Inter-American Convention for the Protection and Conservation of Sea Turtles
X Meeting of the Scientific Committee
Tegucigalpa, Honduras
September 10-13, 2013

CIT-CC10-2013-Doc.5

Report of the Tenth Meeting of the IAC Scientific Committee

1. Opening Remarks and Welcome

The Tenth Meeting of the Scientific Committee (SC) of the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) began with the welcoming remarks of **Ambassador Ramón Valladares Reina**, General Director of Special Affairs of the Ministry of Foreign Affairs and National Focal Point to the IAC; and **Mr. Rafael Amaro Garcia** on behalf of the Biodiversity Directorate (DiBio) of the Ministry of Natural Resources and Environment (SERNA), who provided a warm welcome to the participants on behalf of the Government and people of Honduras.

SC Chair **Mr. Jorge Zuzunaga** thanked the Honduran colleagues for organizing the event and for the warm reception and stressed the importance of sharing scientific knowledge for the conservation of sea turtle species with the numerous countries collaborating with the Convention. The *Pro Tempore* Secretary (PTS), **Ms. Veronica Caceres Chamorro**, thanked the DiBio-SERNA team and the Honduran Focal Point for their support and the SC delegates and observers for their presence and urged attendees to work hard during the sessions.

2. Introduction of participants and election of rapporteur

The meeting was attended by delegates and advisers from the following Contracting Parties: Belize, Brazil, Chile, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Caribbean Netherlands, Panama, Peru, United States and Uruguay. The delegate of Argentina participated in the Fisheries working group session via conference call. Additionally, a representative of the Permanent Commission for the South Pacific (CPPS) and the IAC-accredited NGO ProTECTOR participated as observers (Annex I).

Mr. Eduardo Espinoza (**Ecuador**) was elected rapporteur with the assistance of the *Pro Tempore* Secretariat.

3. Adoption of the agenda

The agenda was adopted with one change, the inclusion of presentations by the Permanent Commission for the South Pacific (CPPS) and the NGO ProTECTOR during the second day of the meeting (Annex II).

4. Conservation Status of Sea Turtles in Honduras

Ms. Carolina Montalvan, delegate of Honduras on behalf of the Biodiversity Directorate of the Ministry of Natural Resources and Environment DiBio-SERNA, gave an overview of the State of Sea Turtles Conservation in the country. The summary included: species found in Honduras and their distribution, the legal framework for the protection of sea turtles on the Pacific coast and the identification of conservation efforts in the Pacific and Caribbean coasts, in addition to the main uses and threats identified on the resource. The presentation highlighted the formation of the National Sea Turtle Technical Committee (COTTOM in Spanish) and the creation of the National Strategy for Sea Turtle Conservation as the country's advances towards the conservation of these species and the implementation of the IAC's objectives.

Ecuador asked about the types of habitats to which the conservation initiatives were oriented. It was mentioned that conservation programs are focused on nesting beaches and their activities are mainly patrols, nest protection and environmental education.

Mexico stressed that conservation efforts in the Gulf of Fonseca should take into consideration the efforts in Nicaragua and El Salvador in order to coordinate and achieve a more efficient management of the species. **Honduras** clarified that although El Salvador and Nicaragua are not part of the IAC, they recognize the importance of including them in their conservation initiatives, and that there was currently communication between the Ramsar Focal Points of the three countries and discussions with the Ramsar Secretariat to promote the designation of the Gulf of Fonseca as a Ramsar Site with Tri-national management, in order to aid in the conservation of the habitat and species it sustains, like sea turtles.

ProTECTOR inquired about how scientific information is included in the country's decision-making process. **Honduras** stated that such information is useful in the preparation of the IAC Annual Report, to update management plans and that currently information is needed to evaluate the effectiveness of the "veda" or closed-season program in the Pacific. Honduras also highlighted the importance of having access to the information generated by groups working with sea turtles in Honduras since often this information is not accessible.

The *Pro Tempore* Secretariat highlighted the request of Honduras to determine the peak nesting season for olive ridley turtles in the south of the country in order in order to provide technical evidence to modify the decree of "Veda" or the closed-season which currently exists in Honduras. Moreover, it offered support on the process of designating the Gulf of Fonseca as a Ramsar Site with tri-national management under the framework of the Ramsar Convention, as a specific activity to be carried out under the Memorandum of Understanding (MoU) between the two Conventions.

Caribbean Netherlands stressed the importance of protecting sea turtles and their foraging grounds on the Caribbean coast of Honduras, since there is evidence that significant proportions of these populations originate from as far away as the Eastern Caribbean.

5. Report from the Chair of the Scientific Committee

Mr. Jorge Zuzunaga gave a summary on the topics covered as per the agreements made during the SC9 and the follow up done by the Working Groups (WG) during the intersessional period. He emphasized the need to prioritize those SC functions that directly support the IAC in achieving its objectives, and the inclusion of these functions into the SC's work plan, uch as the promotion of scientific research and review of sea turtle reports generated outside the Convention.

He then mentioned the activities of the working groups during the intersessional period and the tasks to be undertaken at this meeting, emphasizing the following aspects:

a. IAC Annual Reports

The SC9 instructed the Annual Report Working Group (WG) to propose modifications to Table 2, Annex of the IAC Annual Report, specifically regarding index beaches, criteria for their selection, and reporting real numbers instead of ranges. These changes will improve the quality of nesting data presented from now on within the Annual Report. Moreover the WG worked on creating guidelines for the selection of index beaches by the Contracting Parties, which will be reviewed during this meeting.

b. Database

Mr. Alex Santos **(Brazil)** was thanked for the preparation and adjustments made to the database during the intersessional period. The adjustments were made according to changes in the format of Table 2 of the Annual Report.

c. Exceptions

The SC and the Consultative Committee considerations on the exceptions presented by Panama and Guatemala were sent to the COP6. The COP6 adopted Resolution CIT-COP6-2013-R1 with recommendations based on the scientific feedback received. IAC Committees will monitor the implementation of this Resolution.

d. Fisheries Interactions

Four topics were addressed:

i) Turtle Excluder Devices (TEDs): The SC9 completed the table, listing the devices used by the Parties and sent it to COP6. The Fisheries WG should review and update the table with the information provided by the Parties each year.

ii) Forms to collect information on gillnets: The forms were approved in the SC8. Chile and Argentina offered their support in pilot testing the forms. Based on the results of pilot testing the fisheries WG will provide recommendations to the Parties on the implementation of the forms.

iii) Onboard management of incidentally caught sea turtles: SC9 agreed to compile existing information on the onboard management practices for handling sea turtles incidentally caught in fisheries in order to identify best practices to recommend to the IAC Parties. The Fisheries WG will be presenting their progress on this task.

iv) Ecological Risk Assessment for sea turtles: the topic was proposed for the SC to consider including it within the work plan of the Fisheries WG. The **USA** asked for a description of the topic

and justification as to why it should be included in the SC's work plan. **Chile** proposed evaluating the methodology of the ecological risk assessment to see if could be used to determine the conservation status of some species of turtles and identify information gaps which could direct the work of the SC. The Fisheries WG task consisted of analyzing the feasibility of performing an ecological risk assessment for the eastern Pacific leatherback. In order to do this, other ecological risk assessments were reviewed, for example, the one done by the International Commission for the Conservation of Atlantic Tunas (ICCAT).

e. Climate Change

The Climate Change WG was created to support the Parties in the implementation of Resolution CIT-COP4-2009-R5. During the intersessional period, the group analyzed the implementation of the Resolution over the past two years. The task for the SC in this meeting was to evaluate the WG's report and make recommendations to the WG on their future activities.

f. Hawksbill Working Group

The floor was given to the *Pro Tempore* Secretary (SPT) to explain the subject in relation to the on-going consultancy process. The SPT explained that the consultancy process began with CITES funding, which would allow a consultant to be hired to prepare an analysis on the conservation status of hawksbill turtles in the Wider Caribbean and Eastern Pacific.

g. SC Work Plan

Approved by COP6 for the 2013-2014 period. The COP6 suggested adding additional tasks for 2014 that arise from this meeting, for example the following intersessional activities: i) evaluate the conservation status of sea turtle populations in the region, based on the best scientific data available and considering the environmental, socioeconomic and cultural characteristics of the Parties, and ii) identify and provide the Ramsar Secretariat with information on sea turtles in Ramsar Sites.

In this regard, the SC10 addressed COP6 recommendations and included new activities or broke down existing activities to be performed in 2014 and 2015. On this last point the *Pro Tempore* Secretariat suggested developing specific objectives to match the work plan with the SC functions.

h. Other Topics

The SC Chair requested the *Pro Tempore* Secretariat to elaborate on the activities conducted over the past two years regarding cooperation with regional intergovernmental organizations relevant to sea turtle conservation, the project proposal for the Eastern Pacific (EP) leatherback and activities under the MoU between the IAC and Ramsar Convention.

Ecuador asked about the relevance of including alliances with intergovernmental organizations in the SC's work plan. The *Pro Tempore* Secretariat clarified that the role of the SC is to identify organizations or individuals and to promote outreach between these alliances and the IAC. The SPT is responsible for following up to achieve this cooperation.

6. Report on Activities of the *Pro Tempore* Secretariat

Ms. Veronica Caceres Chamorro summarized the activities carried out by the *Pro Tempore* Secretariat from the SC9 to date. The highlighted activities were:

a. International Cooperation

IAC-Ramsar collaborative activities began with the creation of a technical document on the benefits of Ramsar Sites to sea turtle conservation. This item was included when preparing the SC10 agenda.

Under the IAC-CITES MoU, efforts have begun with CITES to update the conservation status of hawksbill turtles in the Wider Caribbean and Eastern Pacific Ocean. Funding from CITES was received in August 2013 for this project and the process of selecting a consultant has been started. Results are expected be presented in mid-2014 to CITES and IAC.

On the other hand, the MoU between the IAC and the International Commission for the Conservation of Atlantic Tunas (ICCAT) is currently in process. The draft MoU approved by IAC COP6 was sent to the ICCAT Secretariat for consideration by the Parties at its next Commission meeting to be held in November 2013. The SPT requested that countries contact their ICCAT focal points and ask them to familiarize themselves with the document and support it at the Commission meeting.

Lastly, the consultation process has begun among the IAC Parties to review the collaborative arrangement between the IAC and the Sargasso Sea Alliance. The Parties are currently evaluating whether or not to sign the agreement.

b. Cooperation IAC-NGO's

The SPT highlighted IAC's collaboration with WWF on climate change and fisheries data collection. Regarding climate change, a webinar was organized on this topic to which all SC and CCE members were invited. As for collecting fisheries data, in the context of ICCAT's development of an ecological risk assessment for sea turtles, WWF supported the IAC in compiling data on the actions taken by Party countries in order to implement IAC Resolutions "Conservation of Leatherback Turtles (*Dermochelys coriacea*)" and "Reduction of the Adverse Impacts of Fisheries on Sea Turtles", based on the information provided in the 2011 and 2012 IAC Annual Reports. This information was sent to the ICCAT Secretariat.

USA emphasized the importance of IAC associating with organizations like WWF as part of initiatives already underway to maximize synergies. Caribbean **Netherlands** also recommended looking for other partners to create alliances.

c. Financial Resource Management

The SPT reported that the proposal submitted to the Marine Turtle Conservation Fund to support the IAC Sixth Conference of the Parties and the meetings of its subsidiary bodies, particularly the Consultative Committee, was approved. These funds were used to reduce the COP's travel costs, ensuring quorum to this and other meetings was reached. The recipient countries were: Argentina, Mexico, Guatemala, Chile, Panama, Honduras and Ecuador. Furthermore, these funds are used to maintain the contract for the IAC's Technical Assistant.

The SPT thanked the increasing support received from the countries in organizing meetings. Countries were invited to become future hosts, taking into account that the contributions requested were mainly: facilitating local logistics, contributing to lunches and coffee breaks, airport-hotel transportation, organizing field trip and welcome reception, printing materials and providing support staff.

Ecuador emphasized that hosting these meetings provides an opportunity to disseminate sea turtle conservation efforts in the host country, and urged the delegates to take advantage of the opportunity to host IAC meetings.

d. COP6 Resolutions

The SPT summarized the Resolutions adopted by the COP 6, mentioning the following: i) CIT-COP6-2013-R1[1] on exceptions under Article IV (3a and b) for subsistence harvest of *Lepidochelys olivacea* eggs in Guatemala and Panama; ii) CIT-COP6-2013-R3 [2] on the establishment and operation of the Permanent Secretariat. Regarding this matter, it was decided that the temporary headquarters of *Pro Tempore* Secretariat would remain in Virginia, USA, for two years, while the Legal WG and SPT negotiated a hosting agreement with interested Parties or organizations, in order to determine the host at the COP. Ecuador, Peru, Caribbean Netherlands, Stetson University and the NGO Arcas showed interest; iii) Resolutions on finances, the work plan, the Parties pronouncement in memory of Mr. Jairo Mora, and the election of Mexico and Caribbean Netherlands as the new COP's Chair and Vice - Chair respectively.

The **USA** emphasized the importance of seeking new funding alternatives such as regional and national USAID programs and private funds such as the ones created to compensate the oil spill in the Gulf of Mexico. The SPT noted the attempt to form a fundraising WG at COP6. It was agreed that the SPT would follow up on this issue with the USA and Netherlands.

Ecuador commented on the importance of using IAC's quarterly newsletters as a means to disseminate the relevant activities in each country. The SPT indicated that the IAC newsletter was available to profile any activities carried out by the Parties, and the SPT invited each SC delegate to send any relevant activities happening within its country for publication in the newsletter. It was agreed that each member of the SC would send any relevant information to the SPT for its publication.

7. Report of the Sixth Meeting of the Consultative Committee of Experts (CCE)

Mr. Paul Hoetjes provided an overview of the results of the Sixth meeting of the Consultative Committee of Experts (CCE)[3]. The meeting was held via video conference sponsored by the State Department of the U.S. Government, which provided benefits since multiple experts and stakeholders from each country were able to participate in the meeting and resulted in a considerable reduction of the meeting's costs. He highlighted the following:

[1] http://www.iacseaturtle.org/eng-docs/resolucionesCOP6CIT/CIT-COP6-2013-R1_Exceptions_Final.pdf
[2] http://www.iacseaturtle.org/eng-docs/resolucionesCOP6CIT/CIT-COP6-2013-R3_Permanent_Secretariat_Final.pdf
[3] Meeting minutes available at: http://www.iacseaturtle.org/eng-docs/comite-consultivo/6reunion/CIT-CCE6-2013-Doc.03_Report_may_9_ENG.pdf

a. Parties Compliance with IAC Resolutions: the CCE analyzed the level of compliance with the Resolutions based on the information in the Annual Reports. The result of the analysis was presented to the COP6 (see COP6 report for results) along with the recommendations on how to increase the participation of the Parties in completing their annual reports. Brazil's support in organizing the data and creating graphics for the report was highlighted.

b. Exceptions: the CCE evaluated Panama's and Guatemala's request for exceptions, along with the scientific information provided by the SC. A draft resolution was created, which was later adopted by COP6.

c. Eastern Pacific leatherback conservation: the CCE created a document that gave recommendations on how to improve compliance with resolution CIT-COP2-2004-R1[4]. This document was presented to the COP6 and is included in the COP6 report[5].

8. Conservation status of sea turtles in Costa Rica

Mr. Didiher Chacon (**Costa Rica**) summarized sea turtle conservation efforts in Costa Rica during the last year, focusing on: i) the creation of two new categories for Marine Protected Areas, one of which includes managing marine areas with no terrestrial area, and one where regulated fishing rights are given to fishers groups; ii) the creation of the Vice-ministries for water and seas under the Ministry of Environment, and iii) the creation of a National Marine Conservation Strategy. On the other hand, he emphasized a mass stranding event of green turtles that is thought to have been caused by fisheries interactions and not due to poisoning as was officially reported. He proposed that it is necessary to establish a protocol for responding to stranding events that could be applied in the IAC region. Additionally, Mr. Chacon gave a detailed description of the recent tragic assassination of biologist, Jairo Mora, that occurred on Costa Rica's Caribbean Coast, which has set the tone for the way conservation is being done in Costa Rica due to the lack of security while patrolling because of the presence of illegal trafficking. The NGOs' monitoring efforts of beaches near the tragedy's site have been suspended due to the lack of security in the area. However, efforts are being made in conjunction with the Government of Costa Rica and NGOs to declare the area as a protected area.

Caribbean Netherlands asked about alternative conservation efforts given the lack of security on the beaches and at other sea turtle habitats. **ProTECTOR** proposed remote monitoring techniques (e.g. drones) as an alternative even though it is not the same as direct monitoring. **Costa Rica** mentioned that they may achieve some security for patrolling through the declaration of the area as Protected and that remote monitoring alternatives are being considered and created in Costa Rica's universities, although the cost is high.

9. Hawksbill Turtle Status in the Eastern Pacific

Mr. Jeffrey Seminoff summarized the status of hawksbill turtles in the Eastern Pacific (EP). He highlighted the amount of teamwork necessary from organizations such as the Eastern Pacific

[4] Resolution available: http://www.iacseaturtle.org/eng-docs/resolucionesCOP2CIT/COP2-2004-R1-ENG.pdf
[5] COP6 report available: http://www.iacseaturtle.org/engocs/resolucionesCOP6CIT/COP6_Report_ENG_sep_25_FINAL.pdf

Hawksbill Initiative (ICAPO). The team compiled abundant information on hawksbill turtles over the last five years. This information came to change the paradigms about this species, especially regarding foraging and nesting behaviors associated with mangroves and estuarine systems in the EP instead of coral reefs customary for this species, in addition to their migratory behavior. The main nesting beaches for this population are in Nicaragua (Estero Padre Ramos) and El Salvador. Satellite telemetry studies also showed that the species use the Gulf of Fonseca. Moreover, it is further believed that there are two different populations in the Eastern Pacific, which is pending confirmation through genetic studies.

