant from oviductal fluid of the nesting green sea turtle, *Chelonia mydas*. *Chemsphere*. 87, 1308-1315.
- Al-Bahry, S. N., Mahmoud, I., Al-Rwahi, S., Paulson, J. 2011. Egg contamination as an indicator of environmental health. In: *Impact of Egg Contamination on Environmental Health*. Nova Science Publisher, Inc. New York, USA p.p. 1-24.
- Mahmoud, I. Y., Al-Musharafi, S. K., AL Bahry, S. N., Al-Amri, I. S. (2014). Environmental changes and their effects on the fate of the sea turtle reproductive potential and conservation. In: Farooq, S. A., Abed R., Senan, B. *Biotechnology and Conservation of Species from Arid Regions.* pp. 125-136. Nova Science Publisher, Inc. New York.
- Mahmoud, I. Y., Al-Musharafi, S. K., AL-Bahry, S. N., AL-Amri, I. S. (2014). Environmental changes and their effects on the fate of sea turtle reproductive potential and conservation. Chapter 12. In: Farooq, S. A., Abed R., Senan, B. *Biotechnology and Conservation of Species from Arid Regions.* pp. 125-136. Nova Science Publisher, Inc. New York.
- Al-Musharafi, S. K. (2014). Analysis of heavy metal in eggshells of green turtles, *Chelonia mydas*, by scanning electron microscopy and x-ray microanalysis Chapter 13. In: Farooq, S.A., Abed, R., Senan, B., *Biotechnology and Conservation of Species from Arid Regions*. Pp.137-144. Nova Science Publisher, Inc. New York.

Moreover, in 2012 ESO conducted some research activities listed below:

- Hawksbill Satellite Tracking, Flipper Tagging and DNA Sampling;
- Masirah Olive Ridley and Hawksbill Nesting Beach Survey;
- Masirah Loggerhead Nesting Beach Survey;
- Beach Use and Beach Stranding Surveys.

Bundit Chokesanguan

Recent activities of SEAFDEC/TD related to the conservation of sea turtles

1. Promotion on the use of C-hook

Referring to scientific findings of SEAFDEC on the use of C-hooks that result in a hooking rate of sea turtles, which is lower than when using conventional j-hooks. SEAFDEC has promoted the use of C-hooks in its member countries since 2011. SEAFDEC organized a series of national training programmes to promote the use of C-hooks for reducing sea turtle mortality, conducted in: Malaysia (Kuantan, Malaca, Kuching, Perak, and Samporna), Myanmar (Yangon). This aimed to raise awareness of fishers, and to enhance knowledge of fisheries officials on the reduction of sea turtle incidental catch for hook-and-line fisheries. Training materials that SEAFDEC introduced and delivered during the training course include: how to handle an accidental sea turtle catch, the use of d-hooker (tool for removing hook from sea turtle) and its guidelines, c-hook samples given to fishers for their own trial later, sea trial with participants, knowledge on interaction between sea turtles and fishing based on SEAFDEC's study, etc.

2. Onboard observation on the sea turtle interaction with FADs

SEAFDEC has collected information on the possibility of entangling sea turtles from FADs used for tuna fishing. Major findings of this collection have been disseminated together with key recommendations to reduce the entangling of sea turtles in FADs.

3. Study on the response of sea turtles to sound stimuli

SEAFDEC has conducted an experiment aiming to know the response of sea turtles to various frequencies of sound. The experiment was conducted in collaboration with the Department of Marine and Coastal Resources of Thailand at Sea Turtle Conservation Center, Rayong Province. It could be concluded that they will respond to frequencies below 350 Hz.

Jack Frazier

Administration and management of programmes relevant to marine turtles, protected areas, etc.

- Review and revision of diverse IOSEA documents:
    - Extensive revisions on form and documentation, including coordinating detailed revisions of >3 specialists from Site Networks for birds;
    - Detailed revisions of diverse IOSEA Site Network proposals;
    - Detailed revisions of other IOSEA proposals and activities;
- Board of Directors of International Sea Turtle Society (ISTS) (until May 2014)
    - Lead the revision of Constitution and Bylaws of the ISTS;
    - Promoted greater clarity of procedural issues of ISTS;
    - Promoted auto-evaluation & greater clarity in management

Education and training relevant to marine turtle research and conservation

- Local workshop in eastern extreme of Pacific Ocean (range of some western Pacific turtle stocks)

- Promoted greater appreciation for "human dimensions"/social issues
    - Collaboration with WIO MTTF workshop planning;
    - Public talks to ISTS about the importance of socio-economic and also cultural considerations

Fund-raising relevant to marine turtle programmes and other activities

- Promoted & supported fund raising for young and junior marine turtle specialists;
- Contracted two translators/style editors for "Marine Turtles as Flagships"

Policy development relevant to marine turtle research, conservation, education, and training

