ANNEX 11: REPORT OF THE SIXTH MEETING OF THE ADVISORY COMMITTEE, 21-22 JANUARY 2012

Agenda item 1: Welcoming Remarks

1. The IOSEA Coordinator, Douglas Hykle, welcomed to Bangkok the members of the Advisory Committee (AC) as well as the observers present. Dr. Frazier thanked the participants for their attendance, noting that it often required travelling long distances and sacrificing significant time from other professional and personal obligations. He observed that there was an enormous amount information and many topics to cover during the two-day meeting

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

2. Meeting participants, including observers, were briefly introduced (Annex I). The provisional agenda was adopted without amendment (Annex II). However, it was pointed out that certain agenda points should receive considerable attention, particularly topics where the Committee was in a unique position to help advance certain tasks, such as agenda items 3(d) on technical Support, capacity building and standardisation, and 3(e) which concerned the species assessments.

Agenda item 3: Secretariat overview of arrangements for the Sixth Meeting of the Signatory States (SS6)

3. The Coordinator provided an overview of the arrangements for the 4-day Meeting of Signatory States which would immediately follow the AC meeting, noting that planning for the function had taken a long time due to difficulty in identifying a host country and in securing the necessary funding. The flooding in Bangkok, and particularly the resultant inoperative IOSEA website over a period of two months, added further difficulties to the organization of the Meeting. Representatives from 23 or 24 Signatory States out of a total of 33) were expected to attend, somewhat lower than the usual turnout. Also of note, there were six new member States since the last Meeting of the Signatory States in August 2008, namely France, Malaysia, Maldives, Mozambique, Papua New Guinea and Yemen. The Coordinator explained that among the planned activities of the present Signatory State meeting were two thematic workshops, which would have input from some members of the Advisory Committee. The meeting would conclude with a field excursion to Koh Mannai, an island important in Thailand's turtle conservation efforts.

Agenda item 4: Discussion of SS6 agenda items requiring Advisory Committee advice/interventions

(a) Overview of IOSEA MoU Implementation and site-based information

4. The Coordinator introduced the "Overview of IOSEA MoU Implementation" (document MT-IOSEA/SS.6/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.6/Doc.6.1). The SS6 meeting would be asked to focus mainly on the executive summary and Document 6, Part 1, which summarised the main findings. Particular attention would be paid to the final columns of Table 1, which presented observations, suggestions, and recommendations put forward by the Secretariat. Given the enormous amount of information in these documents, the Committee agreed after lengthy discussion to identify priority issues and to provide recommendations with regard to important follow-up activities to be conducted by Signatory States.

(b) IOSEA Priorities

5. Seven key priority follow-up activities had been identified from the Secretariat's analysis of national reports, each one requiring specific work. In some cases, members of the Advisory Committee could help advance the work; in other cases the dedicated research of a student (preferably a graduate student) and/or a consultant engaged by the Secretariat would be the most effective means to obtain high quality, up-to-date information. The priority topics included updating and evaluating specialized technical information, compiling information on major regional threats to marine turtles, setting up an effective system for monitoring the long-term status of marine turtle populations, developing a better understanding of major drivers of threats to marine turtles, and insuring the most efficient and effective use of resources. Each of the seven priorities with recommended follow-up action is discussed separately.

6. Management of tagging information: The Committee strongly recommended that flipper tags used in the IOSEA region be distributed from centralized, permanent agencies, such as national, regional or sub-regional organisations that could also serve as managers of the respective data bases. Working examples of this type of arrangement could be found with the Pacific Regional Environmental Programme (SPREP), the South-East Asia Fisheries Development Center (SEAFDEC), and in the national and state systems of Australia. One of the many advantages of a centralized system is the guarantee of the consistent use of high quality tags made of resistant materials, suitable for the special needs of marine turtle studies. Further considerations with regard to flipper tagging are given in Annex III.

7. Identification and mapping of genetic stocks in the IOSEA region, and establishment of essential long-term monitoring procedures: The Committee considered it essential to have adequate procedures in place for long-term monitoring to be able to assess trends in population size, and thereby evaluate the effectiveness of conservation interventions. This topic comprised two aspects: identification and mapping of genetic stocks for each species in the IOSEA region, and establishment of at least one appropriate index nesting beach for each genetic stock of each species. With regard to the former, Dr. Limpus offered to consult with Dr. Nancy FitzSimmons, a geneticist with extensive and unique experience in the IOSEA region, to create a listing and geographic mapping of known and suspected genetic stocks for each species in the IOSEA region.