Ecuador pointed out the existence of beaches in the Gulf of Guayaquil where turtles have not only been observed at nesting beaches, but interacting with fisheries as well. He also highlighted the conservation efforts being carried out in Machalilla.

Peru inquired as to the reasons for the recent reports on the presence of sea turtles at these mangrove sites, emphasizing the possibility that it could be a new behavior for sea turtles in light of degradation of their usual habitats.

Mexico noted that the coasts of Nayarit and Jalisco are identified as hawksbill nesting sites.

Honduras mentioned an initiative between the government and universities to promote research internships focused on information gaps for this species. **USA** supported the initiative and recognized the challenge of having knowledgeable and motivated people to promote national efforts to follow-up on researching this population, which was thought to be nonexistent up until 5 years ago. The **USA** also recommended including other sectors such as NGOs and local communities.

Regarding the consultation on the update of the conservation status of hawksbill turtles in the Wider Caribbean and Eastern Pacific the Caribbean **Netherlands** asked whether the consultant was going to request more information from data providers or just base the update on existing publications. The SPT and **Ecuador** noted that the Terms of Reference stated that the task is to compile and organize available information in order to prepare a report for CITES and the IAC. The SPT also emphasized and thanked ICAPO's willingness to support the consultant on this task. **Ecuador** also highlighted the challenge of gathering information on this species, published or not, that each Focal Point must do within their country.

10. Incidental capture of sea turtles in Chile's south east Pacific fisheries and results of testing gillnets forms

Mr. Miguel Donoso, Director of the Chilean NGO Pacífico Laúd, provided a summary of their experience in implementing the IAC's gillnet data collection form in Chile. The pilot test was carried out in the second semester of 2012 in compliance with the agreement made at the SC9. The presentation focused on how to determine interactions between fisheries and sea turtles by using the forms in Chile and highlighted that the forms are very effective at identifying these interactions, but not at identifying the species of turtle, given the difficulty fishermen have in recognizing different species with the exception of leatherbacks since it can be easily distinguished. It was also noted that

the use of the forms required that the person filling them in be trained and have a relatively high educational background, which limited its use by fishermen. Another challenge was to determine the state of turtles when they are released (alive/dead), since in some cases the turtles swallowed a hook that was not able to be removed so the animal was released alive, but it was unknown if the hook would cause death later on. The conclusion of the pilot project in Chile is that the forms are a useful tool to collect detailed information on fishing gear that has greater interactions with sea turtles, fishing areas where this interaction occurs and can help measure the impact of coastal fisheries on sea turtles. In this regard, the Government of Chile will be promoting the use of these forms in their data collection operations. **Peru** and the SPT congratulated the NGO Pacífico Laúd and Chile's Sub Secretariat of Fisheries for their efforts and the results of this initiative.

11. ProTECTOR activities in Honduras

Mr. Stephen Dunbar, Director of the NGO ProTECTOR presented an overview of the research efforts led by the organization in Honduras. The NGO carries out research on the Caribbean and Pacific coasts in fields such as genetic analysis, nesting beaches parameters, nest temperatures and sex ratio of hatchlings and telemetry studies in turtles. In southern Honduras, they are currently monitoring hatchlings in order to contribute to the management of the "veda" or closed- season program for Olive Ridley turtles. There are also reports of hawksbill turtles, but fishermen have a difficult time identifying them.

Ecuador asked about their outreach efforts with the government and the possibility that the NGO could become part of an advisory committee. ProTECTOR stated that they present their annual reports to the government of Honduras and hopes to have closer ties with governmental agencies.

12. Advances in the Southeast Pacific Regional Sea Turtle Program

Mr. Fernando Felix representative of the Permanent Commission for the South Pacific (CPPS) began his presentation with an overview of the objectives of the regional program for the conservation of sea turtles in the South Pacific, emphasizing the following components: research and monitoring, sustainable management, environmental education, community participation, information dissemination, institutional capacity building and international cooperation. Similarly he introduced the Biodiversity and Protected Areas Information System SIBIMAP (2009), highlighting the need for more information on sea turtles and identified this as a potential area for synergies between the IAC and CPPS to share information on sea turtles in this database.

The **USA** asked about the origin of the mapping program used. It was clarified that the model was developed by UNEP.

Ecuador and **Honduras** agreed on the need to strengthen the information and its availability, but acknowledged some limitations. On this regard, CPPS invited a member of the IAC SC to participate in the next course on electronic repositories as suitable storage and dissemination tools. The SC10 agreed that the SPT will follow-up with Ecuador's Focal Point to identify someone

suitable to participate in this course. Likewise, the SPT will contact CPPS to follow up on the invitation.

13. Formation of Working Groups

The following working groups were formed in order to develop the subsequent topics:

Working Group: Fisheries
Members: Francisco Ponce (Chile, Coordinator), Miguel Donoso (Chile), Jorge Zuzunaga (Peru), Diego Albareda (Argentina, present by conference call), Phillip Miller (Uruguay).

Working Group: Review 2013 Annual Reports and Index Beaches
Members: Jeff Seminoff (USA Coordinator), Eduardo Espinoza (Ecuador), Alex Santos (Brazil), Carolina Montalvan (Honduras), Isaias Majil (Belize), Belinda Dick (*Pro Tempore* Secretariat).

Working Group: Climate Change
Members: Julia Horrocks (Caribbean Netherlands, Coordinator), Eduardo Espinoza (Ecuador) and Carolina Montalvan (Honduras).

Working Group: IAC- Ramsar Technical Document
Members: René Marquez (Mexico, Coordinator), Didiher Chacón (Costa Rica), Marino Abrego (Panama), Jose Martinez (Guatemala), Oscar Torres (Honduras). This group was supported by Sofia Mendez Castillo (Support to *Pro Tempore* Secretariat).

14. Presentation of the results of the Fisheries Working Group

Mr. Francisco Ponce, delegate from Chile, presented the report and results of the WG for each of the four sub-topics:

a. Manual of best practices for handling sea turtles incidentally caught onboard. A conference call was organized with the Argentinean delegate Mr. Diego Albareda, who did an extensive review of literature and existing manuals on this topic during the intersessional period in order to prepare an informational document to be reviewed at this meeting. It was agreed that colleagues from Uruguay and Argentina will work together to polish the final details on the document that will include recommendations on the best manuals available to be recommended to the IAC Party countries for their use. The WG agreed to set the deadline for January 2014 to incorporate other manuals that are still pending. It is expected that the document with recommendations will be circulating for the IAC SC's review by May 2014.

b. Forms to collect information on sea turtle interactions with gillnets. Chile gave a presentation on the results of the implementation of these forms (described earlier in this report). Argentina also sent a report with its implementation results, where they highlighted that testing these forms allowed them to coordinate joint efforts between different fisheries and natural resources governmental agencies (both local and national), the scientific sector and civil society organizations involved in these matters. The interaction achieved during this joint field exercise strengthened coordination between the different institutions since their complementary roles and

specialties generated a synergy that facilitated the work, laying down the foundation to develop a local conservation strategy for sea turtles in Argentina over the medium term.

Given the experiences of Chile and Argentina, the SC recommends that IAC Parties start implementing the distribution of forms[6], taking into consideration the training requirements that need to be provided to fishermen/observers for its proper application and make any adjustments to the forms as needed within each country.

c. Updated list of TEDs. The WG updated the table of Turtle Excluder Devices used in the IAC area to the year 2013, which incorporated input from Ecuador, Costa Rica and Panama. The SC approved the updated list and SPT will circulate it to the Parties. The list can be found in the Fisheries WG Report (CIT-CC10-2013-Inf.2) (Annex III).

d. Ecological Risk Assessment for Eastern Pacific Leatherbacks. The WG analyzed the potential for conducting an ecological risk assessment on the Eastern Pacific leatherback population. It was determined that a risk analysis on this species would not have greater application since the threatened status of the species is already known. However, the WG recommended further work on the topic of ecological risk assessment aimed at identifying new areas of work for the group, such as: geo-referenced information to determine the geographical position of turtles and determining oceanographic conditions that would be incorporated into habitat characterization models. In order to do this, the WG considered including in its work plan an activity to get support from experts in habitat modeling from the National Oceanic and Atmospheric Administration (NOAA) via a conference call. The SPT was asked to follow up on these efforts with NOAA. The SC approved the Fisheries WG work plan and its new activities.

e. Eastern Pacific Ocean Leatherback Turtle Projects. The SC agreed to continue working with the leatherback taskforce on the preparation of a draft proposal for the Eastern Pacific leatherback turtle, involving countries that are in range of the species' foraging grounds and migration routes.

Lastly, the SC was informed of Chile's intention to submit a project proposal to the Marine Turtle Conservation Fund on October 1, 2013 with assistance from the SPT. The proposal is aimed at characterizing the Chilean coastal fisheries that interact with the Eastern Pacific leatherback turtle.

The fisheries WG report contains more detailed information on its activities and work plan (Annex III).

15. Presentation and results of the Climate Change and Sea Turtles Working Group

Ms. Julia Horrocks, delegate of the Caribbean Netherlands, summarized the results of the WG activities during the intersessional period. She presented the group's report (CIT-CC10-2013-

[6] IAC Forms to collect information on sea turtle interactions with gillnets available in Annex 3 of the document: http://www.iacseaturtle.org/docs/comite-cientifico/Informe_CC8-CIT_dec_12_ESP_Final.pdf

Doc.2), which contained an analysis of the information submitted by the Parties in their 2011-2013Annual Reports. Based on this analysis, the WG proposed changes to the Climate Change Resolution assessment table in the Annual Report for the consideration of the SC. The modified table was discussed in plenary and suggestions were made. The Climate Change WG included the plenary's recommendations in the table.

SC10 approved the changes to the table in the IAC Annual Report on Resolution CIT-COP4-2009-R5 *Adaptation of sea turtle habitats to climate change*, as proposed by the WG. The Climate Change WG report with the modified table will be submitted to the next meeting of the CCE for review, particularly in regard to the SC's suggestion of eliminating Question 6 from the table. The table along with the CCE suggestions should be sent to the IAC Focal Points for its final approval.

The Climate Change WG report (CIT-CC10-2013-Doc.2) contains its recommendations, activities and work plan (Annex IV).

Brazil requested to join the Climate Change WG.

Ecuador emphasized the lack of knowledge regarding the effects and types of monitoring that should be done on climate change. He also highlighted that climate change constitutes an additional element of risk to sea turtles.

Honduras stressed the need to create synergies with the Climate Change Convention (UNFCC), as it also promotes conservation activities. **Ecuador** expressed the importance of notifying the IAC Parties' concern about this phenomenon and search for synergies and funding opportunities in the field of climate change and its effect on sea turtles and their habitats. It was stressed that Ecuador has a vice ministry for Climate Change that is responsible for coordinating the implementation of the National Climate Change Strategy and will be informed of the recommendations of the SC10.

Chile noted that it is developing a national strategy and an action plan on climate change.

The SPT recommended that each SC member approach their IAC Focal Point so they may contact the United Nations Climate Change Convention (UNFCC) Focal Point in order to circulate the IAC Climate Change Resolution (CIT-COP4-2009-R5)[7] with a message stressing the IAC's willingness to collaborate with them on this issue.

Through the coordination of the Honduran SC delegate, Mr. Manuel López Luna, the National Climate Change Director in Honduras, was able to attend the SC10. Mr. López presented the work of the UNFCC and promised to take the IAC message to the next UNFCC meeting of the Parties to be held in Warsaw in November 2013.

The SC10 recommend IAC Focal Points to assist the IAC *Pro Tempore* Secretariat in approaching the Convention on Climate Change in order to find synergies between the two Conventions.

[7] Resolution available at: http://www.iacseaturtle.org/eng-docs/resolucionesCOP4CIT/CIT-COP4-2009-R5ENG_Final.pdf

16. Presentation and results of the Annual Report and Index Beach Working Group

Mr. Jeff Seminoff summarized the WG activities during the intersessional period. He began by recalling that the WG activities arose from SC9 recommendations, like: i) justify the recommendation to use real numbers instead of ranges in reporting nesting abundance for long-term monitoring; ii) describe the advantages and disadvantages of reporting index beaches; iii) develop guidelines to identify index nesting beaches; and, iv) prepare a list of index beaches for the IAC Party countries. The presentation included a summary on the added value of reporting in real numbers instead of ranges to determine trends in nesting abundance. This was illustrated using three case studies in Mexico, Costa Rica and USA. He also emphasized the importance of identifying index beaches for monitoring species, which allow countries to allocate resources more efficiently, strengthen conservation efforts and measure the success of existing conservation initiatives. To create the list of index beaches, every SC member was asked to select their beaches using the guidelines prepared by the WG. Each delegate provided this list along with the justification or criteria used for selection of each beach.

Mexico emphasized the importance of having index beaches as mean to promote new research projects.

Caribbean Netherlands mentioned the possibility of IAC Parties providing information from previous years on the index beaches selected in this meeting. The SPT welcomed the suggestion and reminded them that the SC work plan includes determining and presenting to COP 7, which will be held in 2015, the population status of sea turtle species based on information from the annual reports.

Chile asked which year was going to be considered as the starting point for data collection on index beaches, emphasizing the importance of determining a starting point for all Parties in order to establish a baseline. The SC10 agreed on 2009 as the starting year for the collection of information on index beaches. Belize, Brazil, Costa Rica, Panama, Caribbean Netherlands, Guatemala and Ecuador all have data available since 2009. Honduras has at least two years and pledged to consult various organizations collecting data to see if they can gather older data.

Ecuador recommended making efforts to learn more about the genetics of populations in order to better identify index beaches. **USA** added that this information is not yet available for all Parties, but agreed that a guideline should be included for the countries that do have that information available.

Peru noted that the genetic distribution issue is important, but invited the parties to continue working towards the COP7 presentation using the information available, so that in the future IAC Parties can begin genetically determining sea turtles populations.

The **Caribbean Netherlands** stressed that CITES has already identified index beaches for hawksbill turtles and that this list could serve as a resource for the determination of this species' index beaches. She also asked about the progress made in determining foraging index areas. The importance of determining foraging index areas was agreed and the task was left pending within the group.

During the meeting, the WG prepared the preliminary list of index beaches for the IAC (Annex V) with an explanation of why these sites were chosen based on the guidelines presented in the WG report. It was agreed that the report prepared by the WG CIT-CC10-2013-Doc.3 is very useful in terms of the selection criteria for index beaches and should, therefore, be considered as a technical document prepared by the Scientific Committee. Its coding was change from Doc.3 to Tec.5. The SC10 approved technical document CIT-CC10-2013-Tec.5 (Annex VI). The SPT will request the preamble and preliminary list of beaches from Venezuela in the coming weeks to complete the list. The SPT will send the list of Index Beaches with the technical document to the Focal Points for review and approval by October 15, 2013; giving the focal points one month from this date to approve the list. After that period the list of IAC Index beaches will be used for reporting in the Annual Reports.

The SC10 approved annexed table 2 on important nesting sites of the IAC Annual Report with the appropriate modifications to reflect the decision of COP6 on the use of index beaches (Annex VII).

17. Presentation and Results of the Sea Turtles and Ramsar Sites Working Group

Mr. Rene Marquez, Mexico's delegate, presented a proposal for the document on the importance of Ramsar Sites for sea turtle protection, within the MoU between the Ramsar Convention and IAC, and responding to COP6 recommendation. The SC10 recommended the WG to develop an outline to prepare the IAC-Ramsar technical document.

The SPT mentioned the Ramsar Secretariat's interest in having the SC's opinion since the Ramsar Convention lacks sea turtle experts and they would like to increase their knowledge of sea turtle species found in existing Ramsar Sites. Furthermore, the document should include important foraging and nesting sites that could be considered as potential Ramsar Sites.

Ecuador emphasized the importance of strengthening the relationship between Ramsar Sites and the support this designation may provide to sea turtle conservation. The importance of a closer communication with Ramsar's National Coordinators was also stressed. **Mexico, Honduras, Panama, Ecuador and Caribbean Netherlands** agreed to the benefits that a designated Ramsar site provides to an area, which sometimes already forms part of the national system of Protected Areas.

The SC approved the outline developed by the WG during the meeting, which includes the creation of a working group to prepare a technical document made up of delegates from: Mexico (coordinator), Panama, Costa Rica, Guatemala, and Honduras. This document will include inputs from the Ramsar Secretariat so it will be considered the first collaborative effort under the IAC-Ramsar MoU. The date to deliver this technical document is January 2014. Subsequently, this document will be circulated within the SC and to the Ramsar Secretariat for comments.

18. Updated SC Work Plan

The SC10 updated its Work Plan for the 2014-2015 period in plenary CIT-CC10-2013-Doc.4 (Annex VIII).