- Detailed review of national reports from Lima Convention (Chile, Peru, Ecuador, Colombia, Panama) with recommendations for eastern extreme of Pacific Ocean (range of some western Pacific turtle stocks)
    - Recommendations for research and management priorities;
    - Recommendations for enhanced collaboration, regionally and across ocean basin;
    - Recommendations for completion of standardization and harmonization process

Research activities relevant to marine turtles

- Collaborating with various authors on papers on:
    - Archaeological & ancient cultural aspects of marine turtles at ~5000 BP site in Oman;
    - Evaluation of major nesting beach for *Chelonia mydas* in WIO = Itsamia, Comores;
    - Paleohistory of the Indian Ocean, and implications on zoogeography
- Publications:
    - 2012. Successful success stories, Conservation & Society 2012
    - 2012. Nest and Track Surveys. Pp. 260-264. In: R. W. Mc Diarmid, M. S. Foster, C. Guyer, J.W. Gibbons, and N. Chernoff (eds.) *Reptile Biodiversity: Standard Methods for Inventory and Monitoring*. University of California Press, Berkeley CA.
    - 2012. Eckert, K.L., B.P. Wallace, J.G. Frazier, S.A. Eckert, and P.C.H. Pritchard. 2012. Synopsis of the biological data on the leatherback sea turtle (*Dermochelys coriacea*). U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication BTP-R4015-2012, Washington, D.C.
    - International Instruments: Critical Tools of Conserving Marine turtles of the Eastern Pacific Ocean, In: *Sea Turtles of the Eastern Pacific Ocean: Advances in Research and Conservation* (J.A. Seminoff and B. P. Wallace Eds.) University of Arizona Press. 154–192.
    - The Occurrence of Tortoiseshell on a Pre-hispanic Maya Mosaic Mask, *Antiquity* 86(333): 825–837 (+ 2 appendices).

Mark Hamann

- Served on Board for International Sea Turtle Society 2009 to 2013
- Member of the expert panel for Chevron's Barrow Island turtle project (Australian East Coast).
- Member of the expert panel for the Australian Government's revision process for the marine turtle recovery plan.
- Co-author of the draft Referral Guidelines for marine turtles, dolphins and dugong (documents prepared for the Australian Government to guide assessments of applications for coastal development).

- Project co-leader on Australian Government funded research projects (*National Environmental Research Program*, NERP) to improve knowledge about marine turtles, dugong and marine wildlife in northern Australia.
- Project co-leader on research several projects aimed at improving knowledge of turtle behavior around ports and shipping.
- Advisor of 2 PhDs relevant to IOSEA
    - Ruth Kamrowski (completed in 2014) – light pollution and marine turtles
    - Coralie D'Lima (will submit in 2014) – inshore dolphin and fisheries interactions in east India (has implications for managing marine turtle bycatch and wildlife tourism)
    - Kimberly Riskas (enrolled 2014) – bycatch of marine turtles in the Indian Ocean
    - Paul Whittock and Takahiro Shimada (will submit 2015) home range and behavior of turtles in and around ports and industry.
- Author/co-author of 16 peer reviewed publications since 2012.
    - 3 on ecological aspects of light pollution
    - 2 on social (human behavioural aspects of light pollution)
    - 4 on turtle behavior and satellite tracking
    - 1 on marine turtles and climate change
    - 2 on Governance of marine turtles
    - 1 on Management of ports and shipping development
    - 3 on plastic pollution impacts

Colin Limpus

Administration and management of programmes relevant to marine turtles, protected areas, etc.:

- Leadership of the Qld Government Turtle Conservation Project coordinating annual monitoring of loggerhead, green, flatback, olive ridley turtles at index nesting beaches in Queensland to assess population trends (National).
- Organising committee for 1st and 2nd Australian Marine Turtle Symposia in 2012 and 2014 (National).

Education and training relevant to marine turtle research and conservation (e.g., fisheries bycatch):

- IOSEA Myanmar Marine Turtle Training and Capacity Building Workshop (Sub-regional);
- Training of indigenous Land and Sea Rangers in monitoring of marine turtle nesting populations; predator control management on nesting beaches and sustainable use of marine turtles in north Queensland based out of Mapoon Turtle Camp and Mon Repos Training Camp (National);
- Supervision and collaboration with post-graduate students in marine turtle studies (sub-regional): turtle health and disease in response to extreme weather events; metal bio-accumulation and toxicology for green turtles; green and loggerhead turtle foraging habitat use in response to extreme weather using satellite telemetry; satellite telemetry study of post-nesting migration of olive ridley turtles; stable isotope studies with foraging green turtles and nesting loggerhead turtles; anthropogenic light horizons on Australian turtle rookeries and

impact on flatback hatchling ocean finding; statistical comparisons of nesting census methodologies; population genetics of olive ridley, loggerhead, green and flatback turtles.

Fund-raising relevant to marine turtle programmes and other activities:

- Funding of satellite telemetry studies to investigate green turtle foraging habitat use in response to extreme weather impacts and port development (National);
- Funding of indigenous ranger training (National).