8. The Committee noted that a widely accepted method for long-term monitoring of trends in population size – essential for evaluating conservation status – is to establish an index beach on which standardized monitoring methods for estimating turtle numbers are conducted regularly over decades; recognising that there must be a long-term commitment by the responsible agency to conduct the index beach monitoring, despite financial and other challenges that may occur over the years. A draft questionnaire for establishing and evaluating index beaches is provided in Annex IV.

9. Compiling information on major regional threats to marine turtles: Three very serious sources of threat to marine turtles in the IOSEA region were identified: (1) illegal directed take of turtles, (2) indirect legal take in legal fisheries, and (3) directed legal take of turtles, which raised considerations of sustainable levels of exploitation.

10. Illegal directed take of marine turtles: With reference to Document 6 - Part II, p. 33, para. 9, the Advisory Committee considered it a pressing need to understand the scope (geographic, taxonomic, economic, etc.) and magnitude of illegal fishing as it relates to marine turtles and their habitats. Some fundamental questions that need reliable answers are:

- How does illegal fishing impact marine turtles and their habitats?
  - What types of illegal fishing impact marine turtles and / or their habitats?
  - What nations have illegal fishing impacts on marine turtles?

- What management incentives have been employed by Signatory States to mitigate illegal fishing impacts on marine turtles and their habitats?

- What and where are the markets for illegal fishing on marine turtles?

- What recommendations are needed to begin to reduce negative impacts of illegal fishing on marine turtles?

Practical ways to advance with these steps could include commissioned reviews (e.g. in collaboration with TRAFFIC, fisheries sector, community-based etc.) as well as prescribed student projects (e.g. in the form of semester-long review/coursework, or Masters or PhD level theses).

11. Indirect takes in legal fisheries: Indirect takes of marine turtles in legal fisheries are well established threats. Unfortunately, the information available in IOSEA national reports is not adequate to be able to develop well substantiated mitigation and management plans and actions. To better understand these negative impacts on marine turtles, the following actions are necessary:

- Collect and compile data on turtle bycatch in legal fisheries, and report on levels of fisheries (e.g. effort, gear type, etc.) and the impacts on turtles;

- Where there is uncertainty regarding minimum/optimal data, the Advisory Committee can provide guidance on the minimum data that must be available and reported on;

- Examples of data, data sources, and data gathering methods from different countries in the IOSEA region should be sought.

These actions should be undertaken by Signatory States, with support from dedicated studies, such as by specialists from pertinent fisheries organisations, students, consultants, and others.

12. Directed legal takes and considerations of sustainable levels (Document 6 - Part II, p. 40, para. 20): Where directed take of marine turtles and/or their eggs is legal, there is an urgent need to provide local managers and management authorities with guidelines on the level of take that would not endanger the long-term existence of the populations being exploited. Some fundamental questions that require credible answers are:

- What minimum proportion of clutches/eggs must be allowed to produce viable hatchlings that recruit into the sea, to ensure that the exploited population is sustainable?

- What is the relative impact of the take of turtles of different age and size classes on attaining sustainable levels of exploitation of a genetic stock?

- What is the proportion of nesting turtles that can be taken for human exploitation without risking population decline?

13. Developing a better understanding of major drivers of threats to marine turtles: The Secretariat's detailed analysis of IOSEA National Reports found considerable importance attached to three programmes of the Conservation and Management Plan (CMP) that are focused on socio-economic activities: Reducing adverse economic activities (Objective 1, Programme 1.3); Developing alternative livelihood opportunities (Objective 4, Programme 4.2); and Promoting public participation ("stakeholder involvement") (Objective 4, Programme 4.3). Because the driving forces behind conservation problems are socio-economic, and not necessarily natural history issues, it is essential that management authorities and other involved parties in all Signatory States understand these forces.