19. Follow-up reports on COP6 recommendations on exceptions for Guatemala and Panama

a. Guatemala

Mr. José Martínez, delegate of Guatemala, summarized the country's activities being carried out in order to comply with the Resolution (CIT-COP6-2013-R1) adopted at COP6 on exceptions and their recommendations. Among the main activities highlighted for 2014 was the revision and updating of Guatemala's National Strategy for Sea Turtle Conservation. Similarly, future goals included: i) Dissemination of the new sea turtle strategy to promote its implementation; ii) Increase the quota of eggs protected from 30% to 40% by increasing the incentives provided to parlameros (egg collectors); iii) Complete the registry of hatcheries and parlameros to find ways to strengthen them; and iv) Implement monitoring activities at the beginning of the nesting season in order to collect data on turtle mortality by interaction with fisheries or other causes. This last topic became especially important for the country, given the mass stranding event that occurred on Guatemalan and Salvadoran beaches and adjacent waters in July 2013. Especially because of the lack of clarity on the cause of death, this could be attributed to shrimp fishing activities and/or the use of artisanal trammel nets or even due to algal blooms.

Costa Rica expressed concern over the mass stranding event, since it is the fourth event of this kind reported in the Central American region over the last 4 years, with no clarity on the causes of death. Therefore, he suggested creating a Stranding Working Group with the aim of creating a protocol to address these situations. **Peru and Panama** supported the proposal.

Ecuador mentioned that they have a rapid response network for strandings, which includes sea turtles, and offered to share the information available. He highlighted the importance of including procedures and a section on data collection and chain of custody of tissue samples that could be used as evidence to defend cases in court if necessary, in the protocol.

The SC10 agreed to create the sea turtle Stranding Working Group coordinated by Mr. Didiher Chacon of Costa Rica with the participation of Ecuador, Chile, Panama, Peru and Guatemala. The group will compile existing protocols, consult with experts on the topic and create a management protocol for strandings for the IAC Party countries.

b. Panama

Mr. Marino Abrego delegate of Panama summarized the activities being carried out in response to compliance with the exceptions resolution (CIT-COP6-2013-R1) approved at the COP6. Mr. Abrego began by noting that the exception in Panama is intended only for the Isla Cañas Wildlife Refuge. Afterward, he described the main livelihoods within the refuge as fishing, agriculture and eco- tourism as an alternative for income generation for the communities. Among the main

activities supporting conservation are mangrove reforestation, environmental education and training, specifically on building sea turtle hatcheries.

The SPT asked about the challenges faced in order to determine the type of support they would need from the IAC. The need to maintain a direct relationship with the National Environmental Authority (ANAM) was emphasized since they manage the Refuge, as well as the need for community and institutional capacity building.

20. Approval of SC10 Agreements and Recommendations

The document containing the SC10 agreements and recommendations was discussed in plenary, comments were included, and the document CIT-CC10-2013-Doc.06 (Annex IX) was approved.

21. Proposed location and dates of the next meeting

Peru offered to host the 11th Meeting of the Scientific Committee at Peru's Sea Institute (IMARPE in Spanish) located in Lima. The tentative date would be September of 2014. The SC thanked the Chair of the Scientific Committee and Delegate of Peru for this generous offer.

22. Closing remarks

After completing all agenda items, the meeting was adjourned with closing remarks from the **Minister of Environment, Mr. Roberto Cardona Valle,** on behalf of the Secretary of Natural Resources and Environment of Honduras.

ANNEX I

CIT-CC10-2013-Doc.1

Agenda 10th Meeting of the IAC Scientific Committee (SC10)

Hour	***Agenda Item***	***Presenter***
	Day 1	
8:30 am	Participant registration	
9:00	1. Welcome and opening remarks	Secretary of Foreign Relations
	2. Presentation Sea Turtles of Honduras	SERNA-DIBIO
	3. Presentation of participants and election of meeting rapporteur	SC Chairman
	4. Adoption of the agenda	
10:00	**Coffee break**	
10:15	5. Report from the Chair of the IAC Scientific Committee	SC Chairman
	6**.** Report on activities of the *Pro Tempore* Secretariat/COP6 Report	PT Secretariat
	7. Report of the of 6th IAC Consultative Committee Meeting	CCE Chairman
12:30 pm	**Lunch**	

1:30	8. Reports on inter-sessional activities of the Committee a. Fisheries WG b. Annual Report WG c. Climate Change WG d. Project proposal Eastern Pacific Ocean Leatherback	Working Group Coordinators
2:30	9. Report on nesting beach status in Costa Rica	Didiher Chacon
3:00	**Coffee break**	
3:15	10. Report on State of Eastern Pacific Ocean Hawksbills	Jeff Seminoff
3:30	11. Climate Change and Sea Turtles CIT-CC10-2013-Doc. 2	Julia Horrocks
4:00	12. Sea Turtles and Wetlands of International Importance within Framework of the IAC-RAMSAR MOU	René Márquez
4:30	13. Results from testing of gillnet forms	Francisco Ponce
5:00	Meeting Adjourns	

	Day 2	
8:30 am	14. Presentation of Sea turtle projects in Honduras	Stephen Dumbar PROTECTOR
8:45	15. IAC Annual Reports and Index Beaches CIT-CC10-2013-Tec.5	Jeff Seminoff
10:30	**Coffee break**	
10:45	Continue with Index Beaches	
12:15	16. Cooperation opportunities IAC-CPPS	Fernando Felix CPPS
12:30 pm	**Lunch**	
2:00	17. Working groups by topic. Fisheries WG: a. Manual for Sea Turtle Handling Practices CIT-CC10-2013-Inf. 2 b. Gillnet data collection forms (implementation) c. Turtle Excluder Devices TEDs (update) d. Ecological Risk Analysis of sea turtles (discussion of available literature) Annual Report WG (Review 2013 reports) **Coffee Break 3:30** - Each group prepare recommendations	
5:00	18. Update the SC Work Plan (2014) CIT-CC10-2013-Doc. 4	SC Chairman/Plenary
6:00	Meeting Adjourns	

	Day 3	
8:30 am	19. Working groups present results and continue discussing final recommendations **Coffee Break 10:00 am**	Working Group coordinators
12:30 pm	**Lunch**	
2:00	20. Report on the implementation of COP6	José Martínez

	recommendations on Exceptions (Guatemala and Panamá)	Marino Abrego
2:40	21. Adopt SC10 recommendations and agreements	SC Chair
3:45	**Coffee break**	
4:00	22. Preparation of next meeting (SC11) - Propose locations	PT Secretary
5:00	23. Closing remarks from Mr. Roberto Cardona Valle Minister of Environment of Honduras	Secretary of Natural Resources and Environment of Honduras
	Day 4	
6:00 am	Field trip sponsored by the Government of Honduras to Venado Beach, Marcovia- Sea Turtle Nesting Site	

ANNEX II

CIT-CC10-2013-Inf.1 Participant List X Scientific Committee Meeting

Country	Name of Delegate	Institution	E-mail
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IAC Consultative Committee			
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ANNEX III

CIT-CC10-2013-Inf. 2

Report of the Fisheries Working Group for the 10th Meeting of the IAC Scientific Committee

This report has been prepared by the Fisheries Working Group of the IAC Scientific Committee. This working group is comprised of the following members: Diego Albareda (Argentina), Francisco Ponce (Coordinator, Chile), Miguel Donoso (Chile), Phillip Miller (Uruguay) and Eduardo Espinoza (Ecuador). The topics discussed by the fisheries working group during the 10th Meeting of the IAC Scientific Committee were:

a. Manuals for safe handling of sea turtles onboard
b. Implement the use of IAC gillnet forms by IAC Countries
c. Update list of turtle excluder devices (TEDs) used in IAC Countries
d. Analysis of the potential for conducting an Ecological Risk Assessment of leatherback turtles in the eastern Pacific Ocean (EPO)

a. Safe handling of sea turtles onboard manuals

A review of manuals was done, which was discussed by the Fisheries WG (Annex I), but it was decided that the review would be extended to incorporate additional manuals and documents. Argentina and Uruguay will be responsible for this task. The final product of this review is expected to be completed by the end of January 2014. With this completed, the SC will prepare a document with recommendations to IAC member countries of what manuals the SC consider to be the most appropriate.

The 2006 IAC document "Fisheries and Sea Turtles" will be updated to include recommended manuals to be circulated among members of the SC in the first semester of 2014.

b. Implementation of gillnet forms in IAC Countries

In regard to the field-testing of data collection forms in gillnet fisheries, tests carried out in Chile and Argentina showed positive results. In the case of Argentina, the end result of testing the forms was improved joint efforts between official fisheries and environmental agencies (both local and national), the scientific sector and civil society organizations involved in this issue. The interaction achieved during this joint field exercise strengthened coordination between the different institutions, since their complementary roles and specialties created a synergy that facilitated the task, thus laying down the foundation to develop a cohesive strategy for sea turtle conservation in Argentina in the medium term. The test identified the fleets in which the forms will be tested and a work program to test Form 1 is being designed.

Recommendation: The WG recommends that countries implement the forms developed by the IAC Scientific Committee to collect information on interactions between sea turtles and gillnet fisheries.

c. Update the list of turtle excluder devices (TEDs) used in IAC member countries

The list of TEDs currently used by IAC member countries in shrimp trawl fisheries was updated with the information provided by Costa Rica and Ecuador, who made recent changes to their regulations and/or legislation. Some specifics on information for Panama that was not included in the previous list was added.

SEA TURTLE EXCLUDER DEVICES

In order to fulfill the provisions established in Annex III, numerals 3 and 7, clauses a) and b) and 8 of the text of the Convention, the *Pro Tempore* Secretariat requested that the Focal Points of the Parties send information on the turtle excluder devices (TEDs) currently being used in accordance with the mandates established in their national legislation.

Based on the information submitted by the Focal Points and the information reported by the Parties in their Annual Reports, the IAC Scientific Committee, in its Ninth meeting, prepared a list of TEDs that the countries party to the Convention reported using in order to reduce sea turtle bycatch in shrimp trawl operations.

This list was updated at the Tenth Scientific Committee meeting with the information provided by the Parties in 2013, and will continue to be periodically updated with the information Parties report in their Annual Reports, to be evaluated by the Scientific and Consultative Committees.

Recommendation: The Scientific Committee urges the IAC Parties to fulfill their obligation in requiring the appropriate use (installation and operation) of turtle excluder devices (TEDs) in all shrimp trawl vessels under their jurisdiction, in a way that leads

towards an increased selectivity of shrimp trawlers in order to reduce sea turtle bycatch in fishing operations in the area of the Convention.

LIST OF TURTLE EXCLUDER DEVICES

COUNTRY/ TYPE OF TED	ARGENTINA	BELIZE	BRAZIL	CHILE	COSTA RICA	ECUADOR	USA	GUATEMALA	HONDURAS	MEXICO	NETHERLANDS	PANAMA	PERU	URUGUAY	VENEZUELA
OBSERVATIONS	NA	NA		NA	NA**	NA*	***				NA	****	NA	NA	NA
LEGISLATION			Y				Y	Y	Y	Y		Y			
TYPE OF TEDs															
ANTHONY WEEDLEESS										X					
FED-INP										X					
FLOUNDER TED							X								
GEORGIA JUMPER									X	X					
HARD TED 2"									X						
HOOPED HARD TEDs							X								
MATAGORDA									X						
SAUNDERS GRID										X					
SINGLE GRID HARD TEDs							X								
SPECIALIZED TEDs							X								
SUPER SHOOTER (rigido) 6"								X				X			
SUPER SHOOTER 4"			X			X			X	X					
TED DE BARRA PLANA									X						
WEEDLESS TED							X		X						

NA - Does not apply

Y - The country has legislation that establishes mandatory use of TEDs

* As of October 2012 trawl fishing is prohibited in Ecuador.

** The 2013-10540 sentence declared shrimp trawlers fisheries unconstituional.

*** USA only requires TEDs in trawls, but there are currently no requirements in pelagic trawls.

****Executive Decree N° 82 of April 1 of 2005, establishes that specifications established by the National Marine Fisheries Service of NOAA will be used for TED inspections.

d. Analysis of the potential for conducting an Ecological Risk Assessment of leatherback turtles in the eastern Pacific Ocean (EPO)

The preliminary Ecological Risk Assessment prepared by ICCAT for sea turtles in relation to tuna fisheries was discussed from the standpoint of its applicability to the needs of the EPO Leatherback. It was determined that this type of analysis does not provide the answers required for the EPO Leatherback, but rather proposed developing a risk assessment that starts with a characterization of the leatherback turtle's habitat in the EPO, which could be done using tools such as MAXENT. Beginning with this habitat characterization, the various human activities could then be superimposed, among which perhaps the most important one would be fisheries. This could be used to determine the areas of greatest potential for interaction.

1. This requires initially having geo-referenced information available on the presence of this species and date sighted.
2. Improve process for recognizing species in water and attain complete information on their origin and identification (tagging system). Satellite tracking and tag return data may identify sea areas where animals from specific nesting beaches have been found.
3. Select a model to define habitat. This requires getting advice from an expert on habitat modeling. The possibility of getting advice from Jessica Redfern of NOAA will be investigated.
4. Work with experts to identify environmental variables that can be used to characterize the habitat of leatherback turtles.
5. Conduct virtual workshops to identify scientific and technological solutions that may be required.

Recommendation: include the activities above in the Scientific Committee's work plan.

ANNEX I

Report on the compilation and analysis of current information on onboard management practices for handling sea turtles incidentally caught in coastal fisheries

Introduction

During the last Scientific Committee meeting held in Buenos Aires, the Fisheries WG agreed to work inter-sessionally to compile and analyze current information on onboard management practices for handling sea turtles incidentally caught in coastal fisheries. This task aims to evaluate the need to prepare an IAC manual or technical document on this subject in order to standardize onboard management practices for handling sea turtles in the different types of costal fisheries in the continent and to recommend its use.

Results

The compilation of materials to be analyzed consisted of research by internet, which was then complemented by consulting specialists and organizations working on this topic. The materials were selected by taking the following into consideration: how updated were the techniques they used, the clarity in communicating the procedures and how relevant they were to the fisheries involved at a regional level. The following list is the result of this selection process:

1. Guideline to reduce sea turtle mortality in fishing operations. FAO, Roma 2009. 128 pp.

2. Careful release protocols for sea turtle release with minimal injury. *Epperly S., Stokes L. and Dick S*. NOAA Technical Memorandum NMFS-SEFSC-524, 42pp (2004).
3. Marine Turtle Trauma Response Procedures. Wider Caribbean Sea Turtle Conservation Network (WIDECAST). *Phelan, Shana M. and Karen L. Eckert*. 2006. Technical Report No. 4. Beaufort, North Carolina USA. 71 pp.
4. Sea Turtle Handling Guidebook for Fishermen. *Guido Gerosa and Mónica Aureggi*. United Nations Environment Programme. Mediterranean Action Plan - UNEP. 2001. 32 pp.
5. Apostila para Observadores de Bordo. Tartarugas Marinhas. Projeto TAMAR. Maio 2012.
6. Manual para mejores prácticas de conservación de las tortugas marinas en Centroamérica. *Chacón D., Valerín N., Cajiao M.V., Gamboa H. y Marin G.* (2000).
7. Good practices to reduce mortality of sharks and rays caught incidentally by tropical tuna purse seiners. *Poisson F., Vernet A.L., Seret B. and Dagorn L*. 2012. UE FP7 project #210496 MADE, Delirevable 7.2., DPMA Convention 33246, CAT "Requines", 30pp.
8. "Learning how to release sea turtles (subtitles)". (Video) 276 Mb. IATTC - OFCF Production. Duration 23 minutes.
9. "Reviving sea turtles (subtitles)". (Video) 36 Mb. IATTC – OFCF Production. Duration 3 minutes.

Generally speaking, the purpose of these manuals is to establish guidelines and basic procedures for onboard handling of sea turtles incidentally caught in coastal fisheries; acting as a primary response tool to be used by fishermen. The majority of the material selected for this analysis was prepared by organizations and institutions that are member countries to the IAC; considering a regional approach to fisheries and their interactions with sea turtles.

Fisheries addressed in the manuals:

- Longline
- Trawl
- Gillnet

Technical procedures addressed in the manuals:

- Instructions for the vessel on how to approach a turtle.
- Instructions on how to bring the turtle onboard.
- Instructions for proper handling and restraint of turtle onboard.

- Instructions on how to perform a quick and easy clinical evaluation (active, not active or dead).

Instructions on how to assess and remove hooks.
Instructions on how to evaluate signs of drowning and directions for resuscitation.
Instructions for proper release.

Annexed protocols:

Species identification key.
Spreadsheet for taking basic data (morphometric, etc.).
Instructions for marking individuals.
Expert directory.

Conclusions

The technical information contained in the materials reviewed addresses the most highly recommended onboard management practices for treating problems with sea turtles on fisheries vessels. To complement this, we suggest the inclusion of basic guidelines for handling sea turtles with signs of hypothermia, which will be useful for some feeding grounds during the winter months.

The IAC prepared a publication in 2006 "Fisheries and Sea Turtles" (IAC Secretariat, May 2006, San José, Costa Rica), that describes the problem of sea turtle interactions with the different fisheries. This publication could act as the introductory framework for preparing an IAC technical document that recommends different onboard management practices for sea turtles as a result of their interactions with coastal fisheries.

The IAC technical document, "Manual of Management Techniques for Sea Turtle Conservation at Nesting Beaches" (CIT-CC8-2011-Tec.2. 52 pp.), would serve as the model for developing a similar technical document on handling sea turtles onboard. By keeping both documents, they would share many of the general and specific objectives desired by the IAC:

Promote the standardization of techniques used in the IAC region.
Offer national sea turtle programs a tool for capacity building.
Strengthen the capacity of local and national institutions in developing conservation programs.
Promote the use of standardized methodologies and terminology.
Promote IAC objectives.
Provide a base document, to be adapted to the specific legislation and conditions of each country or to be used as a document for international reference.