Policy development relevant to marine turtle research, conservation, education, and training:

- In collaboration with Australian Government, facilitated technical meeting to draft a Single Species Action Plan for loggerhead turtles in the South Pacific Ocean for adoption at CMS COP11 (addresses nesting and foraging in eastern Australia) (Regional)

Research activities relevant to marine turtles:

- Global GIS mapping of temporal and spatial distribution of marine turtle nesting and migration (Regional)
- Researching ocean-finding behaviour of marine turtles, including disruption of ocean finding behaviour of loggerhead, green and flatback turtles to changed light horizons from street lights, including amber LED lights (National).
- Satellite telemetry studies of foraging green turtles, investigating their behaviour associated with port dredging activities and their response to underwater military explosions (National).
- Mark recapture analysis of long term tagging data from 5 index beaches from 2 stocks of flatback turtles, quantifying population size and survivorship trends (National).

Jeff Miller

- Attended the 2012 meeting in Bangkok in January. Presented to the Advisory Committee on the BoBLME project and to the Signatory Countries on reproductive ecology and development of marine turtles (in coordination with Dr. C. J Limpus).
- Attended the IOSEA Regional meeting during the 33rd Annual Symposium on Sea Turtle Biology and Conservation, February 2-8, 2013 in Baltimore, and presented a brief review of activities and services available to countries through IOSEA. Had numerous informal discussions with attendees from the IOSEA countries.
- Attended the IOSEA regional meeting during the 34th Annual Symposium on Sea Turtle Biology and Conservation in New Orleans in 2014 and presented a brief review of activities and services available to countries through IOSEA. Had numerous informal discussions with attendees from the IOSEA countries.
- Presented a 3 day training workshop entitled "National Training Workshop for Conservation of Sea Turtles" for the Environment Friends Society in Bahrain in May 2014. Material included biological characteristics, stranding activities, husbandry, and how to develop a national stranding program; generated a list of potential projects for the Audience included Government officials, fishermen, veterinarians, and conservation group members.

- Completed review of Technical Support and Capacity Building Program. Prepared a synoptic report on the review for presentation at the IOSEA meeting in Bonn.
- Have reviewed a few Site proposals.
- Have been working with King Fahd University of Petroleum and Minerals (KFUPM) and Aramco in Saudi Arabia to begin satellite tracking of nesting turtles from Karan & Jana Islands and to eradicate mice from the islands. Funding has been granted for tracking project. (Not really a part of IOSEA but important players in the region)

Kartik Shanker

Activities related to marine turtles 2011 – 2014

1. Networks for conservation

- In 2009, I established the Turtle Action Group, a national network of non-governmental organisations and individuals to collaborate on and coordinate efforts on the conservation of marine turtles and their habitats. We helped convene the 4th and 5th annual meetings of Turtle Action Group (TAG) in Chennai (November 2011) and Jamnagar, Gujarat (January 2013). Through a grant from the USFWS, we provide small grants to a few organizations in the network, and training and capacity building through the workshops.
- As part of our capacity building efforts, we have conducted training programmes for the Forest Department in Kerala, Karnataka, Orissa and Andaman and Nicobar Islands, and plan to conduct a programme in Gujarat shortly.
- I help oversee the activities of the Orissa Marine Resources Conservation Consortium, a platform to bring together local communities and conservationists in Orissa. I have been involved in establishing a collaborative platform for conservation in the Andaman and Nicobar Islands called the Island Resource Network, which includes NGOs, government agencies (including Forest Department, Navy and Coast Guard) and private resorts and tour operators.
- In September 2014, we will conduct a regional meeting for researchers including participants from India, Sri Lanka and Bangladesh.

2. Outreach

- My team has developed a comprehensive manual on sea turtle conservation and management and distributed it to government and non-government organisations throughout the country. The manual has been translated into *Gujarati* and is being translated into *Tamil*. We have also developed a set of 15 posters that have been distributed widely. Most recently, we have developed a poster on 'Best Practices for Sea Turtle Hatcheries' which will be translated and distributed. My team provides back-end support for the production and distribution of the *Indian Ocean Turtle Newsletter*.
- We have developed a website, Sea Turtles of India (www.seaturtlesofindia.org) with comprehensive information about sea turtle distributions in India, research, as well as exhaustive bibliographies and resources. We are building an online data portal that organisations around the country can use to enter, visualize and share data.

3. Research

- I have been conducting long term research on olive ridley turtles at Rushikulya, Orissa since 2007. Here, we monitor offshore populations, solitary nesting, mass nesting, nest predation, hatching success, beach temperatures and sex ratios, and beach profiles.
- I have also maintained a long term monitoring programme for leatherback turtles in Little Andaman Island. Here, we monitor nesting, predation, hatching success, beach temperatures, and beach profiles. We have a tagging programme and have also tracked 10 turtles using satellite transmitters.
- We are also initiating a monitoring programme at the newly discovered mass nesting beach for olive ridley turtles at Cuthbert Bay in middle Andaman Island.
- In addition, I have continued my research on the genetics of sea turtle populations on the coast of India.