14. While useful for showing the critical importance of these socio-economic issues, the Committee considered the information given in the national reports is inadequate for a complete and systematic understanding of these very complex issues, and recommended that specific studies be conducted. The key components for responding to these needs include:

- Compilation of descriptive details from the IOSEA region relevant to the fundamental socio-economic concerns/issues;

- Compilation of information relevant to the fundamental socio-economic concerns issues, from published sources, independent of the geographic location of the work;

- Evaluation of alternative livelihood approaches relevant to specific cases within the IOSEA region;

- Design of investigation for establishing reliable socio-economic foundations for specific cases within the IOSEA region.

The execution of these diverse tasks could involve diverse modalities, including: academic research projects (e.g., graduate student theses) and commissioned work.

15. Ensuring the most efficient and effective use of resources: The Committee observed an urgent need to put into place objective and regular evaluations. Among the specific questions that need to be answered are:

- How have results from research and/or monitoring been used to improve management of either target or bycatch species?

- Are periodic reviews mandated by current management plans? If "yes", how frequently is this done?

- How are the results from research and monitoring communicated to other parties, such as other government agencies, NGOs, researcher organisations, etc.?

Different methods could be used. The Committee encouraged Signatory States to arrange regular, independent evaluations of their research, monitoring and management programmes, to ensure that desired objectives are being realised. Focused work on certain aspects of this question can be conducted by specialists in this issue; these could include students (e.g., MSc and PhD candidates) and/or consultants.

16. Over the course of its two day meeting, members of the Advisory Committee made different observations and recommendations germane to priorities for the IOSEA Marine Turtle MoU. These "fundamental considerations" can be summarised as follows. It is necessary to constantly remind ourselves of the objective of this agreement, namely to *"protect, conserve, replenish and recover marine turtles and their habitats, based on the best scientific evidence, taking into account the environmental, socio-economic and cultural characteristics of the Signatory States"*. The IOSEA agreement exists to promote regional cooperation to meet the above objective. The Conservation and Management Plan, with its six objectives, 24 programmes, 105 activities, is very ambitious; thus there is an urgent need to prioritise actions. We must do everything possible to nurture collaborations and synergy, and diverse levels with diverse organisations and stakeholders; we must constantly strive for the highest quality of information; and there is a pressing need to develop objective, independent evaluations of activities conducted under the aegis of the IOSEA. It is important also to point out that these considerations are intimately related to the development of an IOSEA Strategic Plan (a first draft of which was produced in February 2009).

(c) Site Network proposal

17. The Committee briefly discussed the status of the site network proposal (document MT-IOSEA/SS.6/Doc. 7), to be deliberated subsequently by the Signatory States, noting that the concept of a network of important marine turtle sites had been introduced and accepted at the Second Meeting of the Signatory States (2004). During the ensuing period there had been many discussions and

revisions of different proposals, including a consultancy and an inter-sessional working group since SS5. The Secretariat mentioned that further comments had recently been received from a Signatory State. It was suggested that the evaluation criteria be kept under periodic review and be treated as a "living document", subject to revision as necessary.

(d) Technical Support/Capacity-building and Standardisation

18. The Committee observed that diverse methods of training and capacity building could be used, varying from regional courses and symposia, including core modules, to training activities tailored to specific needs of an identified audience. The Committee attached particular importance to the unique value of graduate level training, with the view to nurturing highly trained and competent individuals who would subsequently serve as resident, in-country trainers. The Committee identified a need to have a clear institutional vision for the training/capacity building activity, for example by a "certification" process for IOSEA trainers. Particularly, a greater need for Advisory Committee integration was identified. Given the ever-present problem of limited resources, there were repeated suggestions to try to organise training/capacity building activities to coincide with other related events – such as other training activities and/or marine turtle symposia – so that costs and organisational work could be significantly reduced.

19. After lengthy discussion, it was agreed that Dr. Miller would revise and recirculate Annex 4 of document MT-IOSEA/SS.6/Doc.8 among IOSEA roster of training experts and country representatives, to come up with the best way to deal with this activity and engage Signatory States. He would then analyse the results and consult with the Advisory Committee about putting together a document to advance the process. Among the substantive points brought up during the debate was the pressing need for members of the IOSEA training roster to interact and collaborate more, to complement each other and their specific training projects. Other suggestions included taking a more in-depth look into training needs and funding requirements, as well as finding ways to build awareness of the training capabilities of IOSEA.