Recommendations

Analyze and agree, within the framework of the 10th SC meeting, on the format for presenting the document on handling sea turtles onboard.
Consult with the team that prepared the document "Manual of Management Techniques for Sea Turtle Conservation at Nesting Beaches" (CIT-CC8-2011-Tec.2. 52 pp.) and, based on their experience, determine what steps should be taken next.
Establish a drafting team and corresponding work plan, within the Fisheries WG, with collaboration from the rest of the delegates of the IAC member countries.

Vet. Diego Albareda
IAC Delegate of Argentina
Coordinator, PRICTMA

ANNEX IV

CIT-CC10-2013-Doc. 2

Report from Climate Change Working Group to the 10th IAC Scientific Committee Meeting

Given that the potential impacts of climate change on sea turtles are diverse and complex and likely to worsen, a Resolution on adaptation of sea turtle habitats to climate change (CIT-COP4-2009-R5) was passed by the IAC 4th Conference of Parties. This Resolution has since been identified by the IAC Consultative Committee of Experts (CCE) as the Resolution with the lowest level of compliance.

To improve the Parties ability to meet the objectives of this Resolution, the 9th meeting of the IAC Scientific Committee (SC9) formed an inter-sessional working group be established on this topic.

The working group members are Chile, the Caribbean Netherlands (Julia Horrocks, Coordinator), USA and Peru. The working group's tasks were to review what kinds of information Parties are already reporting in their annual reports (2011-2013) and to consider what types of quantitative data could potentially be reported that would allow an assessment of the impacts of climate change on nesting beaches and nesting behavior to be monitored. The Report of the working group should include recommendations to IAC Parties to improve their compliance with this Resolution.

Work plan

Review the six actions upon which information is currently requested as well as the instructions for completion of the Climate Change table of the IAC Annual Report to see whether information being requested from the Parties is clear or needs to be clarified.
Review what kinds of information Parties are submitting. This will require examination of Annual reports for 2011-2013 for all Parties, specifically comparing information in Part III Threats section of the Annual Reports (and perhaps other sections) along with the responses to Actions in regard to the Resolution 5.
Develop a list of parameters that can be included in the Climate Change table so that Parties can indicate whether or not they are collecting data on them.
Review Tables 2 and 3 in the Annual Reports to see if habitat data that can be used to monitor trends in climate change impacts on index nesting beaches and foraging grounds could be incorporated.

Review of responses to the Questions in the Action Table for CIT-COP4-2009-R5

Table with responses from Annual reports 2011-2103 in Annex 1

Question 1a: Have marine and coastal habitats on which sea turtles depend been included in national plans and programs for adaptation to climate change? Specify habitats and plans.

Belize, EEUU, Ecuador, Guatemala, Honduras, Mexico, Panama, Uruguay and Venezuela all responded Yes to this question.

All IAC Parties are also Parties to the United Nations Framework Convention on Climate Change. National plans for adaptation to climate change are likely to include coastal habitats, some of which will be habitats upon which turtles depend. Any country with a coastline that has a national adaptation plan would likely have considered coastal habitats. If a national plan or programme exists, countries should have responded Yes to 1a. National planning is being promoted as part of the UNFCC Cancun Adaptation Framework (2012)

Question 1b: Are these plans for adaptation to climate change being implemented?

For countries without plans and programmes, 1b is not applicable. For countries with national plans or programmes, only Belize, EEUU, Ecuador and Mexico responded that they are currently implementing their plans.

Question 2a: Are corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats?

This question requests information on whether management plans and/or protection and conservation programmes for sea turtles include “corrective measures and measures on adaptation to climate change”.

It is not completely clear what these "corrective measures" could include and this may need to be explained more fully to obtain this information from the Parties.

Honduras, Mexico, EEUU, Panama and Venezuela responded Yes to the question. In the 2013 Annual report, Honduras responded No to 2a, having responded Yes in previous 2 years.

Question 2b: Are you evaluating the corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats?

USA responded Yes to evaluation of corrective measures in 2011 and 2012 reports. However, it reported No to Question 2a in both 2011 and 2012 reports and reported Yes in 2013

Question 3: Have you identified any organizations or pertinent expert groups as possible partners to work on the topic of adaptation by sea turtles to climate change?

Respondents who answered Yes listed national (e.g. IMARPE, Sea Turtle Conservation Bonaire, UNAM) and/or international partners (e.g. WWF, James Cook University). It is not clear exactly why this information is being sought and needs to be made clear.

Question 4: Have you carried out research and monitoring to improve knowledge of the effects on, and vulnerability of sea turtles and their habitats, to climate change?

There may be some overlap between information requested in Part III (Threats) b) Research and the information requested in Question 4. The types of information currently being provided in response to Question 4 is shown below for a sample of Parties.

Mexico: "Monitoring of incubation temperatures on some priority nesting beaches is being done".
Caribbean Netherlands: "Ongoing monitoring program"
Brazil: "Long term regular monitoring and evaluation in the main nesting areas of the 5 species of sea turtles, including data collection of incubation parameters"
Honduras: "Currently the Pro-mangle Project is creating a coastal marine sensitivity map that includes a rapid environmental assessment of the anthropological interventions in the ecosystem."
Belize: "…nesting beach erosion management and monitoring is ongoing as part of the monitoring plan"

USA: "NMFS Pacific Islands Center has conducted modeling looking at the impacts of climate change on loggerhead and leatherback nesting abundance trends to help decipher the impact of fisheries versus climate".

Question 5: Has your country hosted capacity building workshops for monitoring techniques and/or adaptation to climate change?

Does this question relate to climate change capacity building workshops generally, or to climate change and sea turtles specifically?

Question 6: Has your country implemented mitigation measures for non-climatic threats as a way to improve the resilience of populations to the impacts of climate change? Specify which ones.

Giving legal protection to foraging grounds or nesting beaches is important to improve the resilience of populations to the impacts of climate change. Some countries recognized this and answered Yes to Question 6 because important nesting sites were protected, e.g. Brazil. Other countries e.g. Argentina, which protects Bahia Samborombon as well as Bahia Blanca, Panama, where all of its foraging and nesting sites are Protected Areas (see Panama Tables 2 and 3), and the USA where all important nesting sites are protected, did not respond Yes to Question 6.

Panama (2012) mentions relocation of nests in danger of erosion as a mitigative action against non-climatic threats in its response to Question 6. They may want to include this as a mitigative action for climate change too.

USA in their 2013 Annual report answered YES to question 6 and they mention that they are in the process of implementing the measures as called for in the new Strategy since 2012 called the National Fish, Wildlife and Plants Climate Adaptation Strategy.

A preliminary overview of the Reports identified the following issues:

1. Although the title of the Resolution refers to sea turtle habitats only [Resolution CIT-COP4-2009-R5: Adaptation of sea turtle habitats to climate change], the wording of the Resolution states that work related to sea turtles themselves is also required, and the SC is specifically requested to work with other relevant expert groups to "identify how the IAC Parties can work to adapt to the impacts of climate change on sea turtles and their habitats".

The Resolution 5 Action Table sometimes refers to habitats only and sometimes to sea turtles and their habitats (see red below). This needs to be made consistent.

ACTIONS

1 a) Have marine and coastal habitats on which sea turtles depend been included in national plans and programs for adaptation to climate change? Specify habitats and plans.
1 b) Are these plans for adaptation to climate change being implemented?
2 a) Are corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats?
2 b) Are you evaluating the corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats?
3. Have you identified any organizations or pertinent expert groups as possible partners to work on the topic of adaptation by sea turtles to climate change? Please list.
4. Have you carried out research and monitoring to improve knowledge of the effects on, and vulnerability of sea turtles and their habitats, to climate change?
5. Has your country hosted capacity building workshops for monitoring techniques and/or adaptation to climate change?
6. Has your country implemented mitigation measures for non-climatic threats as a way to improve the resilience of populations to the impacts of climate change? Specify which ones.

Actions 1a, 3 and 6 specifically request further information within the Table, while others do not, although there are generic instructions for completion of the Tables. I.e. "Specify actions implemented, name of the project or relevant document, location, objective(s), institutions responsible, contact, financial or other support (optional), results (both positive and negative) and duration" and " If you need more space to describe these actions, please attach additional pages and note the resolution and question number to which you are responding".

Recommendation: The Table needs to be standardized in its wording and instructions.

2. Not all Parties list Climate Change as a threat to sea turtles in Part III (Threats) of the Annual Report, e.g. USA, Chile, Uruguay. Some Parties only list Climate Change as a threat to certain species e.g. *Lepidochelys olivacea* in Mexico. The only small island Party (Caribbean Netherlands) lists Climate Change as one of only two listed threats. Using tick boxes in the 2013 Annual Reports may increase the number of countries listing Climate Change as a threat.

Recommendation: If countries do not consider Climate Change to be a threat to either nesting or in water habitats, they may want to consider stating that Resolution 5 does not apply.

3. Parties are differing in the interpretation of the information being requested. The Actions are generally much less specific in Resolution 5 than those of the other Resolutions. For example, what exactly is meant by "corrective measures"?

Recommendation: There may be a need to clarify the information being requested, perhaps through offering boxes that can be ticked.

4. In Question 6, some Parties are responding with yes/no answers only, without elaborating on what data they are collecting. More guidance may result in more information being given. For instance, Parties that protect index sea turtle foraging or nesting habitats are implementing mitigation measures for non-climatic threats.

Recommendation: Remove question 6 from the table since the information requested is provided by the Parties in other parts of the Annual Report/Resolution Tables and, therefore, the question is redundant. If not removed, Question 6 could be refined by giving boxes with options to tick and Parties could be requested periodically to provide a list of publications relating to the research.

5. Currently there are no meaningfully quantifiable measures within the Resolution. Parties are not submitting information that can be quantified to detect any trends in habitat quality with changing climate.

Recommendation: Parameters that can be evaluated over time to monitor climate change trends at sea turtle habitats should be included in Annual Reports. Parties could be requested to indicate whether they are monitoring any of the following parameters (and/or others) at index sites (initially nesting beaches) and report on them annually. Perhaps this could be done by adding an additional Excel Table to the IAC Annual Report (i.e. Table 4).

<u>Preliminary list of parameters that may already be monitored</u>

Beach width- manual or aerial monitoring
Sand temperature
Beach boundary – nearest built structures at landward edge of sandy beach
% beach vegetation lost/gained
Number of sea defences (e.g. beach armoring, sea walls, etc.)
Number of climatic events (e.g. hurricanes) that result in damage to sea turtle habitats
% nests relocated because of threat of erosion (as opposed to natural predation, for instance)
% nest losses from storm events
Frequency of nest inundation due to tidal surge, *inter alia*.

Final Recommendations and 2014 Group Work Plan:

To find out what climate change data are being collected by IAC countries, the working group requests the *Pro Tempore* Secretariat to ask the Parties to report back to them on what types of environmental data are currently collected (if any) on nesting beaches and a brief description of the methodology used.. The working group suggests sending the preliminary list of parameters listed above as examples in order to guide the response of the Parties. The Parties will have until March 31, 2014 to provide this information.

Parallel, the working group will review published literature on methodologies for collecting environmental data on beaches (including the IAC Nesting Beach Manual, WWF Tool Kit, UNESCO Sandwatch, IUCN) to identify some simple standardized methods that could be recommended to Parties to include in their index beach data collection protocols and which they could report on in the Annual Report possibly in a new Annex table (Table 4).

This work will be conducted inter-sessionally and once the above information is available, the working group will prepare a report on recommended parameters and methodologies for collecting data related to climate change to be reviewed at the 11th Scientific Committee meeting.

Based on the analysis presented in this document, the working group proposes changes to the climate change table in order to monitor compliance with Resolution CIT-COP4-2009-R5 so that it is clearer for IAC Parties and also provides more detailed and useful information to the Scientific Committee. The modified table is in Annex 2.

ANNEXES

Annex 1: Parties' responses to the Climate Change Resolution in the 2011-2013 Annual Reports

Qu	Argentina		Belize			Brazil			Caribbean Netherlands			Chile			Costa Rica		
	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013
1a	N	N	Y			N	N	N	N	N	N	N	N	N			
1b	NA	NA	Y			NA	NA	NA	NA	NA	NA	NA	NA	NA			
2a	N	N	N			N	N	N	N	N	N	N	N	N			
2b	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA			
3	N	N	Y			N	N	Y	Y	Y	Y	N	N	N			
4	N	N	Y			Y	Y	Y	Y	Y	Y	N	N	N			
5	N	N	Y			N	N	N	N	N	N	N	N	N			
6	N	N	N			Y	Y	Y	N	N	N	N	N	N			

Qu	Ecuador	Guatemala	Honduras	Mexico	Panama	Peru

	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013
1a	N	N	Y	N	Y	Y	Y	Y	Y		Y	Y	N	Y	Y	N	N	N
1b	NA	NA	Y	NA	N	N	N	N	N		Y	Y	NA	N	N	NA	NA	N
2a	N	N	Y	N	N	N	Y	Y	N		Y	Y	N	Y	Y	N	N	N
2b	NA	NA	Y	NA	NA	NA	Y	Y	NA		N	N	NA	N	N	NA	NA	N
3	Y	Y	Y	N	N	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
4	ND	Y	Y	N	N	N	Y	Y	N		Y	Y	N	N	N	N	N	N
5	Y	Y	Y	N	N	N	N	N	N		Y	Y	N	N	N	Y	Y	N
6	ND	Y	Y	N	N	Y	Y	Y	N		Y	Y	N	N	N	N	N	N

Qu	**USA**			**Uruguay**			**Venezuela**		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
1a	N	N	Y	Y	Y		Y	Y	
1b	NA	NA	Y	N	N		N	N	
2a	N	N	Y	N	N		Y	Y	
2b	Y	Y	Y	NA	NA		N	N	
3	N	N	N	Y	Y		Y	Y	
4	Y	Y	Y	N	N		Y	Y	
5	N	N	Y	Y	Y		Y	Y	
6	N	N	Y	Y	Y		Y	Y	

Annex 2: Proposed Modifications to Climate Change Resolution Table in IAC Annual Report

Resolution CIT-COP4-2009-R5: Adaptation of sea turtle habitats to climate change

ACCORDING TO RESOLUTION CIT-COP4-2009-R5, REPORT WHETHER YOUR COUNTRY:

IS COMPLYING WITH THE FOLLOWING:	**YES**	**NO**	**DOES NOT APPLY**	**DESCRIBE ACTION(S) (*)**
1) Has your country prepared a plan(s) for adaptation to climate change? If Yes, specify the plan(s). If they are in progress or answer is No, continue to Question 2a.				
1a) Have the marine and coastal habitats on which sea turtles depend been included in the plans and national programs on adaptation to climate change? Specify habitats included:				
Beaches				
Mangroves				
Coral Reefs				
Seagrasses				
Others, specify:				
1b) Are components of the plan(s) important to the adaptation of critical sea turtle habitat being implemented? Specify habitats:				
Beaches				

Mangroves				
Coral Reefs				
Seagrasses				
Others, specify:				
2a) Is environental research/monitoring being conducted to evaluate the potential impacts of climate change on sea turtles? Specify parameters/research:				
Sand Temperature				
Sea Temperature				
Coral Bleaching				
Beach Geomorphology				
Storm intensity and frequency				
Others, specify:				
2b) Is biological research/monitoring being conducted to evaluate the potential impacts of climate change on sea turtles? Specify biological research:				
Nesting season				
Hatching success				
Recruitment				
Sex ratio				
Mortality				
Others, specify:				
3 a) Are corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats? Specify measures:				
Nest relocation				
Hatchery establishment				
Use of incubators				
Protection of cooler beaches				
Protection of areas landward of nesting sites from coastal development				
Planting or removal of vegetation				
Others, specify:				
3 b) Are any of the plan's corrective measures being implemented and/or evaluated? If Yes, please specify.				
4. Have you identified organizations or pertinent expert groups as possible partners to work on the topic of adaptation by sea turtles to climate change? Please list these organizations or expert groups.				
5. Has your country hosted capacity building workshops for monitoring techniques and/or adaptation to climate change regarding or focused on Sea turtles and their habitats?				

(*) Specify actions implemented, name of the project or relevant document, location, objective(s), institutions responsible, contact, financial or other support (optional), results (both positive and negative) and duration.

ANNEX V

CIT-CC10-2013-Doc.3

SEA TURTLE INDEX NESTING SITES FOR PARTY COUNTRIES OF THE INTER-AMERICAN CONVENTION FOR THE PROTECTION AND CONSERVATION OF SEA TURTLES (IAC)

This document was prepared at the 10th Meeting of the IAC Scientific Committee (SC10) by the Working Group on Sea Turtles Nesting Trend Analysis (WG) to address the 6th IAC Conference of Parties request of proposing a list of index nesting sites (index beaches) for IAC Countries. To make the selection of index sites the WG used information provided by each IAC country delegate based on the criteria to select index beaches in the technical document CIT-CC10-2013-Tec.5 *"Selecting Index Nesting Beaches in the IAC Region and Data Collection Guidelines"*. The selected list of index sites will be reviewed and updated periodically by the SC in order to ensure that they stay relevant to meet sea turtle conservation goals in the IAC region.

The IAC Scientific Committee recommends to the IAC Focal Points that they adopt the index nesting sites included in Table 1 to be used to report information in the IAC Annual Reports.

Introduction

Criteria have been developed to aid the selection of sea turtle index nesting beaches so that countries that are Parties to the Inter–American Convention for the Protection and Conservation of Sea Turtles (IAC) can identify beaches that are critical to sea turtle conservation. One of the main uses of index sites is to generate information that is relevant to understanding the status of the most important turtle populations in the region, while at the same time maintaining a manageable reporting scheme.