4. Policy

I have been involved in discussions with the Ministry of Environment and Forests, both with issues relating to IOSEA, and other issues. Most recently, I have been part of a group of individuals and non-governmental organisations that are exploring the legality and potential impacts of rehabilitation housing and aquaculture farms at the Rushikulya mass nesting rookery in Orissa.

5. Fundraising

I have raised funds from the USFWS Marine Turtle Conservation Act Fund for monitoring and conservation of sea turtles in India. In addition, we have raised funds from the International Seafood Sustainability Foundation for the conservation of leatherback turtles in the Andaman and Nicobar Islands. Funds from the Ministry of Environment and Forests to the Centre for Ecological Sciences, Indian Institute of Science, Bangalore also support the monitoring programmes in Orissa and the Andaman Islands. Satellite telemetry of leatherback turtles was supported by the Indian Space Research Organisation – Space Technology Cell at Indian Institute of Science, Bangalore.

Manjula Tiwari

- I was invited to be on the IOSEA Advisory Committee on Feb 5, 2012
- In Papua, Indonesia, I am the scientific and technical advisor to the leatherback project managed by the State University of Papua, and I have been involved in:
    - research to quantify factors impacting hatchling production
    - the development and implementation of a science-based management and conservation program for leatherbacks
    - training/capacity building of project personnel
    - liaising with the government
    - education, outreach, and community-based conservation
- I have been on the PhD Committee of 1 Indonesian student, and am co-authoring several peer reviewed publications coming out of this dissertation.
- In Oman, I have been involved in:
    - fisheries bycatch around Masirah Island

    - satellite telemetry of loggerheads nesting on Masirah Island
- I am part of the Pacific Leatherback Working Group and the Bellagio Working Group, which address issues in some of the IOSEA region countries – Indonesia, Papua New Guinea, Vietnam.
- I am the Editor-in-Chief of the African Sea Turtle Newsletter, which also highlights and distributes research and conservation contributions from the Western Indian Ocean.

Appendix IV

PROVISIONAL LIST OF PROJECT CONCEPTS RESULTING FROM THE UPDATED (2012) LEATHERBACK ASSESSMENT

Priority areas

Western Indian Ocean: Provide partial support or help to leverage funding for a post-graduate study to investigate the hatching success and incubation temperature of leatherback and loggerhead rookeries in Mozambique. This research should be done in conjunction with sub-regional experts (e.g. Dr Ronel Nel/South Africa).

Note: Due to related studies from South Africa indicating that hatching success and incubation temperatures are favourable it is a suspected low priority. However, as the SWIO leatherback population is rated as critically endangered it needs to be assessed in the future.

Northern Indian Ocean: Devise a low-cost monitoring protocol, identify and monitor index sites consistently for a period of 3-5 years in Sri Lankan leatherback rookeries, and collect genetic samples as a contribution to a region-wide assessment. Possible collaborators: local conservation bodies (e.g. Turtle Conservation Project (TCP) – Sri Lanka) and interested experts (e.g. MCS/Dr Peter Richardson).

Note: Considered a priority and so developed into Project 1.

Thailand & Malaysia (+ other programmes): Review egg relocation and hatchery practices and, where appropriate, suggest and implement management interventions to enhance hatching success and produce balanced sex ratios. Short-term expert consultancy.

Note: Considered a priority and so developed into Project 2.

Habitat Rehabilitation: Assess the extent of use of exotic vegetation to stabilize beach/dune systems and the impacts thereof through a questionnaire survey throughout the IOSEA region. If appropriate (based on the survey results), develop a short paper that outlines the problems associated with using for example Casuarina trees in beach/dune stabilization and provide recommendations and guidelines as to the sensible removal of these trees from beach dune/ecosystems. Commission an expert desktop study to conduct the survey and develop the paper.

Note: Considered important and so developed in to Project 3.

Indonesia (Java/Sumatra): Engage with local environmental agencies and NGOs (e.g. through a workshop) to document the extent of leatherback nesting, particularly in Java/Sumatra and disseminate education and awareness materials, to stimulate future data collection and the establishment of turtle monitoring programmes, where relevant.

Note: Considered important and so developed in to Project 4.

Papua New Guinea: Aerial surveys have identified Buang-Buasi and Kamiali as important nesting sites. It has been suggested to establish long-term monitoring to determine nesting abundance trends in PNG (Dutton et al 2007). IOSEA to engage with experts working in the region to identify opportunities for support (e.g. technical training, data management systems, education and awareness) to enable local communities to establish inexpensive monitoring programmes.

Note: Existing efforts in the region already underway so no need for additional action.

Additional Suggestions

(a) The Steering Committee (Bellagio Sea Turtle Conservation Initiative, 2008) highlighted beach erosion as a growing issue, along with predation at some to key island rookeries. Targeted support for technical training for egg relocation of "eggs/nests at risk" may assist in enhancing hatching success.