(e) Species Assessments for leatherback and loggerhead turtles

20. The meeting was informed on the status of the leatherback and loggerhead assessments. It was agreed that the leatherback assessment, finalized in 2006, needed to be updated, at least in terms of basic threats and progress made in conservation actions. Dr. Ronel Nel consented to take on this task, with the hope of providing a final draft for comment by April 2012. The finalization of the loggerhead assessment had been complicated by other assessments of this species that were initiated recently, and the need to avoid needless duplication of effort, and also take advantage of the most recent of information relevant to the conservation of loggerhead turtles within the IOSEA region. It was agreed that Dr. Hamann, coordinator of this assessment, would attempt to consult with Signatory State representatives, particularly during the sub-regional consultations, to advance the final aspects of data compilation.

21. The observation was made that while the IOSEA Advisory Committee was developing a loggerhead assessment, other organisations had taken on the same task – unfortunately without communicating with the IOSEA. This led to a discussion about the validity of IOSEA investing time and effort in these assessment activities. It was pointed out that IOSEA has a unique role in providing pragmatic, up-to-date information and guidance for conservation and management of marine turtles and their habitats in the IOSEA region, which is not captured in other assessment work. In this light it was agreed that the IOSEA species assessments should be especially relevant to the management and conservation needs in the region.

22. It was pointed out that a particular need for more useful species assessments, as well as other IOSEA activities, was access to much more complete and thorough information from relevant fisheries organisations that are active in the IOSEA region. In this light, the Committee requested that Signatory States do everything possible to encourage these fisheries organisations to enhance their

capacity to collect information on marine turtle bycatch and make it fully available to Signatory States and IOSEA Secretariat.

(f) National networks/communities

23. The Chair pointed out that the IOSEA Conservation and Management Plan requires Signatory States to "encourage cooperation within and among government and non-government sectors, including through the development and/or strengthening of national networks" [CMP Activity 6.4 c]. He further observed that no government agency, in any country in the world, has adequate resources (human, logistic, financial, etc.) to be able to comply with the numerous and diverse tasks required by the CMP. Hence, it is essential to nurture the greatest possible communication, collaboration, and cooperation at the national level. The Coordinator informed the meeting that a questionnaire on national networks/committees was distributed to all IOSEA Focal Points, but it did not elicit as positive a response as a questionnaire that was sent out prior to the last Signatory State meeting in 2008. To facilitate this essential task, the Committee recommended that the issue of nurturing national marine turtle networks/committees be clearly articulated in the "Terms of Reference and Guidance for IOSEA Focal Points" (document MT-IOSEA/SS.6/Doc. 11).

(g) Thematic workshops planned for SS6

24. The Coordinator introduced the two thematic workshops to be held at SS6: (1) Satellite Tracking and (2) Climate Change Impacts on Marine Turtles and related Mitigation Strategies. The workshops were scheduled to be held in parallel. However, based on anticipated demand, the convenor of the climate change workshop had agreed to hold an additional session in the evening, making if possible for delegates to attend both workshops if they so desired.

(h) Sub-regional consultations: suggestions for enhancing outputs and follow-through

25. The Coordinator reviewed the plan to allow for consultations at SS6 in smaller sub-regional groups, to provide for exchange of ideas and experience among countries with geographic affinity. In the last meeting of Signatory States, some of the groups were constrained by the amount of time allocated to country presentations. He suggested that the sub-regional focal points needed to be firm in setting the agenda and that the outline in document MT-IOSEA/SS.6/Doc. 2 – Addendum be used as guidance for running the consultations. In a related note, some committee members discussed the merits of changing some of the sub-regional alignments due to geographic affiliations.

(i) Data quality

26. The Committee noted that data quality was an overarching concern in turtle conservation efforts and encouraged Signatory States to make all efforts to ensure the highest quality of information provided in diverse reports. A clear example of this need was shown in the Secretariat's observations concerning site-based information on species, habitats, threats and mitigation measures (document MT-IOSEA/SS6/Doc 6.1). This issue was also relevant to the fundamental concepts, mentioned earlier in the meeting.