In addition to ensuring that all index sites are effectively monitored for the foreseeable future, it is important that genetic studies are undertaken to confirm that all genetic stocks of a species within a region are targeted during monitoring efforts. Complete genetic mapping of the region's different sea turtle populations can also help identify the levels of threat and vulnerability that these threats present to the stability of each genetic stock.

Within two years of the initiation of an index beach monitoring program, it is suggested that efforts are made to evaluate level of monitoring, research and management of these beaches, so as to gauge the effectiveness and efficiency with which nesting sites are being monitored by IAC Party countries.

Below you will find a description by country of the criteria used for selecting their sea turtle index nesting beaches and a list of the suggested index sites for each species within each IAC country where sea turtle nesting occurs (Table 1).

BELIZE

The most important nesting site documented recently is Gales Point in Manatee Bar, where 100 to 150 nests have been monitored annually in recent years (Searle 2005). McSweaney (2008) determined that during the 2003 nesting season, from June to November, 72 hawksbill (*Eretmochelys imbricata*) nests were recorded in Gales Point Sanctuary, a posterior analysis of the clutches showed a 70% hatching success. Bacalar Chico Marine Reserve and National Park has three species of sea turtles. The east coast beach, from Robles to Rocky Points, provides nesting sites for loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtles. Juvenile green and hawksbill turtles can be found in the seagrass beds and inner lagoon/patch reefs, while juvenile loggerheads are not found in the area. Sub-adult and mature loggerheads and hawksbills can be found foraging on the fore reef. Mature greens are normally only in the area while mating and nesting. This site is the only nesting beach in Belize where the loggerhead and green sea turtles lay about 85 nests.

BRAZIL

The Brazilian index beaches are the most representative for the five species of sea turtles that nests in Brazil, based on quantitative analysis, genetic diversity, temperature dependent sex-determination (TSD) and Regional Management Unit (RMUs) modeling. These sites are all part of a long-term monitoring program (more than 20 years) and they have been selected by TAMAR (Organization that together with the Government of Brazil works on sea turtle conservation in the country) based on the above criteria.

CARIBBEAN NETHERLANDS

In Bonaire there is one primary nesting beach, on the uninhabited islet of Klein Bonaire off the west coast of Bonaire. This beach hosts majority of the nests of Bonaire for hawksbills, green turtles, and loggerheads. It has had long term monitoring in place for many years (> 10 yrs). There is also a foraging area that is a good inwater index site called Lac that is an important foraging site with extremely fast growth rates of subadult green turtle reported. Long-term monitoring program in place.

In St. Eustatius, Zeelandia Beach hosts nesting leatherbacks and green turtles. This site hosts the majority of nests of the island; it is the only nesting beach for leatherbacks (*Dermochelys coriacea*) in the Caribbean Netherlands. Long-term monitoring program in place.

COSTA RICA

The selection criteria for the list of index beaches were (1) representative of the most common species in Costa Rica (for example, there are no index beaches for *C. caretta*), (2) had data for at least the last couple of years at each site, (3) there are permanent and consistent efforts to monitor the status of the nesting colony, (4) that included the most important *arribada* and solitary nesting beaches, and (5) some were included in wildlife protected areas.

ECUADOR

Galapagos is the second most important nesting site for the East Pacific green turtle (*C. mydas*). This archipelago has one of the largest marine protected areas in the world. In 2000/2001 the Charles Darwin Foundation (FDC) initiated a systematic monitoring program for nesting green sea turtles and, for eight years, continued to develop this program at 3 key sites in the archipelago (Quinta Playa and Bahía Barahona on Isabela Island and Las Bachas on Santa Cruz Island). As of the 2009/10 season, the Galapagos National Park Department got directly involved with the FDC to carry out these programs.

In 2011 for the first time, systematic activities of the project at the three nesting beaches of REMACOPSE, Mar Bravo, La FAE and Tres Cruces (6.5 km) began, including daily and nightly routine monitoring of sea turtle nesting sites. This program was initiated under the framework of the Research, Monitoring and Scientific Cooperation Program, in accordance with the Management Plan of the Puntilla Marine Coastal Wildlife Production Reserve in Santa Elena - REMACOPSE of the Ministry of Environment (MAE). These beaches present average nesting activity for *Lepidochelys olivacea* and *C. mydas*.

Inside the Pacoche Wildlife and Marine Coastal Refuge in the province of Manabi, two important nesting beaches called La Botada and San Lorenzo have been identified. Therefore, the MAE through the person in charge of wildlife refuge established a program to monitor an area of approximately 4 km of beach.

GUATEMALA

Few long-term efforts have been carried out on nesting beaches in Guatemala Caribbean coast, which is where the nesting beaches for *D. coriacea, E. imbricata, C. mydas* and *C. caretta* are found. Therefore, index beaches for this coast or species cannot be established at this time.

Unlike the Caribbean, some efforts have been made since the late 70s on the Pacific coast of Guatemala with *L. olivacea*, however, information has not been systematically collected at all the beaches. The only beach that currently has information from the past 10 years is

the beach monitored by the NGO ARCAS, which collects *L. olivacea* eggs at Hawaii beach in Chiquimulilla, Santa Rosa. In addition to having data on the number of eggs collected, hatchlings hatched, released and dead hatchlings, and infertile eggs, they have information on track counts and have participated in regional genetic studies. This would be Guatemala's first proposal for an index site.

There is also new work being done (3-4 years) by Akazul, another NGO that collects *L. olivacea* eggs on Barrona beach in Moyuta, Jutiapa. This project collects the same information as ARCAS, and also has a tagging program. This would be the second option for consideration as an index site, even though it doesn't have more than five years of information.

HONDURAS

Honduras is currently in the process of strengthening existing sea turtle conservation efforts and starting new ones in both Pacific and Caribbean/Atlantic coasts. So far Honduras has evaluated the status of sea turtle conservation and is working on a national strategy for their conservation and protection. As part of these initiatives, Honduras will be monitoring to determine if there are other beaches in addition to the ones on the current list that can be proposed as index sites in order to conserve the five species found in the country.

MEXICO

In Mexico the term index beach refers to two conditions defined by: a) a history of more than 10 years of continuous monitoring done in the area, and b) monitoring done with established methodologies in both data collection and the evaluation of information.

PANAMA

Panama has nesting on both the Caribbean and Pacific coasts. Most sites have had ongoing monitoring for 10 years or more. However, there is one new site (Playa Armito or Pito) where monitoring will begin in 2014. This site is included as an index site because it will likely be one of the most comprehensive monitoring efforts due to funding available from the Fulbright Foundation to monitor the site.

UNITED STATES

The U.S. implemented an index nesting beach program in Florida in 1989.This effort is coordinated by the Florida Fish and Wildlife Conservation Commission (FFWCC) and includes 26 sites around the state of Florida. Index nest counts represent approximately 69 percent of known loggerhead nesting in Florida, 74 percent of known green turtle nesting and 34 percent of known leatherback nesting. Nesting activity at these 26 sites is lumped to provide one overall value for each species each year. In addition, there are identified index sites in Georgia, North Carolina, and South Carolina US, which constitute the northern

recovery unit for loggerhead sea turtles. As with Florida, all nesting beaches within each state are lumped so that only one abundance value is provided per state each year. In the western Gulf of Mexico, surveys meeting index site criteria for Kemp's ridley (*Lepidochelys kempii*) are carried out on Padre Island in south Texas. In the Pacific, there is only one primary nesting beach for green turtles, in the NW Hawaiian Islands, and one main beach for hawksbill turtles, in the main Hawaiian Islands. These nesting beaches are systematically surveyed and are considered index beaches. In addition to the index beaches within the continental United States and Hawaii, there are additional index beaches for Puerto Rico and the U.S. Virgin Islands. Sea turtle nesting is widespread in these two territories, but the sites chosen as Index Sites for this IAC reporting exercise include the most robustly and long-term monitored sites.

VENEZUELA

The Venezuelan index beaches are the most representative for the four species of sea turtles that nests in Venezuela, based on quantitative data mainly, although genetic diversity has been assessed for one population. One of the beaches has a long term monitoring program (more than 30 years), Aves Island Wildlife Refuge, others in the Sucre State and Isla de Margarita (Nueva Esparta State) have had over a decade of monitoring effort and several others are more recently assessed but, they have a good potential to provide an adequate coverage of the four species in the country. At least two-three beaches more should be selected for some States in the central-eastern coast (Miranda, Anzoategui and Sucre) and a similar number for the insular region (La Tortuga, La Blanquilla and Los Testigos).

Table 1. List of suggested index sites for each sea turtle species for each IAC country within which sea turtle nesting occurs.

Name of Beach	DC	CM	EI	CC	LO	LK	Ramsar	Responsible
Belize (2)		**(1)**	**(1)**	**(1)**				
Gales Point			X					
Bacalar Chico Marine Reserve		X		X				
Brazil (18)	**(2)**	**(1)**	**(7)**	**(12)**	**(3)**			
Comboios	X			X				
Povoação	X			X				
Busca Vida			X	X				
Santa Maria				X				
Barra Jacuipe			X	X				
Guarajuba			X	X				
Itacimirim			X	X				
Praia do Forte			X	X				
Barra do Furado				X				
Farol				X				
Farolzinho				X				
Maria Rosa				X				
Berta			X					
Pipa			X					
Name of Beach	**DC**	**CM**	**EI**	**CC**	**LO**	**LK**	**Ramsar**	**Responsible**

Brazil (*continued*)								
Mangue Seco					X			
Coqueiros					X			
Pirambu					X			
Trindade Island		X						
Caribbean Netherlands (2)	**(1)**	**(2)**	**(1)**	**(1)**				
Klein Bonaire, Bonaire		X	X	X				Sea Turtle Conservation Bonaire
Zeelandia, St. Eustatius	X	X						St Eustatius Sea Turtle Conservation Program
Costa Rica - Pacific (9)	**(1)**	**(5)**			**(4)**			
Isla Murcielago		X						
Nancite*					X			
Naranjo		X			X			
Cabuyal		X						
Nombre de Jesús		X						
Punta Pargos		X						
Playa Grande	X							
Ostional*					X			
Hermosa					X			
Costa Rica - Atlantic (4)	**(3)**	**(1)**	**(1)**					
Tortuguero	X	X						

Pacuare Norte	X							
Name of Beach	**DC**	**CM**	**EI**	**CC**	**LO**	**LK**	**Ramsar**	**Responsible**
Costa Rica - Atlantic (*continued*)								
Mondonguillo	X							
Cahuita			X					
Ecuador (9)		**(6)**	**(1)**		**(5)**			
San Lorenzo					X			MAE (Pacoche)
La Botada					X			MAE (Pacoche)
Playa Chocolatera		X			X			MAE (REMACOPSE)
Playa Tres Cruces		X			X			MAE(REMACOPSE)
PlayaMar Bravo		X			X			MAE(REMACOPSE)
Playita (Machalilla)			X				YES	MAE (PNM/ Equilibrio Azul)
Quinta Playa (Galapagos)		X						MAE (DPNG)
Barahona (Galapagos)		X						MAE (DPNG)
Las Bachas (Galapagos)		X						MAE (DPNG)
Guatemala (2)	**(1)**				**(2)**			
Hawaii	X				X			ARCAS
La Barrona					X			
Honduras - Atlantic (3)	**(1)**		**(2)**					
Pumkin Hill, Utila			X				YES	

Plaplaya	X							
Name of Beach	**DC**	**CM**	**EI**	**CC**	**LO**	**LK**	**Ramsar**	**Responsible**
Honduras - Atlantic *(continued)*								
Cayos Cochinos			X					
Honduras - Pacific (2)					**(2)**			
Punta Raton					X		YES	
El Venado					X		YES	
Mexico - Atlantic (12)		**(11)**	**(4)**	**(8)**		**(7)**		
Rancho Nuevo, Tamps		X		X		X		CONANP
Barra del Tordo, Tamps		X		X		X		CONANP
Altamira, Tamps		X		X		X		CONANP
Mirama, Tamps						X		CONANP
Lechuguillas, Ver		X	X			X		CONANP
Isla Aguada-Xicalango-Victoria, Camp		X	X			X		CONANP
Chenkán, Camp		X	X			X		CONANP
Las Coloradas/Rio Lagartos, Yuc		X	X	X				CONANP
Xcacel, Q.Roo		X		X				State Reserve
Chemuyil, Q. Roo		X		X				
Xel Ha, Q. Roo		X		X				
Puerto Aventuras, Q. Roo		X		X				

Mexico - Pacific (13)	**(6)**	**(5)**			**(9)**			
El Verde, Sin	X				X		YES	CONANP
Name of Beach	**DC**	**CM**	**EI**	**CC**	**LO**	**LK**	**Ramsar**	**Responsible**
Mexico - Pacific (*continued*)								
Platanitos, Nay					X			CONANP
Nuevo Vallarta, Nay					X			CONANP
Mismaloya, Jal					X			CONANP
Chalacatepec, Jal					X			CONANP
El Chupadero, Col							YES	CONANP
Mexiquillo, Mich	X	X			X		YES	CONANP
Tierra Colorada, Gro	X	X			X		YES	CONANP
Cahuitán, Oax	X						YES	CONANP
Escobilla, Oax*	X				X			CONANP
Barra de la Cruz, Oax	X	X			X		YES	CONANP
Maruata, Mich		X						Univ. Michoacana SNH
Colola, Mich		X						Univ. Michoacana SNH
Panama - Atlantic (3)	**(2)**	**(1)**	**(3)**	**(1)**				
Cayos Zapatillas (B. del Toro)			X					
Playa Chiriqui (B. del Toro)	X	X	X	X				
Playa Armita o Pito (GunaYala)	X		X					
Panama - Pacific (2)		**(2)**			**(2)**			

RVS Isla Cañas		X			X			
Playa La Marinera		X			X			
Name of Beach	**DC**	**CM**	**EI**	**CC**	**LO**	**LK**	**Ramsar**	**Responsible**
United States - Atlantic (7)	**(5)**	**(4)**	**(3)**	**(4)**		**(1)**		
Culebra Island, Puerto Rico	X							
Vieques Island, Puerto Rico	X	X	X					
Mona Island, Puerto Rico			X					
Buck Island Reef National Monument, U.S. Virgin Islands	X	X						
Sandy Point NWR, U.S. Virgin Islands	X	X	X					
Florida Index Beaches	X	X		X				
Georgia Index Beaches				X				
North Carolina Index Beaches				X				
South Carolina Index Beaches				X				
Texas (South Padre Island)						X		
United States - Pacific (2)		(1)	(1)					
French Frigate Shoals (HI)		X						
Hawaii			X					

Venezuela (11)	**(6)**	**(4)**	**(6)**	**(6)**				
Querepare (Edo. Sucre)	X			X				CICTMAR
Cipara (Edo. Sucre)	X			X				CICTMAR
Macuro (several nearby beaches, Edo. Sucre)	X	X	X					ONDB-MPPA
El Agua - Parguito Beach (Edo. Nueva Esparta)	X							ONDB-MPPA
Parque Nacional Archipiélago Los Roques (several cays)			X	X			YES	INPARQUES, Fundación Científica Los Roques
La Sabana (Edo. Vargas)	X							ONDB-MPPA, Consejo de Pescadores
Parque Nacional Henri Pittier (Cuyagua Beach, Uricaro Beach and others)		X	X	X				INPARQUES, Fundación Ecodiversa, Community leaders
Beaches between the Morón and Yaracuy River mouths			X	X				Palmichal S.C.
Parque Nacional Morrocoy (Cayo Borracho, Varadero and Mayorquina Beaches)		X	X				YES	CICTMAR, INPARQUES
Paraguana Peninsula	X		X	X				UNEFM (Universidad Nacional Experimental Francisco de Miranda)
RFS Isla de Aves		X						ONDB-MPPA
= 101 Sites*,+	**28**	**44**	**30**	**33**	**27**	**8**		

+ 12 Beaches selected as index sites are within RAMSAR areas

Table 2. Summary of Beach and Species/Beach counts for Index and non-Index reporting schemes in IAC countries in which sea turtle nesting occurs.

Species	**# sites**	**# index sites**
Dermochelys coriacea	52	28
Chelonia mydas	71	44
Eretmochelys imbricata	62	30
Caretta caretta	46	33
Lepidochelys olivacea	83	27
Lepidochelys kempii	19	8
Species/Beaches	**333**	**170**
Beaches	**205**	**101**

ANNEX VI

CIT-CC10-2013-Tec.5

Selecting Index Nesting Beaches in the IAC Region and Data Collection Guidelines

This report has been prepared by the IAC Scientific Committee Working Group on Nesting Trend Analysis and recommends that it be used to guide the selection of index sea turtle nesting sites in the IAC region. The goals of this document are: (1) to provide a justification for using real nesting numbers rather than ranges in nesting abundance in the IAC Annual Reports, (2) provide guidelines for selecting IAC index nesting sites that will be used in Annual reports, and (3) provide considerations for annual data collection on nesting females at each index beach.

Introduction

During the 9th Meeting of the IAC Scientific Committee Meeting in Buenos Aires, Argentina, we reported the results of a study to examine the value of IAC Annual Report data for monitoring changes in nesting abundance for sea turtles in the Party countries. There were three main results of this work that resulted in the formation of a new IAC Working Group on Nesting Trend Analysis. The goals of this new group, which are reflected in the present report, were 1) to more clearly explain why the IAC Scientific Team recommends the use of real numbers instead of ranges for monitoring long term changes in nesting abundance, 2) to describe the advantages and disadvantages of reporting only for nesting index sites rather than all sites in a country, and 3) to develop guidelines for determining which nesting beaches should be considered index sites within IAC countries. Recent advances for each of these IAC goals are summarized below.