Note: Considered important and so developed in to Project 2 & 3.

(b) An Action Plan has apparently been developed through a Memorandum of Understanding (MoU) among Indonesia, Solomon Islands, and Papua New Guinea to support field conservation efforts and establish effective institutional and funding mechanisms to implement management activities in a sustainable manner. Implementation of this plan should be a priority.

Note: Leave to other frameworks e.g. Bellagio

Priority projects

Project 1**:** There are few continuous long-term data but the available data indicate that there is variable but significant nesting in Sri Lanka. Through an expert-directed workshop including local experts and conservation bodies:

- Devise a low-cost monitoring protocol,
- Identify and monitor index sites consistently for a period of 3-5 years in Sri Lankan leatherback rookeries,
- Train individuals in the procedures to collect (and store) tissue samples that can be contributed to a region-wide genetic assessment.

Suggested Collaborators: local conservation bodies (e.g. Turtle Conservation Project (TCP) – Sri Lanka) and interested experts (e.g. MCS/Dr Peter Richardson).

Project 2: Given the potential impact of egg relocation and hatchery practices on critically low populations in the IOSEA regions undertake an expert consultancy to:

- Review the extent of egg relocation and hatchery practices in the region (particularly Thailand).
- The impact of egg relocation and hatchery practices
- Identify examples of best practice for egg relocation and hatchery
- Host a technical training workshop for individuals/organizations that are currently undertaking (or considering) egg relocation practices.
- Draft a brochure and training material to highlight best practice principles in egg relocation and hatchery practices.

Project 3: Coastal management practices e.g. dune stabilization through the use of Casuarina trees, potentially have a significant impact on turtle nesting habitat in the IOSEA region and so affect nesting and hatching production. Through a post graduate research project with expert advice/support

- Conduct an online survey (e.g. survey monkey) to identify key drivers of impacts to beach/dune systems (e.g. Casuarinas, erosion, soft and hard armouring, light pollution) on nesting beaches across the IOSEA region.
- Use data from the IOSEA website, google earth and other spatial tools to map and quantify the extent of the impacts.
- Overlay these impacts with known nesting habitats
- Identify priority areas for rehabilitation or other forms of mitigation.

Project 4: Recognising that there is widespread, low-density nesting along the Indian Ocean margin of southern Indonesia (in particular Java and Sumatra) engage with local environmental agencies and NGOs through an expert-directed workshop to:

- Document the extent and quantification of leatherback nesting, and
- Identify threats hampering successful hatchling production
- Consider alternative livelihood practices that could facilitate the long-term sustainability of data collection.
- Develop and disseminate education and awareness raising materials to stimulate future data collection and the establishment of turtle monitoring programmes, where relevant.

Note to all projects: Collect tissue samples for genetic analysis and stable isotopes wherever possible.

Appendix V

PROVISIONAL LIST OF PROJECT CONCEPTS RESULTING FROM THE LOGGERHEAD ASSESSMENT (2013)

Project 1: There is a lack of knowledge of hatchling production rates and hatchling and post-hatchling dispersal of loggerhead turtles from rookeries in the Indian Ocean.

This should be done for each of the management units, noting that the baseline data available differs across the management units.

Determine (step 1) temporal and spatial patterns of clutch distribution (step 2) survivorship of eggs and hatchlings (step 3) socioeconomic opportunities/barriers to manage egg loss and if possible (step 4) use ocean modelling coupled with genetics to understand oceanic dispersal.

Project 2: Available data indicate that there is variable but significant nesting by loggerhead turtles on Socotra, Mainland Oman and occasional nesting in Sri Lanka

Through an expert-directed workshop including local experts and conservation bodies:

- Devise a low-cost monitoring protocol,
- Identify and monitor index sites consistently for a period of 3-5 years in Socotra, Mainland Oman and Sri Lankan rookeries,
- Train individuals in the procedures to collect (and store) tissue samples that can be contributed to a region-wide genetic assessment.

Project 3: There is a lack of knowledge on the vulnerability of loggerhead turtle nesting beaches in the IOSEA region to climate change

This should be done for each of the management units, noting that the baseline data available differs across the management units.

- Quantify sand temperature profiles from index beaches to better understand the variability of temperatures that eggs are exposed to.
- Use beach height data, distribution maps and other spatial datasets to understand vulnerability of IOSEA stocks

Appendix VI

SUGGESTED EVALUATION FRAMEWORK FOR SITE NETWORK PROPOSALS

1. Acceptance of the proposal, without need for further revision (apart from Secretariat editorial corrections).

2. Acceptance of the proposal, subject to clarification/minor revision to be completed by the proponent before the conclusion of SS7.

3. Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within [six] months of the conclusion of the SS7 meeting; followed by Advisory Committee review and positive recommendation.