Agenda item 5: Advisory Committee membership, chairmanship, functioning

27. The Committee was advised that two of its members would be standing down and that the Secretariat had received only one new nomination that conformed to the Advisory Committee's terms of reference. A discussion ensued about setting a procedure for considering nominees during intersessional meetings. It was pointed out that there was a need for the Advisory Committee to have a diversity of disciplines, not just turtle biologists. The possibility of meeting more frequently than just before SS meetings was also discussed. Some members supported holding annual meetings on an optional basis, only when needed, while others suggested that video-conferencing was an option to pursue and thus save on costs. In another matter, the Chairman called for increased communication among Committee members when meetings were not in session. The need for clarity in function and

decision regarding the Advisory Committee was emphasized. The Committee noted that at the end of SS6, the new committee would meet to elect its chair.

Agenda item 6: Report of the Chair to the Meeting of Signatory States

28. It was noted that on 23 January the Chairman would be invited to report orally to the Meeting of the Signatory States on the main issues considered during this Advisory Committee meeting.

Agenda item 7: Other business

29. There being no other items of business, the Chairman thanked participants for their contributions and adjourned the meeting.

ANNEX I: LIST OF PARTICIPANTS TO THE SIXTH MEETING OF THE IOSEA ADVISORY COMMITTEE

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ANNEX 2: AGENDA OF THE SIXTH MEETING OF THE IOSEA ADVISORY COMMITTEE

1. Welcoming remarks

2. Admission of observers and adoption of the agenda

3. Secretariat overview of arrangements for the Sixth Meeting of the Signatory States (SS6)

4. Discussion of SS6 agenda items requiring Advisory Committee advice/intervention

   (a) Overview of IOSEA MoU implementation (Doc. 6) and site-based information (Doc 6.1)
   (b) IOSEA priorities
   (c) Site Network proposal
   (d) Technical Support/Capacity-building & standardisation
   (e) Species Assessments: leatherback (retrospective) and loggerhead
   (f) National networks/committees
   (g) Thematic workshops planned for SS6
   (h) Sub-regional consultations: suggestions for enhancing outputs and follow-through
   (i) Data quality

5. Advisory Committee membership, chairmanship, functioning

6. Report of the Chair to the Meeting of Signatory States

7. Other business

ANNEX III: SUMMARY OF SPECIAL CONSIDERATIONS ON FLIPPER TAGGING

Marine turtles are slow growing, long-lived animals. If we wish to follow individual turtles throughout their life span, then tags used for flipper tagging need to be made of a material that can last for decades when immersed in seawater. Typically, a marine turtle is decades old when it commences its adult breeding life and can be expected to have a breeding life spanning an additional 20+ years. It is not uncommon for some individual turtles to skip 4 to ten years between breeding seasons. For a tagging-recapture program to be effective, the tag must have a high probability of remaining readable on the turtle across these types of time periods.

Only two types of flipper tags are currently available which can be expected to remain on turtles across many years: titanium tags and inconel tags. All other types of flipper tags (aluminium, monel, plastic) have a limited retention time on turtles in the sea.

Only titanium and inconel tags are recommended for use as the primary flipper tags within marine turtle tagging studies in the IOSEA Region. No other types of tags can be expected to survive more than a decade on a turtle. Probability of recognition of individual turtles across long recapture intervals can be improved by applying more than one tag to the turtle.

The primary function of flipper tagging in marine turtle research and monitoring projects is to allow the identification of individual turtles. Once individual turtles are identifiable, it is possible to:

- Use tagging to census the number of turtles visiting a particular beach within a nesting period.
- Use recaptures of tagged turtles to determine spatial dispersal and migration of turtles:
    - Migration linkages between foraging areas and distant nesting beaches.
    - Sequential habitats used during developmental migration of immature turtles.
    - Changes in nesting beaches by individual turtles within and between breeding seasons.
- Use mark-recapture studies to quantify:
    - Renesitng interval (days between successive clutches in a breeding season);
    - Remigration interval (years between successive breeding seasons);
    - Number of clutches laid by a turtle during a breeding season;
    - Growth rates;
    - Population recruitment rates, annual survivorship and population size at a particular study site, based on mark-recapture modelling;

With additional analysis,

- growth data can be modelled to estimate the age to first breeding;

There are therefore both short term and long term data to be gained from flipper tagging studies. When turtles are correctly tagged with titanium or inconel tags, recaptures of these turtles are likely to occur across at least 30 years. This interval of return of information from tagged turtles is typically longer than the duration of most university studies and longer the period of involvement of managers employed by government agencies for turtle conservation.