1. Benefits of reporting real nesting numbers instead of using IAC abundance ranks

Ranges (number of females or clutches within an established range, for example, 1-10, 11-100, 101-500, 501-1000, 1001-5000, 5001-10,000, 10,001-100,000 etc.) do not adequately detect changes in abundance or population trends. The use of ranges varies quite a bit according to the species and geographic location, which is why it is better to use actual numbers that are more sensitive/effective at detecting changes in abundance for a specific species. With small populations for which significant changes in

population size may result from relatively small increases in total numbers, ranges will not adequately portray these changes. For example, hawksbills nesting in Machalilla National Park, Ecuador average 10 nesting females a season, yet still represent the most important hawksbill (*Eretmochelys imbricata*) nesting aggregation in the southeastern Pacific (Gaos et al. 2010). In this case, a change in population size from 10 females/year to 5 females/year would likely not be distinguished by a range (bin)-based reporting scheme, yet would still constitute a 50% decrease in the annual nesting population. In such cases, reporting the actual number of turtles would more adequately capture the nesting trend at this site. With larger populations, the situation is similar. While ranges can be instructive of general trends, the use of ranges does not capture the true inter-annual variation in nesting abundance that is so critical for monitoring population trends. As shown in Figure 1 and Figure 2, for leatherback turtles and green turtles, respectively, ranges can show only a portion of the overall change in annual abundance. However, important changes can occur from year-to-year and is very valuable information for managing both declining and increasing populations.

Clearly, the biggest shortcoming of nesting abundance ranges rather than use of real numbers is when a population is large (e.g. greater than 10,000 individuals) and is in a state of gradual decline. A good example of this is ongoing in Florida USA at present, where loggerhead turtles have been declining at a slow rate for more than 10 years (Figure 3). In such a case, this population fits best into the IAC range (10,001-100,000). However, with a 90,000 difference in the lower and upper values of this range, it is very difficult to capture important trends. This is particularly problematic with declining populations, for which sea turtle managers must have real numbers to detect a decline - and change their management appropriately.

For the reasons mentioned above, the Scientific Committee recommends that actual (real) numbers of females and clutches are reported per nesting season and requests that only real numbers are reported in the Annual Report for the most representative sites (for example, index sites or beaches) for each country. The SC believes that this will allow for more consistent reporting from a specific site, and with greater ease since data are only required from representative beaches. Having more consistent reporting of real numbers will help fulfill the goal of the Annual Reports, which taken over time, is to capture population abundance changes at the index sites included in the Annual Reports.

2. Advantages and disadvantages of Index Beach reporting

The State of the World's Sea Turtles (SWOT) defines index beach as the following: in situations where numerous, separated nesting beaches are used by the same population of nesting females, it is sometimes not possible to monitor all sites to ensure maximum coverage. In those situations, one can monitor an index beach or beaches within each population or management unit. The index beach approach assumes that annual abundance patterns observed by comprehensive monitoring of an index beach reflect a broader pattern that occurs at all other beaches used by the same nesting population of that species.

The use of index beaches allows for more consistent reporting from a specific site since these sites are partly selected for their ease of long-term monitoring of a representative portion of a nesting population. Furthermore, its use will reduce the effort needed to fill out the Annual Reports since the IAC Party countries will only be reporting on beaches representative of the different nesting populations and not on all nesting beaches in the country. For example, the analysis of Table 2 of the Annual Report indicated that one country alone reported more than 100 nesting beaches over the years, however, the same beaches are not reported year after year, and this inconsistency makes their analysis difficult over time. Another advantage to using index beaches is the ease with which information can be exchanged in order to perform a regional analysis since the majority of sea turtle conservation initiatives report data in the form of index beaches (Ex. IUCN, SWOT).

The SC also recognizes that one possible disadvantage to the use of index beaches is that it can leave out an important beach if it is not classified as an index beach, but may have other characteristics important to sea turtle conservation. Nevertheless, despite this disadvantage, the Index Nesting Sites present one way to arrive at an IAC reporting strategy that will be efficient and comparable among years.

3. Guidelines for selecting index beaches within each IAC country.

We recognize that not all Party countries have defined index beaches or sites; therefore, the SC will provide the following definitions and criteria to help define these sites. The Index Beach Guidelines below include suggestions presented in previous index

reporting efforts by the IUCN Marine Turtle Specialist Group, the State of the World's Turtles (SWOT) nesting beach database, as well as suggestions in Schroeder and Murphy (1999), Gerrodette and Taylor (1999), Valverde and Gates (1999), Seminoff and Shanker (2008), and Sims et al. (2008). Prior to considering what sites within a country or region should be included as index sites, there are three key requirements that will facilitate correct selection. First, it is fundamentally important that there are sufficient nesting beach monitoring programs established at nesting beaches for each species within each country. Second, nesting abundance and trend data have been collected with robust methodologies on a consistent basis over the duration of each project (See nesting maps for Eastern Pacific, Figure 4). Third, there is some understanding of the genetic stock structure and geographic limits for each species in each country and region (Figure 5; e.g. Limpus 2008; Dutton et al. 2008, Wallace et al. 2010). Information on population genetic structure and regional management units (RMSs) is available for all nesting populations within the IAC region; this information is available in scientific publications that can be requested from IAC leadership, although perhaps the best document to use for this purpose is that by Wallace et al. (2010) that clearly describes the global regional management units. The SC, therefore, clarifies that the index beach criteria described below are neither exclusive nor the only ones that exist; they just serve as the basis for helping select index beaches or sites. Criteria to define index beaches will depend on many factors inherent to each country (politics, sampling, distribution, etc.). Table 1 provides five guiding principles for determining Index Nesting sites; each is elaborated on more fully in the text following Table 1.

Table 1. Guidelines for selecting index beaches/sites within each IAC country

1.	At the country level, each country should choose at least one index site for each species that nests at any significant level.
2.	An index beach might be selected because it hosts a significant proportion of the overall nesting population within a region or country, even if numbers are small.
3.	If there is significant population structure (e.g. genetics, RMUs), then index sites should be selected to represent the various segments of the regional population.
4.	Index beaches may include major nesting sites already under intensive study and long-term monitoring.
5.	Index sites for all countries should remain consistent from year to year and receive sufficient resources to maintain adequate and consistent monitoring.

Guideline 1. *At the country level, each country should choose at least one index site for each species that nests.*

It is important that all IAC countries select at least one index site for each sea turtle species that nests within its national boundaries. If a country has two coast lines (e.g. Costa Rica w/ Pacific and Caribbean coasts) then each ocean basin should be treated independently and have at least one Index Site per species.

Guideline 2. *An index beach might be selected because it hosts a significant proportion of the overall nesting population within a region or country, even if numbers are small*

Typically, an index site should be reflective of the overall trend for each respective species within the country or region. This is easily accomplished if the sites constitute a major portion of the overall nesting population for the genetic stock in question. It is important to note, however, that there may also be some index sites that have a small proportion of the overall nesting population but are selected because they represent a novel genetic or morphological population segment (see Guideline 3).

Guideline 3. *If there is significant population structure (e.g. genetics, RMUs), then index sites should be selected to represent the various segments of the regional population.*

Information on population genetic structure is vital to insure that the selected Index Sites are representative of all the genetic segments of a population. There are many scientific studies that have studied population structure in sea turtles, and the majority of stocks for the various species in the IAC region have been identified. Please contact IAC leadership for this information, and for PDFs of pertinent articles.

Guideline 4. *Index beaches may include major nesting sites already under intensive study and long-term monitoring*

A key characteristic of any site for which long-term trends are to be determined is that the site has relatively long-term monitoring data (e.g. 10 yr minimum). This is because most sea turtle populations exhibit significant inter-annual variation, and the only way to determine if a particular trend is occurring is to compare many years of information. A second and equally important

requirement under this Guideline is that the monitoring effort is robust and is consistent from year to year at the selected Index Site. If a site has already been studied in a consistent manner for many years, this may make it valuable as an index nesting beach.

Guideline 5. *Index Sites for all countries should remain consistent from year to year and receive sufficient resources to maintain adequate and consistent monitoring.*

In order to monitor long-term trends, it is important that each Index Site remains so for long-term (e.g. more than 10 years) time frames. If for example, a site is selected to be an Index Site, but after five years it is no longer reported on, the IAC will be unable to determine the trends in abundance. Thus, the most appropriate Index Sites in a country or region are those for which data reporters have a high level of confidence that the infrastructure and funding for that site is stable for many years to come. This is often difficult to determine ahead of time, but a good example is that it would be more appropriate to pick a site if it is managed or overseen by more established and financially stable University, State, or Federal Authorities as opposed to sites that are run by NGOs or volunteer organizations.

Benefits of the IAC Index Nesting Beach Annual Reporting

The IAC Scientific Committee has worked for several years to develop a reporting mechanism that would be both practical for reporting purposes (i.e. worksheets that are easy to fill in) and meaningful as a tool to help guide sea turtle conservation in the region. We believe that the two recently-adopted changes - reporting real numbers instead of ranges, and reporting for Index Sites instead of all beaches - are key advances for the IAC's ability to meet its sea turtle conservation goals. For the first time, the information on nesting beach abundance that is included in all IAC reports will be useful for monitoring changes in population trends at the most important nesting sites for each sea turtle species in the region.

In closing, we believe that the use of real numbers will allow IAC to more effectively meet the sea turtle conservation goals of identifying which nesting sites have declining populations, which in turn will allow us to focus our efforts on nesting sites that need

extra help with respect to conservation attention and on-the-ground resources. To achieve this goal, we encourage the IAC Party countries to make full use of existing partnerships with other organizations such as IUCN-MTSG and SWOT that also have the goal of monitoring nesting trends at key sites around the IAC region.

Data collection considerations at IAC Index Beaches

The purpose of the following information is to provide guidance on the collection of data to measure annual abundance in nesting activity at each of the IAC Index Nesting Sites. By following these recommendations, data collected at index beaches will be of sufficient quality to measure long-term trends, assuming data is collected over long-term periods. Information below has been gathered from several resources including Bjorkland (2001), CITES (2002), IAC (2011), SWoT (2011).

(1) Monitoring Boundaries. Monitoring boundaries of index nesting beaches must be established and adhered to each year. Selection of monitoring boundaries (beach length) should take into consideration the needs for the survey length to be monitored over long term periods.

(2) Survey Frequency. Survey frequency (number of days per week the survey is conducted) must be specifically set and adhered to from year to year. Ideally, nesting surveys should be conducted daily, however, logistical considerations may preclude daily surveys. A survey frequency of every other day is considered a minimal requirement to reduce survey error. In the case of remote, isolated nesting beaches, where logistics preclude every other day surveys, a reduced survey schedule of 2-3 times evenly spaced across the week may be sufficient, provided all other criteria, including surveyor training are met (SWoT 2011).

(3) Survey Period. The survey period should encompass the peak of the nesting season and should be designed to allow for shifts in the peak of the nesting season from year to year. Beaches that have not been previously surveyed, or for which the nesting season has not been defined, will require pilot studies to identify the peak of the nesting season prior to setting the survey period. Pilot studies should be conducted for a period of 3 years, during which time the complete nesting season will be surveyed. Ideally, the

complete nesting season should be encompassed, however, the minimal survey period is 8 weeks, shorter survey periods may be appropriate depending on local conditions and a complete understanding of variability in the nesting season.

(4) Nest Verification. Ideally, nesting beach monitoring personnel will be sufficiently trained to confirm nests by evaluating track and nest site characteristics. If there is a question whether a crawl has resulted in a nest, the presence or absence of eggs should be verified by hand digging.

(5) Surveyor Training. Training should include observations of nesting turtles to ensure that surveyors have a thorough understanding of the behaviors that result in crawl and nest characteristics, this is key to correctly identifying nests vs. non-nesting emergences. Training should also include "hands-on" training evaluating crawls on the survey beach with experienced personnel. New personnel should work side-by-side with experienced personnel until the project leader is sufficiently convinced that new personnel have the knowledge and skills necessary to perform an accurate survey.

(6) Information to be collected each season. Based on Annex 2 of the IAC Annual Reporting Forms (Page 13), the following data are requested for each species that nests at each nesting beach.

1. Name of index nesting site or beach
2. Nesting season begins
3. Nesting season ends
4. Monitoring period begins
5. Monitoring period ends
6. Survey Frequency
7. Geographic location (latitude/longitude) in decimal degrees
8. Extension of beach monitored(Kilometers)
9. Declared protected area (yes or no)
10. Annual nesting abundance (exact count of females, clutches or nests)
11. Tagging program (flipper tagging, passive integrated transponder (PIT) tags, and/or satellite telemetry programs)
12. Tissue sampling (yes or no)

13. Organization providing data

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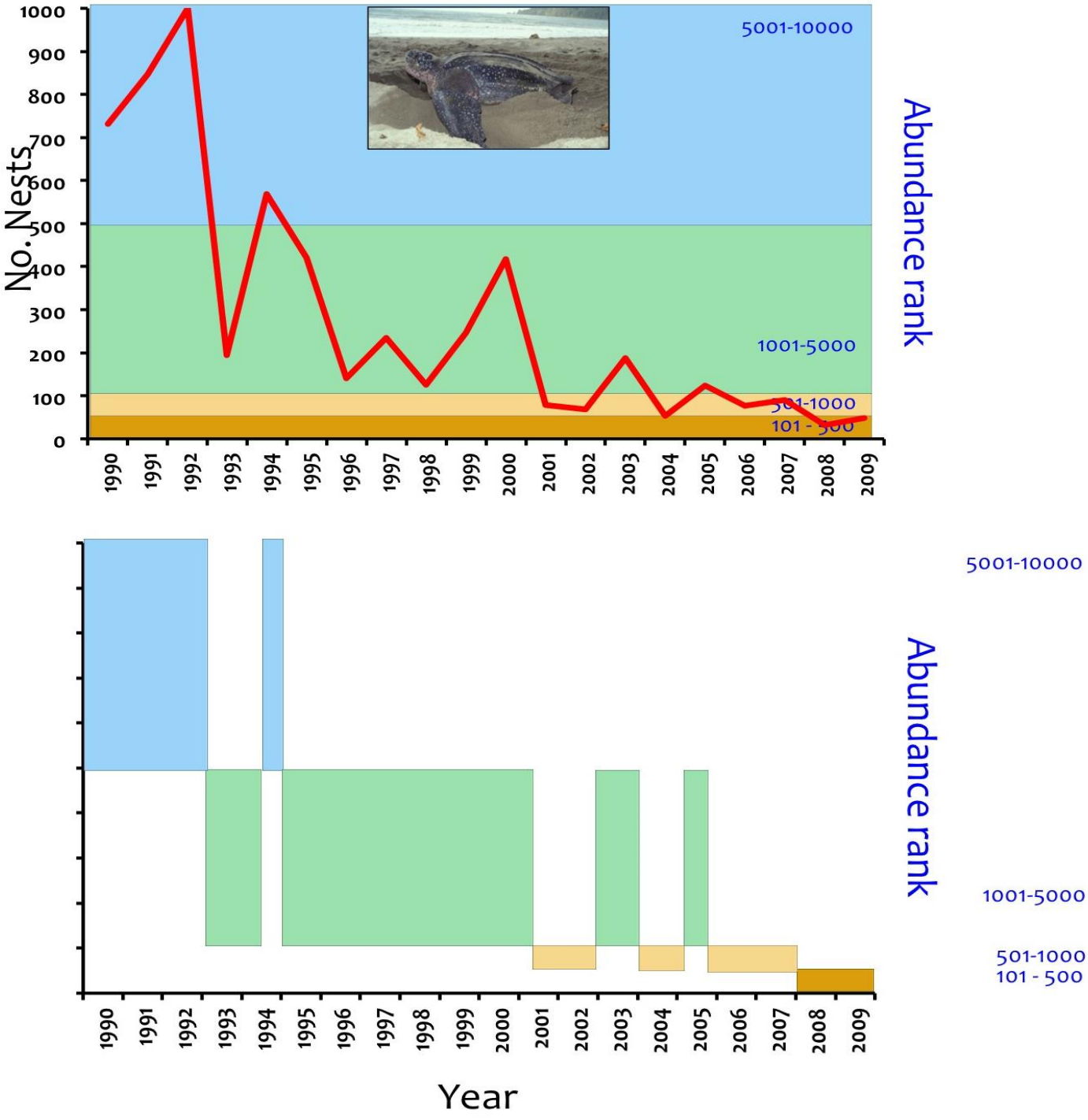

Figure 1. (TOP) Leatherback nesting trends at Playa Grande, Pacific Costa Rica (1990/91-2009/10) overlaid on IAC Nesting Abundance Ranks. Data courtesy of Leatherback Trust and James Spotila; (BOTTOM) Leatherback nesting trends at Playa Grande determined by rank categories and not real numbers. The declining trend is apparent with rankings, but there is much less resolution on actual nesting numbers.