4. Recognition that the proposal has merit but requires substantive revision prior to resubmission for reconsideration at the next Meeting of Signatory States.

5. Rejection of the proposal, on the grounds that it is unlikely to meet the criteria for inclusion, even if substantive revision were undertaken.

Appendix VII

IOSEA SITE NETWORK EVALUATION SHEET

CRITERIA	SCORE RANGE	Actual Score	Potential score	Comments / rationale for score
I. Ecological and Biological Criteria				
EB1a. Turtle abundance (at nesting sites)*	**3 6 9 12 15**			
EB1b. Turtle abundance (foraging sites)*	**0 5 10 15**			
EB2. Species and/or management unit richness	**6 9 12 15**			
EB3. Presence of rare marine turtle species	**6 9 12**			
EB4. Resistance and resilience	**1 to 8**			
Sub-Total [*cf. Expected minimum category value = 18*]				
II. Governance Criteria				
G1. Legal framework	**1 to 8**			
G2. Conservation actions	**1 to 10**			
G3. Collaborative management, surveillance and enforcement	**1 to 8**			
G4. Research and monitoring	**4 6 8**			
G5. Sustainable human and financial resources	**1 to 8**			
Sub-Total [*cf. Expected minimum category value = 20*]				
III. Socio-economic and Political Criteria				
S1. Cultural importance	**1 to 6**			
S2. Compatible activities	**1 to 6**			
S3. Educational value	**1 to 6**			

S4. Existing recognition	**0 2 4 6**			
S5. National significance	**1 to 6**			
S6. Perceived ancillary benefits as a consequence of the site's inclusion in the network	**1 to 6**			
Sub-Total [*cf. Expected minimum category value = 15*]				
IV. Network-wide Ecological Criteria				
N1. Representativeness and replication	**1 to 4**			
N2. Ecological connectivity	**1 to 8**			
N3. Area	**1 3 6 9 12**			
Sub-Total [*cf. Expected minimum category value = 10*]				
GRAND TOTAL [*cf. Expected minimum total score = 75*]				

Instructions to Evaluators:

As seen throughout this document, the evaluation scales have values ranging from 0 to 15, together with descriptive text (particularly for the top and bottom end of the scale, and one to three values in between) to help guide evaluators. **In general, values can be assigned along the full continuum, and need not be restricted to the indicative values / descriptions shown in each scale.** Also, in exceptional cases, a zero value may be assigned when a particular criterion is not met at all.

However, the "Fixed Scales" associated with criteria EB1, EB2, EB3, G4, S4, and N3 are the exceptions to this general rule, as they do not accommodate intermediate or zero values.

* Note in relation to Criterion EB1 (a/b): Where several species nest or forage at a single site, the score for the most abundant species is to be used, not the sum of scores for all of the species present. This is because species/management unit richness is evaluated under Criterion EB2.

Appendix VIII

ADVISORY COMMITTEE RECOMMENDATIONS REGARDING SITE NETWORK PROPOSALS (as at 8 September 2014)

	Proposal	**Date submitted**	**Evaluators**	**Mentors**	**Final ranking**
1	United Republic of Tanzania: Rufiji Delta – Mafia Channel Complex	31 October 2013	Jack Frazier & Mark Hamann	Jack Frazier	Acceptance of the proposal, without need for further revision (apart from Secretariat editorial corrections).
2	South Africa: iSimangaliso Wetland Park World Heritage Site	1 July 2014	Mark Hamann & Col Limpus	Mark Hamann	Acceptance of the proposal, without need for further revision (apart from Secretariat editorial corrections).
3	Myanmar: Thameehla Island	5 July 2014	Col Limpus & Manjula Tiwari	Col Limpus	Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within six months of the conclusion of the SS7 meeting; followed by Advisory Committee review and positive recommendation.
4	Islamic Republic of Iran: Sheedvar Island	28 July 2014	Jeff Miller and Ali Al Kiyumi	Jeff Miller	Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within six months of the conclusion of the SS7 meeting; followed by Advisory Committee review and positive recommendation.
5	Seychelles: Aldabra Atoll	11 August 2014	Mark Hamann & Manjula Tiwari	Jack Frazier	Acceptance of the proposal, without need for further revision (apart from Secretariat editorial corrections).
6	Comoros: Itsamia, Mohéli	28 August 2014	Jack Frazier & Manjula Tiwari	Jack Frazier	Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within six months of the conclusion of the SS7 meeting; followed by Advisory Committee review and positive recommendation.
7	United Arab Emirates: Bu Tinah Shoal	30 August 2014	Jeff Miller and Ali Al Kiyumi	Jeff Miller	Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within six months of the conclusion of the SS7 meeting; followed by Advisory Committee review and positive recommendation.