To maximise the value of long term data available from flipper tag returns, it is imperative that tags be dispersed from centralised tagging ‘agencies’ that are also custodians of the tagging data and subsequent tag recovery data. The tagging agency should be identified by the return address on the back of the tag.

Short term tagging studies not linked to long term management of tagging databases are not recommended.

It is strongly recommended that there be Regional tagging agencies. For example:

- South Pacific Regional Environmental Programme (SPREP) coordinates the purchase, dispersal and data security for turtle flipper tagging projects within the Pacific Island Nations. All tags used have a common prefix and SPREP return address. Tag recoveries reported to SPREP and reported on to the national focal points and study teams responsible to the respective tagging projects. This database has been functional for 20 years.
- Within Australia, individual States and the Commonwealth have agreed prefixes to identify their tag series: CA = Commonwealth of Australia; NS = New South Wales; QA = Queensland; WA = Western Australia, each with the respective return address. Each state manages its own database. Queensland is also custodian of the back-up database for the Commonwealth and Northern Territory tagging projects and a number of historical tagging studies in the region. Each agency regulates tagging studies by academics, NGOs and community groups to use tag series supplied by the respective management agency. Centralised coordination of turtle tagging data has been in place in Australia for more than 40 years.
- Within the ASEAN region, the Marine Fishery Resources Development and Management Department of the Southeast Asian Fisheries Development Center (MFRDMD/SEAFDEC) provides flipper tags and consolidates tag data from ASEAN member countries within the framework of a long-term fisheries/research project. Contact person: Mr. Syed Abdullah Syed Abdul Kadir, MFRDMD/SEAFDEC, 21080 Chendering, Terengganu, Malaysia, syedjohor@gmail.com

It is critical that tag numbers are not duplicated within an ocean basin. See the IOSEA website < http://ioseaturtles.org/flippertags.php> for a detailed summary of tag series used by more than 20 countries within the IOSEA region, as well as a paper offering general information on flipper tags and tag series, authored by Dr. Jeanne Mortimer.

ANNEX IV: QUESTIONNAIRE FOR IDENTIFYING NATIONAL INDEX SITES FOR MONITORING MARINE TURTLE POPULATIONS

Country: Species: Date prepared:

References identifying the genetic stocks or management units (Author and year):

Name of stock					
Are there index beaches for each stock (Y/N); How many (number)					
	1	2	3	4	5
Name of index beaches by stock					
Census method for index beach					
Year of first census					
Year of last census					
Additional comments					
Published report (author & year)					

Reference list for reports and publications identified above:

1.

2.

3.

4.

5.

Supply a set of summary tables and/or graphs for the census data from each index site.

EXAMPLE: Questionnaire for identifying national index sites for monitoring marine turtle populations (sample from Australia).

Country: Australia Species: *Caretta caretta* Date prepared: 21 Jan 2012

References identifying the genetic stocks or management units (Author and year): Limpus *et al*. 2005

Name of stock	SW Pacific					
Are there index beaches for each stock (Y/N); How many (number)	Yes: 6					
	1	2	3	4	5	6
Name of index beaches by stock	Woongarra Coast (including Mon Repos)	Heron Island	Wreck Island	Lady Musgrave Island	Northwest Island	Wreck Rock beaches
Latitude						
Longitude						
Census method for index beach	Total nightly tagging for the nesting season	Total nightly tagging for the nesting season	Total nightly tagging for 2 weeks and mid nesting season (last 2 weeks of December)	Total nightly tagging for 2 weeks and mid nesting season (last 2 weeks of December)	Total nightly tagging for 2 weeks and mid nesting season (last 2 weeks of December)	Total nightly tagging for 5 weeks during mid nesting season
Year of first census	1970	1974	1977	1971	1977	1978
Year of last census	continuing	continuing	Continuing		Continuing	Continuing
Additional comments	6 small crescent beaches in a continuous rocky shore.	1.6km beach	1.7km beach	XXX km beach	5km beach	22km of mainland beach
Published report (author & year)	Limpus, 2008; Limpus and Nicholls, 2000; Chaloupka et al. 2008	Limpus, 2008	Limpus, 2008	Limpus, 2008	Limpus, 2008	Limpus, 2008

Reference list for reports and publications identified above:

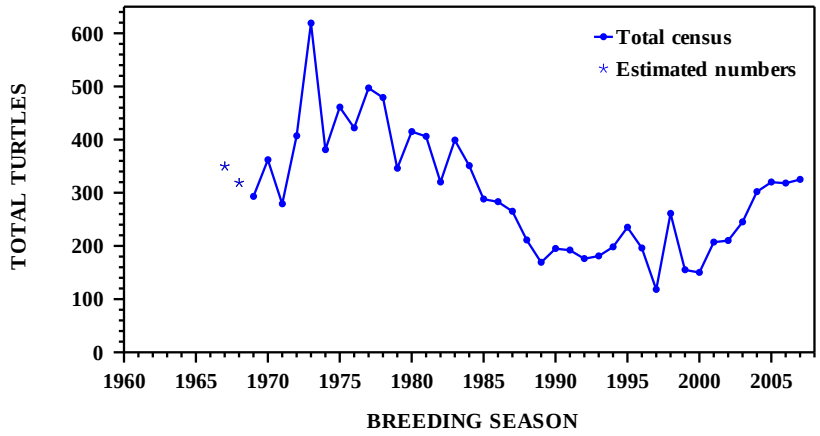
Chaloupka, M., Kamezaki, N., and Limpus, C. J. (2008). Is climate change affecting the population dynamics of the endangered Pacific loggerhead sea turtle? *Journal of Experimental Marine Biology and Ecology* 356, 136-143.

Limpus, C. (2008). A biological review of Australian marine turtles. 1. Loggerhead turtle, *Caretta caretta* (Linnaeus). (Queensland Government Environmental Protection Agency: Brisbane.)

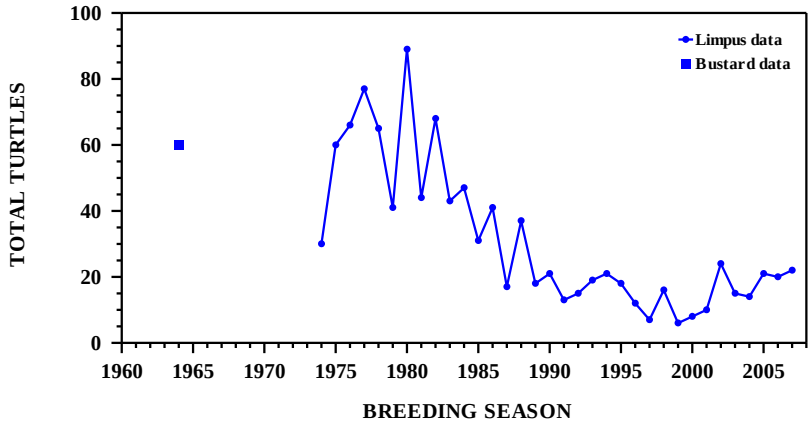
Limpus, C. J., Boyle, M., and Sunderland, T. (2005). New Caledonian loggerhead turtle population assessment: 2005 pilot study. In “Proceedings of Second Western Pacific Sea Turtle Cooperative research and Management workshop. Volume II. North Pacific Loggerhead sea turtles.” (Ed. Kinan, I.) Pp. 77-92. (Western Pacific Regional Fisheries Management Council. Honolulu.)

Supply a set of summary tables and graphs for the census data from each index site.

Figure 1. Total annual loggerhead turtle, *Caretta caretta*, nesting population at index rookeries measured by total annual tagging census.