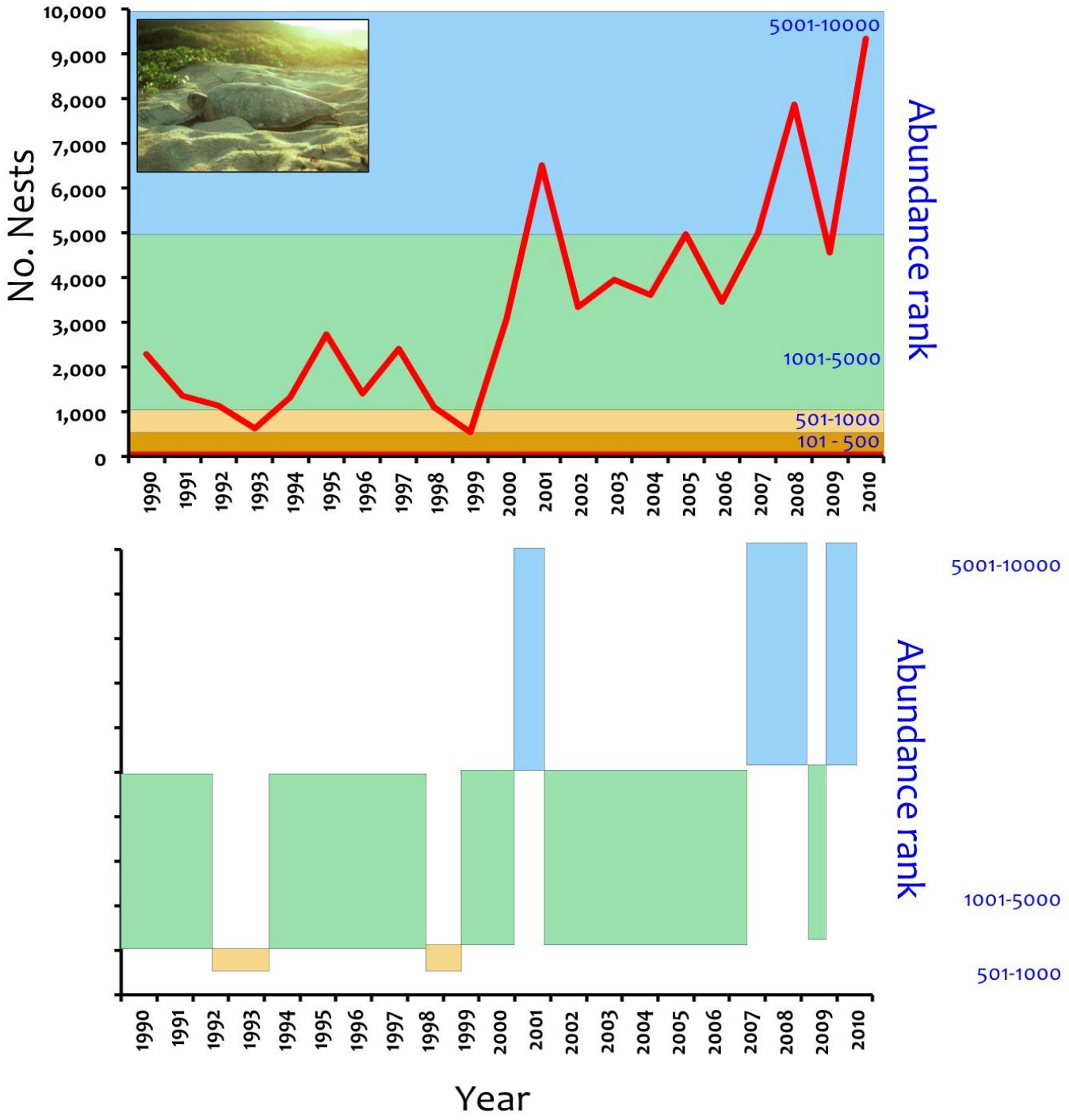

Figure 2. (TOP) Green nesting trends at Colola, Michoacan, Mexico (1990/91-2009/10) overlaid on IAC Nesting Abundance Ranks. Data from Delgado-Trejo and Alvarado-Diaz 2012 (BOTTOM); Green turtle nesting trends at Colola, Michoacan, Mexico by rank categories and not real numbers. The increasing trend is apparent with rankings, but there is much less resolution on actual nesting numbers.

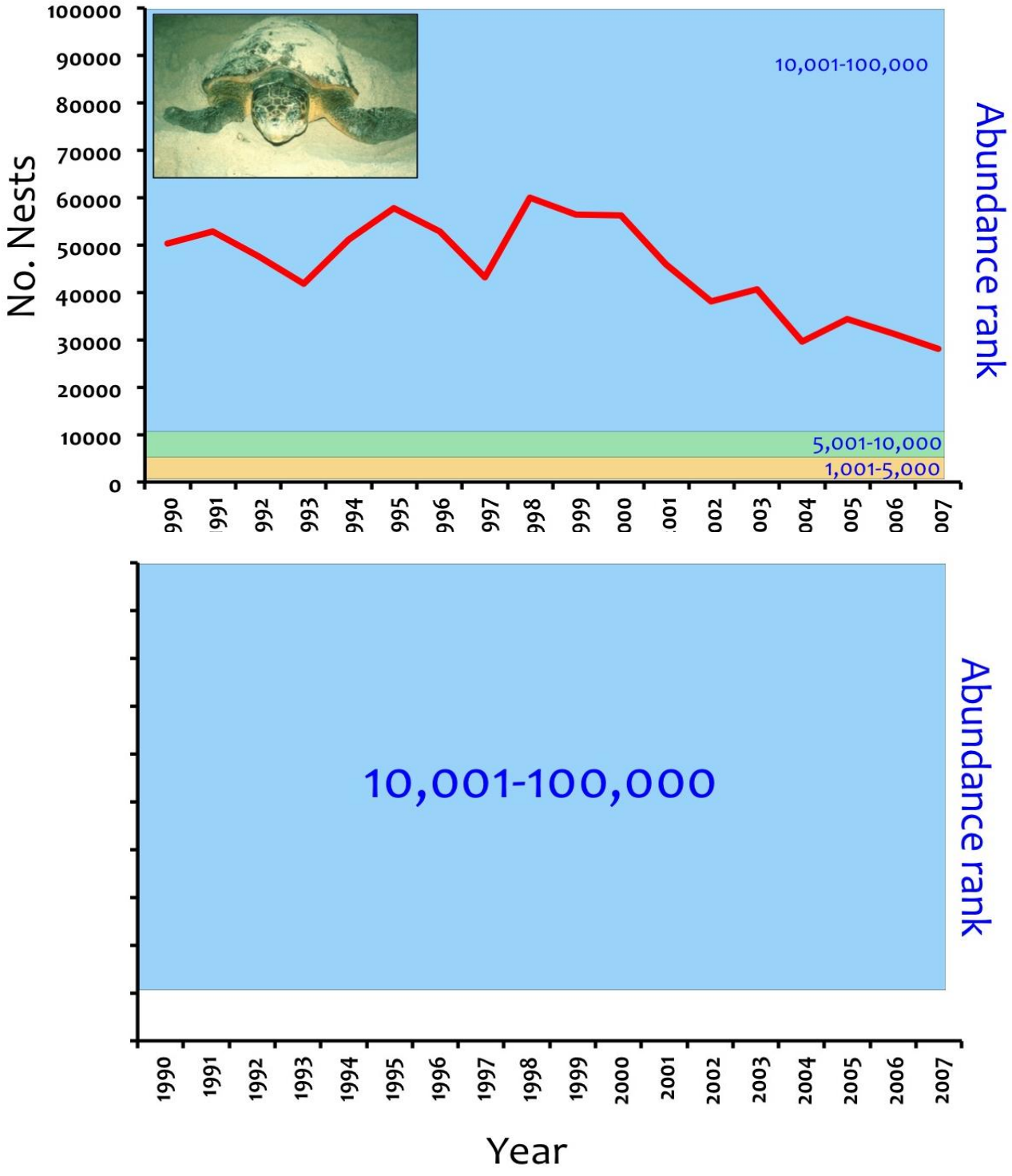

Figure 3. (TOP) Loggerhead turtle nesting trends at Florida Index Beaches (1990-2007) overlaid on IAC Nesting Abundance Ranks. Data from FWC 2013 (BOTTOM); Loggerhead turtle nesting trends at Florida USA Index Beaches by rank categories and not real numbers. **Note that the declining trend is undetectable using IAC abundance rankings.**

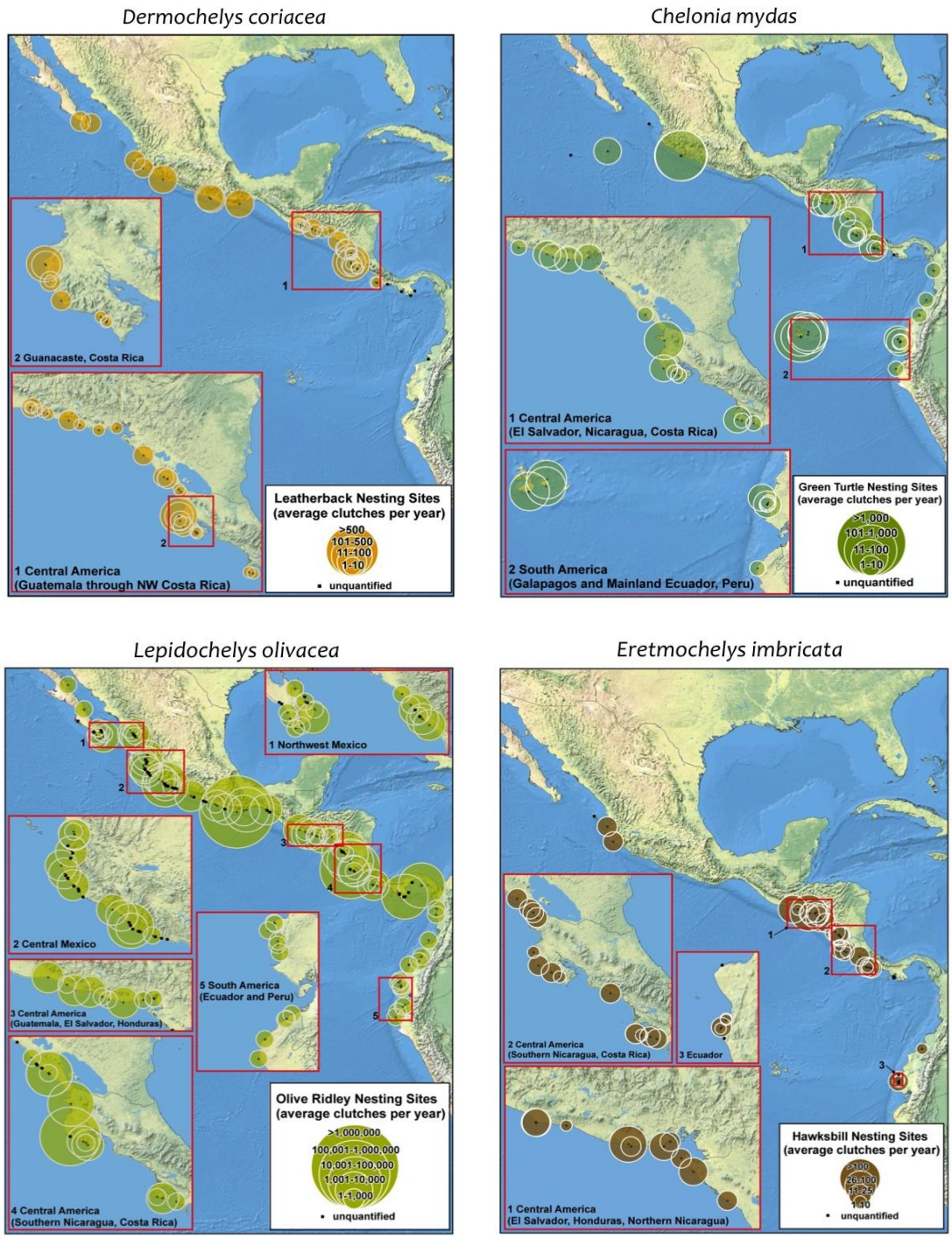

Figure 4. Summary of nesting locations and relative size for the four sea turtle species that occur in the Eastern Pacific Ocean. Note, the authors would like to add, but are unaware of similar information for the Atlantic IAC region. NOTE to IAC Members: similar maps will soon be developed for Caribbean and Atlantic nesting sites.

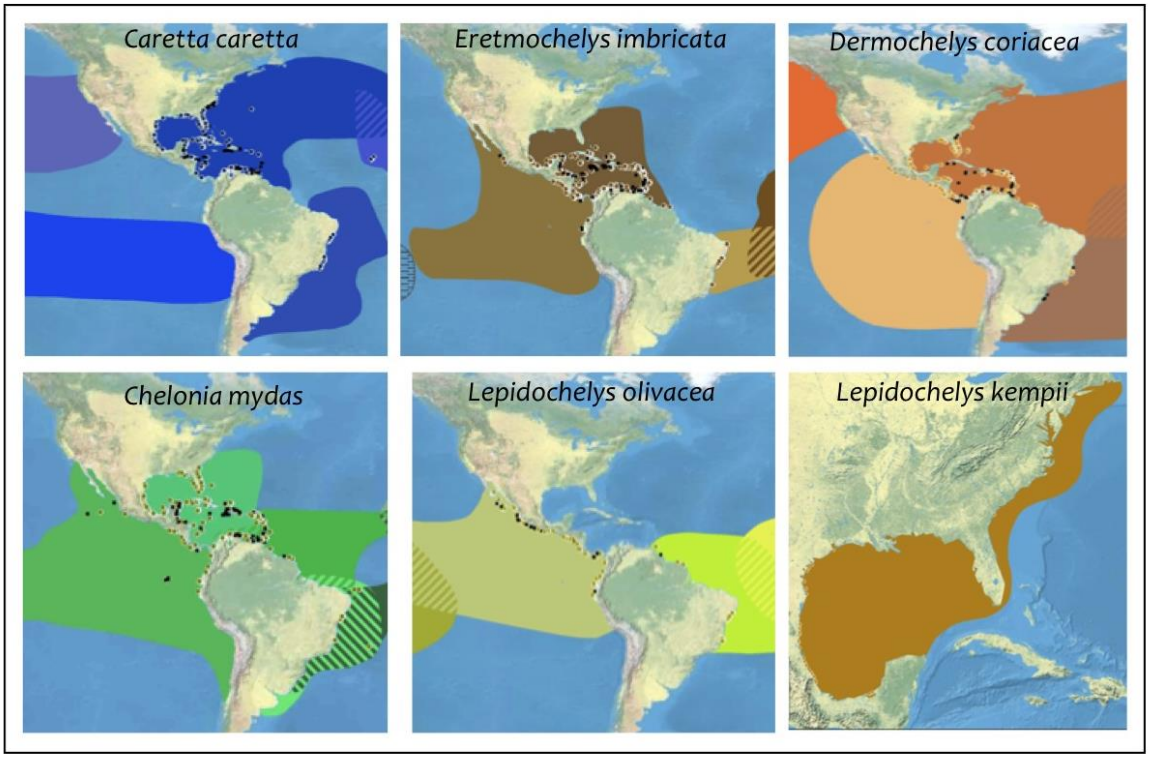

Figure 5. Regional management units - based largely on genetic analyses - for each of six sea turtle species occurring within the IAC Region. Maps modified from Wallace et al. (2011).

ANNEX VII

IAC Annual Report General Instructions

Annex IV of the Convention text states that each Contracting Party shall hand in an Annual Report. To complete this Annual Report, Focal Points should consult with various stakeholders involved in sea turtle issues. If you have any questions regarding this Annual Report, please write to the PT Secretariat at secretario@iacseaturtle.org

Please note that the date to submit this Annual Report is **April 30th of 2014.**

Part I (General Information)

Please fill out the following tables. Add additional rows if necessary.

a._ Focal Point

Institution	
Name	
Date Annual Report submitted	

b._ Agency or Institution responsible for preparing this report

Name of Agency or Institution	
Name of the person responsible for completing this report	
Address	
Telephone(s)	
Fax	
E-mail	

c._ Others who participated in the preparation of this report

Name	Agency or Institution	E-mail

Part II (Policy and Management)

a._ General description of activities carried out for the protection and conservation of sea turtles

In accordance with Articles IX and XVIII of the text of the Convention, each Party shall establish monitoring programs, policies and plans for implementation at a national level for the protection and conservation of sea turtles and their habitat.

As a result, the Party shall report on the action plans, management plan or other types of instruments, describing their location, the species considered and the actions implemented by governmental, non-governmental and private institutions related to sea turtles.

In addition to the above, please fill out the following tables and explain the level of progress in the comments column.

	YES/NO/ In Progress	**Comments**
Does your country have a national plan of action in accordance with Article XVIII?		
Does your country have policies and programs at local and regional levels in accordance with Article XVIII?		
Does your country have monitoring programs in accordance with Article IX?		

b._ National legislation and international instruments related to sea turtles adopted in the preceding year

Describe any national regulations, international agreements and other legal instruments adopted during the preceding year (April 30, 2012-April 30, 2013) related to sea turtles and/or relevant activities. Provide a reference and attach the digital file for the legislation and its corresponding number. The laws adopting the international legislation should be included, when they exist.

National Legislation		
Type and name of legal instrument (No.)	Description (Range of application)	Sanctions(s) Imposed
International Instruments		
Treaty, Convention, Agreements, Memorandum of Understanding		Year signed and/or ratified

Note: *If this is the first time a country is submitting this information, please include all pertinent national legislation and international instruments currently in force.*

c._ Actions for compliance with national and international legislation

c.1 IAC Resolutions

Fill in the following tables for each of the IAC Resolutions listed below. In the case that a Resolution does not apply to your country, please mark the box RESOLUTION DOES NOT APPLY, and if a specific question does not apply, please mark the column DOES NOT APPLY. If you need more space to describe these actions, please attach additional pages and note the resolution and question number to which you are responding.