	Proposal	**Date submitted**	**Evaluators**	**Mentors**	**Final ranking**
8	United Arab Emirates: Sir Bu Na'air	1 September 2014	Jeff Miller and Ali Al Kiyumi	Jeff Miller	Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within six months of the conclusion of the SS7; followed by Advisory Committee review and positive recommendation.
9	France: Europa Island	1 September 2014	Jack Frazier & Manjula Tiwari	Jack Frazier	Conditional acceptance of the proposal, subject to the provision of additional information by the proponent within six months of the conclusion of the SS7 meeting; followed by Advisory Committee review and positive recommendation.
10	Philippines: Turtle Islands Wildlife Sanctuary	2 September 2014			Not assessed – official endorsement not received as at 6 September 2014.

Appendix IX

RECOMMENDATIONS/LIST OF SUGGESTED ACTIONS EXTRACTED FROM FINAL REPORT OF THE ADVISORY COMMITTEE (as at 10 September 2014)

Note: The numbers in [] refer to paragraph numbers in the Advisory Committee report.

Actor	Topic	Proposed Action
Signatory States	"Overview of IOSEA MoU Implementation" (document MT-IOSEA/SS.7/Doc. 6)	Provide feedback on the points in the table in Part I: 1. Descriptions of exemplary approaches; 3. Adverse incentives; 14. Critical review of management programmes; 20. Analysis of international flipper tag data; 24. Species assessment (for green turtles); 26. Standardisation/harmonisation of methods; 27. Review of education/awareness initiatives; 28. Alternative livelihood opportunities; 36. Training effectiveness and synergy **[6].**
	Collaborative research and management	Data collection should be intensified through regional collaboration, and technical support offered to less developed countries, as well as through partnerships with five recognised genetics laboratories **[7].**
		Genetics work could be linked more closely with the Species Assessments and the Site Network process, which could help to identify index beaches and priority foraging areas **[7]**.
	Identification of genetic characteristics of the nesting populations (document MT-IOSEA/SS.7/Doc. 10.2)	Signatory States should prioritize which genetic stocks need identification at nesting and foraging areas and, where possible, on the high seas**; [8]** The species assessments & site network process should inform the prioritization of genetic analysis of populations **[8].**
	Leatherback Assessment (document MT-IOSEA/SS.7/Inf.10)	Consider four actionable project concepts proposed by the AC **[10]:** - In Sri Lanka, where monitoring and sampling is needed; - In places where there is egg relocation and hatcheries (particularly in Malaysia and Thailand); - In places where coastal management practices (e.g., dune stabilization) are of concern; - In Indonesia, where there is poorly documented widespread, low density nesting (Annex 4).
	Loggerhead Assessment (document MT-IOSEA/SS.7/Inf.11)	Consider three project proposals from the AC **[10]:** - Elucidate hatchling production rates and post-hatchling dispersal in the Indian Ocean; - Elucidate nesting activity on Socotra Island (Yemen), mainland Oman, and Sri Lanka - Elucidate vulnerability of nesting beaches in the IOSEA region (Annex 5)
	IOSEA Site Network (document MT-IOSEA/SS.7/Doc. 7)	Engage in a constructive discussion at the SS7 Meeting of the challenges faced by Focal Points in meeting their collective commitments **[13].**
		Undertake, with support of mentors from the AC, any necessary revision of their proposal, during or after the Signatory State meeting **[17].**
		Periodic review of Network Sites: It was proposed that this discussion, including consideration of a reporting template for network sites, be taken up at the next Meeting of Signatory States (SS8) **[18].**

Actor	Topic	Proposed Action
Signatory States	IOSEA Site Network (document MT-IOSEA/SS.7/Doc. 7)	Signatories proposing sites with small but significant nesting populations (in terms of management units) should invest efforts in developing complementary arguments to justify the inclusion of such sites in the IOSEA Site Network **[19].**
		Engage actively in the establishment of a steering committee to seek financial support in the months following the meeting **[21].**
		Observer from the United States offered to investigate, within her own organisation (NOAA), the possibility of collaborating with IOTC/IOSEA in delivery of technical support, such as marine turtle-related observer training **[22].**
	Bycatch mitigation (document MT-IOSEA/SS.7/Doc. 10.4)	Begin addressing by-catch issues in the countries and locations that are identified as priority areas in the species assessments **[23].**
	Technical Support /Capacity-building programme (document MT-IOSEA/SS.7/Doc. 8)	The sub-regional consultations of the Meeting of Signatory States would be an appropriate forum for identifying technical support / capacity-building needs in IOSEA Signatory States **[27].**
	Standardisation / harmonisation of technical terms, protocols, methods, reporting, etc.	Any data collection project conducted in the region should report rigorously on the methodology followed, whatever the method chosen among the many options available **[29].**
Advisory Committee	Illegal take and trade (document MT-IOSEA/SS.7/Doc. 10.1)	Give more consideration to the issue of marine turtle poaching and trade in the Site Network proposal evaluation process (one way to achieve this would be to request more explicit mention of turtle exploitation and poaching in the section pertaining to threats affecting marine turtles in the vicinity of the site, and to revise the evaluation criteria accordingly) **[9].**
	Leatherback (document MT-IOSEA/SS.7/Inf.10) and loggerhead (document MT-IOSEA/SS.7/Inf.11) assessments	The next IOSEA assessment should focus on hawksbill turtles. Drs. Limpus, Hamann and Miller volunteered to form a committee to take the work forward intersessionally **[11].**
	IOSEA Site Network (document MT-IOSEA/SS.7/Doc. 7)	'Mentors' from among the members present for each Site Network proposed, to provide feedback to proponents to help them strengthen their proposals during and/or after IOSEA SS7. *(Advisory assistance should be offered to proponents during the completion phase of the Site Information Sheets, but such "pre-submission" mentors should serve only as resource persons and not be involved in the writing of the proposal.)* **[15].**
		Enhance IOSEA's involvement in by-catch mitigation efforts, for instance by contributing papers to the IOTC's Working Party on Ecosystems and Bycatch (WPEB) **[22].**
	Bycatch issues (document MT-IOSEA/SS.7/Doc. 10.4)	Consider favourably IOTC requests for technical advice, subject to financial support and availability **[22].**