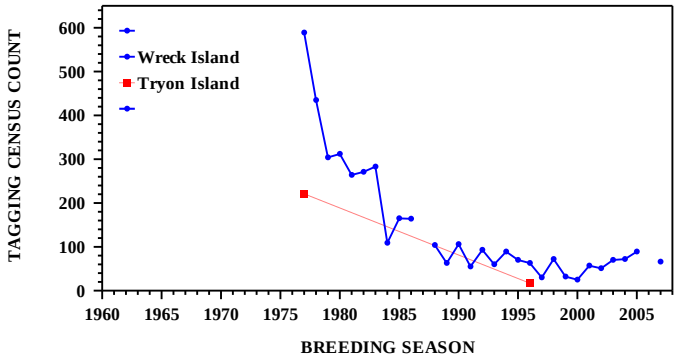


1a. Woongarra Coast, including Mon Repos

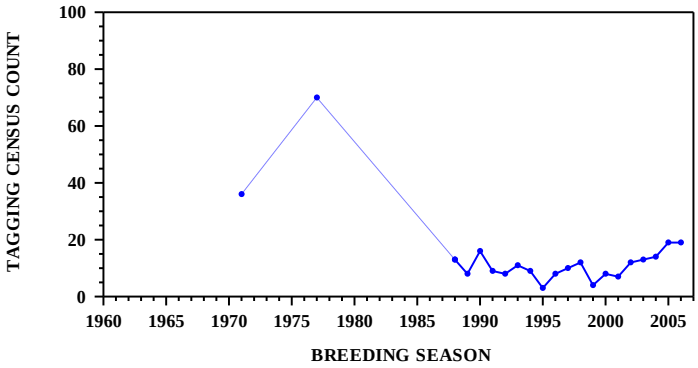


1b. Heron Island

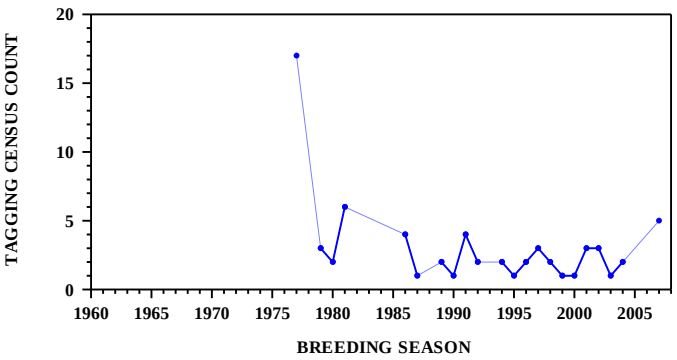
Figure 2. Annual number of loggerhead turtles, *Caretta caretta*, recorded nesting at index rookeries measured by tagging census at the peak nesting season census period during the last two weeks of December.



2a. Wreck Island and Tryon Island

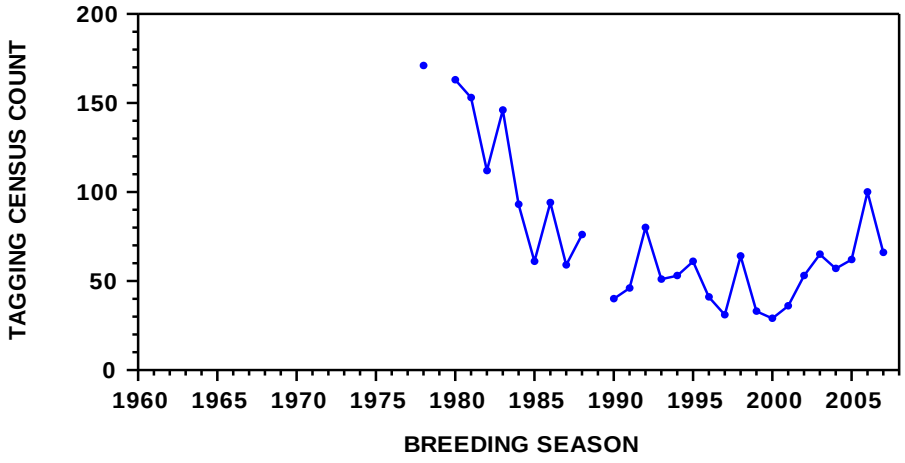


2b. Lady Musgrave Island



2c. Northwest Island

Figure 3. Annual number of loggerhead turtles, *Caretta caretta*, recorded nesting at an index rookery measured by tagging census at the peak nesting season census period during five weeks in December and January



3a. Wreck Rock Beaches

ADDENDUM TO THE REPORT OF THE SIXTH MEETING OF THE IOSEA ADVISORY COMMITTEE

1. By tradition, the Advisory Committee convenes briefly following the close of the Meeting of the Signatory States, primarily to discuss arrangements for the chairmanship. A quorum of existing members of the Advisory Committee (Al-Kiyumi, Chokesanguan, Frazier, Limpus, and Miller) met informally on the evening of 26 January 2012.

2. Dr. Miller, seconded by Dr. Limpus, proposed that Dr. Jack Frazier continue as Chair for another term. Dr. Frazier accepted the nomination and was duly re-confirmed as Chair of the Advisory Committee.