Actor	Topic	Proposed Action
Advisory Committee	Technical Support / Capacity-building Programme (document MT-IOSEA/SS.7/Doc. 8)	Site Network mentors to help proponents identify where the IOSEA Technical Support / Capacity-building Programme could address training needs at their site, as well as help articulate more precisely their actual resource requirements **[26].**
		Recognise and give credit to the training programmes already existing throughout the IOSEA region and to support these, through promotion of greater collaboration throughout the region **[27].**
		Propose options to Signatories where they were needed and requested **[27].**
	Standardisation / harmonisation of technical terms, protocols, methods, reporting, etc.	Take note of discrepancies or inconsistencies observed in the descriptions provided in Site Network proposals being reviewed **[29].**
		A glossary of standardised terms might be prepared for inclusion in the IOSEA website. Keep under review issue of standardisation/harmonisation **[29].**
	General	Make use of and inter-link IOSEA initiatives, such as site-based information, species assessments, and site network proposals **[31].**
		Recognise the common lack of basic information and insure the availability of up-to-date, credible information **[31].**
		Ensure that spatial, temporal, and organisational/institutional scales are clear; strive for quality control **[31].**
		Promote and optimise cooperation at various levels (local, national, bi-national, sub-regional, regional, and beyond) – for example, with the Indian Ocean Tuna Commission **[31].**
		Follow-up on and evaluate various initiatives; show-case the relevance of IOSEA initiatives to those of other programmes **[31].**
		Involve a responsive Advisory Committee in advising at various levels of IOSEA initiatives **[31].**
		Potential, future workshop on predation issues **[31].**
Secretariat	Help identify genetic characteristics of the nesting populations	Assist countries with contact addresses for applying for CITES permits **[8];** The Advisory Committee will assist Signatories with contacts for laboratories specializing in sea turtle genetics **[8].**
	Illegal take and trade (document MT-IOSEA/SS.7/Doc. 10.1)	Try to raise the profile of marine turtle trade issues among intergovernmental organisations / networks that focus on other aspects of wildlife crime and to collaborate more closely with CITES, ASEAN-WEN and TRAFFIC **[9].**
		Give more visibility to marine turtle trade issues on the IOSEA website, for example by posting announcements on meetings organised by CITES and TRAFFIC, and featuring exemplary legislative/enforcement actions carried out by Signatory States **[9].**
		Update the existing paper, which could serve as an entry point to the topic, and submit it to CITES COP17, to be held in South Africa in 2016 **[9].**
		The observer from the United States noted that the Secretariat of the Inter-American Sea Turtle Convention was already collaborating closely with CITES; a joint approach with IOSEA could be productive **[9].**

Actor	Topic	Proposed Action
Secretariat	Leatherback (document MT-IOSEA/SS.7/Inf.10) and Loggerhead (document MT-IOSEA/SS.7/Inf.11) assessments	Seek funding from other partner organisations such as NGOs **[10].**
	IOSEA Site Network (document MT-IOSEA/SS.7/Doc. 7)	Site Network information materials such as the template, evaluation criteria and website page might benefit from repackaging as to make them more attractive to potential donors **[16].**
		The Secretariat reiterated its commitment to undertake editorial revisions of the submitted proposals to correct linguistic or organisational deficiencies, without affecting their substance, prior to their publication on the IOSEA website **[16].**
	Bycatch issues (document MT-IOSEA/SS.7/Doc. 10.4)	Improve the visibility of by-catch issues by making use of opportunities offered by the IOSEA website. This could be achieved by adding a section on by-catch on the home page (including an updated version of Doc 10.4.) and linking to relevant videos and other information material produced by other organisations (for example in Australia and the United States) **[24].**
	Standardisation/ harmonisation of technical terms, protocols, methods, reporting, etc.	Supplement the existing links to various conservation/ management manuals already contained in the Electronic Library of the IOSEA website **[29].**