Resolution CIT-COP2-2004 R1: Conservation of leatherback turtles (*Dermochelys coriacea*)

ACCORDING TO RESOLUTION CIT-COP2-2004-R1, REPORT WHETHER YOUR COUNTRY:

			RESOLUTION DOES NOT APPLY	
IS COMPLYING WITH THE FOLLOWING:	**YES**	**NO**	**DESCRIBE ACTION (*)**	**DOES NOT APPLY**
1a) Have you created conservation plans and long-term programs that can reverse the critical situation of the leatherback turtle in the Eastern Pacific?				
1b) Are you implementing these conservation plans and monitoring programs?				
2a) Have you taken conservation measures to significantly reduce the use of leatherback turtle products and by-products?				
2b) Do you evaluate these conservation measures?				
3a) If your country has leatherback turtle nesting beaches in the Eastern Pacific: Have you taken conservation measures to protect the nesting sites and their associated habitats?				
3b) Do you evaluate the conservation measures taken to protect those nesting sites and their associated habitats?				
4. Has your country adopted fishing techniques that reduce incidental capture and mortality of this species?				
5a) Is your country collecting information on incidental capture of leatherbacks in the following fisheries:				
Artisanal fisheries				
i) Long-line				
ii) Gillnets				
iii) Other fishing gear (indicate which one(s))				
Industrial fisheries				
i) Long-line				
ii) Gillnets				
iii) Other fishing gear (indicate which one(s))				
5b) Have you provided the IAC with information on incidental capture of leatherbacks in the following fisheries:				

Artisanal fishing					
	Long-line				
)	Gillnets				
i)	Other fishing gear (indicate which one(s))				
Industrial fisheries					
	Long-line				
)	Gillnets				
i)	Other fishing gear (indicate which one(s))				
6. Have you established agreements and/or understandings with countries fishing within international waters to adopt fishing techniques that reduce incidental capture of leatherback turtles? List which countries:					
7. Have you encouraged other non-Party states to the IAC, carrying out activities that affect leatherback turtles, to adopt measures in favor of their conservation, by means of bilateral, multilateral or regional contacts?					
8. Have any cooperative agreements or alliances been established with pertinent organizations? List:					

(*) Specify actions implemented, name of the project or relevant document, location, objective(s), institutions responsible, contact, financial or other support (optional), results (both positive and negative) and duration.

Resolution CIT-COP3-2006 R-1: Hawksbill turtle conservation *(Eretmochelys imbricata)*

ACCORDING TO RESOLUTION CIT-COP3-2006-R1, REPORT WHETHER YOUR COUNTRY:

				RESOLUTION DOES NOT APPLY	
IS COMPLYING WITH THE FOLLOWING:		**YES**	**NO**	**DESCRIBE ACTION (*)**	**DOES NOT APPLY**
1. Has your country promoted synergies with other Conventions, treaties, international organizations, and/or regional fisheries bodies on the management and conservation of hawksbill turtles and their habitats? Indicate which one(s).					
2 a) Are you strengthening monitoring of the illegal use and trade of hawksbill turtles and their products?					
2 b) Are you enforcing pertinent hawksbill legislation?					
2 c) Are activities being carried out in order to stop illegal trade of hawksbill products?					
3. Does your country support and strengthen the research and monitoring activities required to improve the scientific basis of conservation measures for the hawksbill turtle? Especially in:	Genetics				
	Migratory behavior				
	Location and conservation status of foraging habitats.				
	Location and conservation status of prey species.				
	Population dynamics at foraging sites				
	Integrity of nesting				

	habitats				
	Others (specify)				
4. As indicated in the recommendations from FAO's Technical Meeting on the conservation of marine turtles and fisheries that was held in Bangkok in 2004 and adopted by the 26th Session of FAO's Fisheries Committee (COFI), does your country carry out any activities mentioned in a) and/or b)?	a) Evaluate incidental capture of hawksbill turtles in jurisdictional waters.				
	b) Actions to mitigate incidental capture of hawksbill turtles in their jurisdictional waters.				
5. Does your country apply the precautionary approach when considering proposals for seismic exploration on priority marine habitats of the hawksbill turtle?					
6. Indicate if your country is strengthening the protection of important nesting and foraging habitats by declaring protected areas and regulating anthropogenic activities that adversely impact these habitats.	a) Protection of nesting habitats				
	b) Protection of feeding habitats				
7. Does your country promote exchange of technical capacity and collaborative research on hawksbill habitats among Parties as well as non Parties and other involved organizations in the Area of the Convention?					

(*) Specify actions implemented, name of the project or relevant document, location, objective(s), institutions responsible, contact, financial or other support (optional), results (both positive and negative) and duration.

Resolution CIT-COP3-2006-R2: Reduction of the adverse impacts of fisheries on sea turtles

ACCORDING TO RESOLUTION CIT-COP3-2006-R2, REPORT WHETHER YOUR COUNTRY:

IS COMPLYING WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	DOES NOT APPLY
1.Adopted the "Guidelines to Reduce Sea Turtle Mortality induced by fisheries operations", of the United Nations Food and Agriculture Organization (FAO), including:				
A.Research and monitoring of adverse impact of fisheries on sea turtles				
• Collect information by fishery				
• Observer programs				
• Research on sea turtle/fishery interactions				
• Information on non-Party vessels				
• Cooperation with non-Party states to obtain information				
B. Mitigation measures for the following fisheries:				

i) Long-line				
ii) Gillnets				
iii) Trawling (e.g., 1. TEDs: specify legally approved TEDs, their dimensions, material, and target species for that fishery, 2. time-area closures: specify geographical area, time of closure and target species for that fishery, 3. tow times and/or 4. other measures)				
iv) Other fishing gear (indicate which one(s))				
C. Training, education and dissemination				
• Training, education and dissemination activities				
D. Harmonization of policies and legislation				
• Modifications to instruments				
E. Capacity building				
• Creation of a national sea turtle committee/network				
F. Financing				
• Financial support obtained to implement guidelines in this resolution				
G. Socio-economic considerations				
• Support socio-economic activities that help mitigate adverse impacts of fisheries on sea turtles				
H. Other aspects				
• Environmental impact studies for mariculture projects				
2. Sent information and documents on sea turtles created by your country to the Secretariat of the Convention? List documents.				
3. Initiated activities that assist the Convention Secretariat in contacting non Party States through established mechanisms, especially in the area of the Convention, so that they may provide, in a cooperative spirit, the Secretariat with available data on incidental sea turtle catches in their fisheries?				
4. Supports the Convention Secretariat, through established mechanisms, to commence discussions with regional fishery management organizations in order to develop Memorandum of Understandings.				

(*) Specify actions implemented, name of the project or relevant document, location, objective(s), institutions responsible, contact, financial or other support (optional), results (both positive and negative) and duration.

Resolution CIT-COP4-2009-R5: Adaptation of sea turtle habitats to climate change

ACCORDING TO RESOLUTION CIT-COP4-2009-R5, REPORT WHETHER YOUR COUNTRY:

IS COMPLYING WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	DOES NOT APPLY
1 a) Have marine and coastal habitats on which sea turtles depend been included in national plans and programs for adaptation to climate change? Specify habitats and plans				
1 b) Are these plans for adaptation to climate change being implemented?				

2 a) Are corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats?				
2 b) Are you evaluating the corrective measures and measures on adaptation to climate change included within management plans and/or protection and conservation programs for sea turtles and their habitats?				
3. Have you identified any organizations or pertinent expert groups as possible partners to work on the topic of adaptation by sea turtles to climate change? Please list.				
4. Have you carried out research and monitoring to improve knowledge of the effects on, and vulnerability of sea turtles and their habitats, to climate change?				
5. Has your country hosted capacity building workshops for monitoring techniques and/or adaptation to climate change?				
6. Has your country implemented mitigation measures for non-climatic threats as a way to improve the resilience of populations to the impacts of climate change? Specify which ones.				

(*) Specify actions implemented, name of the project or relevant document, location, objective(s), institutions responsible, contact, financial or other support (optional), results (both positive and negative) and duration.

c.2 National and International Mandates

List actions that are being carried out to comply with national and international mandates (Ex: inspections, confiscations, sanctions, etc.)

d._ Application[submission] of exceptions established in the Convention

Describe in detail the exceptions allowed in accordance with article IV, item 3(a,b,d) and Annex IV of the text of the Convention, in accordance to the procedure established by the COP (Doc. CIT-COP5-2011-R2). Attach management program.

Part III (Research information)

a._ Threats

Indicate threats ***(Coastal development, incidental capture, direct use, contamination and pathogens, and climate change)*** *by species, with information on the area and activities taken to control them in the following table.* Lo = *Lepidochelys olivacea*; Lk = *Lepidochelys kempii*; Dc = *Dermochelys coriacea*; Ei = *Eretmochelys imbricata*; Cc = *Caretta caretta*; Cm = *Chelonia mydas*.

Species	Threat(s)		Actions
Lo	☐Coastal development ☐Incidental capture ☐Direct use	☐Contamination ☐Pathogens ☐Climate change	
Lk	☐Coastal development ☐Incidental capture	☐Contamination ☐Pathogens	

	☐Direct use	☐Climate change	
Dc	☐Coastal development ☐Incidental capture ☐Direct use	☐Contamination ☐Pathogens ☐Climate change	
Ei	☐Coastal development ☐Incidental capture ☐Direct use	☐Contamination ☐Pathogens ☐Climate change	
Cm	☐Coastal development ☐Incidental capture ☐Direct use	☐Contamination ☐Pathogens ☐Climate change	
Cc	☐Coastal development ☐Incidental capture ☐Direct use	☐Contamination ☐Pathogens ☐Climate change	

b._ Research

Describe scientific research that is being carried out in the country relating to sea turtle population assessments including tagging, migration, and genetic studies, as well as those relating to conservation issues including habitat monitoring, fisheries interactions, disease, etc. Provide a list of references for the information used in this report and note how to obtain them when needed.

In addition to the above, please fill out the following table on the types of research being carried out in the country and with what specie(s).

Research	**Specie(s)(Lo, Lk, Cm, Ei, Cc, Dc)**
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	

c._ Other activities

Include information on: environmental education activities, programs to establish and manage protected areas, and cooperative activities with other Party countries.

Part IV: Annexes

Table 1: Species Present

Place an X in the box when the species listed is present in the oceanographic basins of your country as established in Article III of the text of the Convention. Lo = Lepidochelys olivacea; Lk = Lepidochelys kempii; Dc = Dermochelys coriacea; Ei = Eretmochelys imbricata; Cm = Chelonia mydas; Cc = Caretta caretta.

Species	Pacific Ocean	Atlantic Ocean	Caribbean Sea
Lo			
Lk			
Dc			
Ei			
Cm			
Cc			

Table 2: Index nesting sites or beaches for sea turtle conservation

a. *This table is intended to report information on index nesting sites or beaches for each species. For beaches that have multiple species nesting, enter that beach under the list for the primary nesting species. When entering information on nesting site or beaches, information is to be entered for each species independently. Indicate the names of index nesting sites. On a separate sheet of paper, indicate the selection criteria used for identifying the index beach, for example, because it hosts a significant proportion of the overall nesting population within a region or other defined unit or genetic importance.*
b. *Nesting season: Indicate the starting and finishing date of the nesting season.*
c. *Monitoring period: Indicate the starting and finishing date of monitoring efforts.*
d. *Survey frequency: Indicate the frequency with which the surveys are done (daily, weekly, bi-weekly, monthly, among others).*
e. *Geographic location: Specify latitude and longitude in decimal degrees.*
f. *Extension of beach monitored: Provide the total length (in Kilometers) of the nesting beach.*
g. *Declared protection area: Indicate (yes or no) if the area is declared as some type of protected area.*
h. *Annual nesting abundance: Provide information on the total number of females and/or clutches or nests deposited at the nesting site or beach in real numbers. Provide the exact count of females based on tagged or uniquely identified individuals. If the exact number of clutches is unknown provide total number of nests.*
i. *Information from tagging program: Indicate if there have been any tagging activities at the nesting beach by using the letters of the type of tagging being done: flipper tagging (FT), passive integrated transponder (PIT) tagging, and satellite telemetry (ST) programs. If possible, on a separate sheet or as attached reference provide greater detail about the type of tagging efforts conducted. Also provide satellite telemetry maps or flipper tag recovery information if available.*
j. *Tissue sampling: Indicate if there has been tissue sampling conducted at this site. This includes skin, blood, and other body tissues. On a separate sheet, or as attached references, describe these tissue sampling programs in greater detail. For example, were samples collected for genetic, contaminant, and/or stable isotope studies?*
k. *Indicate what organization or entity is providing the data.*
l. *When inserting new rows, please copy and paste the drop down menus when applicable.*

Spp	Name of Index Nesting Site or Beach	Nesting season		Monitoring period		Survey Frequency	Geographic Location (Lat/Long) in Decimal Degrees				Extension of beach monitored (km)	Declared Protected Area (Yes/No)	Annual Nesting Abundance			Tagging Program (FT, ST, PIT)	Tissue Sampling (Yes/No)	Organization or entity providing data
		Start	Finish	Start	Finish		Latitude		Longitude				Females Exact Count	Clutches Exact Count	Number of Nests			
Lo								º		º		Choose an item.				Choose an item.	Choose an item.	
								º		º		Choose an item.				Choose an item.	Choose an item.	
Lk								º		º		Choose an item.				Choose an item.	Choose an item.	
								º		º		Choose an item.				Choose an item.	Choose an item.	
Dc								º		º		Choose an item.				Choose an item.	Choose an item.	
								º		º		Choose an item.				Choose an item.	Choose an item.	
Ei								º		º		Choose an item.				Choose an item.	Choose an item.	
								º		º		Choose an item.				Choose an item.	Choose an item.	
Cm								º		º		Choose an item.				Choose an item.	Choose an item.	
								º		º		Choose an item.				Choose an item.	Choose an item.	
Cc								º		º		Choose an item.				Choose an item.	Choose an item.	

Table 3: Important foraging sites for sea turtle conservation

a. This table is intended to contain information for foraging sites being studied for each species. For marine habitats that have multiple species present, enter the specific site under the heading for the priority species at that site.

b. Name and geographic location: Provide the name of the site and geographic location in decimal degrees in Lat/Long (one reference point).

c. Area: Indicate the size of the study site (en Kilometers^2).

d. Declared protection area: Indicate if the area is declared as some type of protected area.

e. Life stage: Indicate the life stage or stages found in the study area (juvenile, subadult or adult).

f. Information from tagging program: Indicate if there have been any tagging activities at the in-water site by using the letters of the type of tagging being done: flipper tagging (FT), passive integrated transponder (PIT) tagging, and satellite telemetry (ST) programs. If possible, on a separate sheet, or as attached reference provide greater detail about the type of tagging efforts conducted. Also provide satellite telemetry maps or flipper tag recovery information if available.

g. Tissue sampling: Indicate if there has been tissue sampling conducted at this site. This includes skin, blood, and other body tissues. On a separate sheet, or as attached references describe these tissue sampling programs in greater detail. For example, were samples collected for genetic, contaminant, and/or stable isotope studies?

h. Indicate the organization or entity providing the data.

i. When adding new rows, please copy and paste the drop down menus when applicable.

Species	Name of the Study Site	Geographic Location (Lat/Long) in Decimal Degrees Latitude		Longitude		Area (Km^2)	Declared Protection Area (Yes/No)	Life Stages (Juvenile, Sub-adult, Adult)	Tagging Program (FT, ST, PIT)	Tissue Sampling (Yes/No)	Organization or entity providing data
			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
Lo			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
Lk			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
Dc			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
Ei			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
Cm			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	
Cc			°		°		Choose an item.	Choose an item.	Choose an item.	Choose an item.	

ANNEX VIII

SCIENTIFIC COMMITTEE 2014-2015 WORK PLAN

This document was taken from the original IAC 2013-2014 Work Plan approved by the COP6 (CIT-COP6-2013-Doc.3). It was updated at the 10th Scientific Committee meeting and an additional column for activities proposed in 2015, was added.

STRATEGIC PLANNING		**WORK PLAN - GOALS – SCOPE – REQUIREMENTS**						
Activities	**Verifiable Goals/ Products**	**Indicators**	**Year 2014**		**Year 2015**		**Responsible**	**Not Financed**
			I semester	**II semester**	**I semester**	**II semester**		
3.1 To elaborate and update its Work Plan following the guidelines of the Convention and the agreements and resolutions of the Conference of the Parties (COP´s).	a. Prepare the committee's bi-annual work plan with actions to be performed, chronogram and those responsible.	Updated Work Plan		X		X	Scientific Committee	
3.2 To evaluate the conservation status of the sea turtle populations in the region, based on the most reliable scientific data and considering the environmental, socioeconomic and cultural characteristics of the Parties.	a. Prepare technical report on Parties annual reports.	Report submitted		X		X	Scientific Committee	
	b. Prepare a strategy for reporting index beaches.	Strategy for reporting and analyzing index beaches prepared.	X	X			Annual Report WG	
	c. Analyze the technical information presented in the annexed tables (index nesting sites) of the Parties' Annual Reports.	Report submitted on the state of sea turtle populations to present at COP7.		X			Scientific Committee and Annual Report WG	
	d. Yearly maintenance and update IAC database with the information provided in the annual reports.	Updated database	X				Scientific and Consultative Committees and Secretariat	

e. Review database format and contents when necessary.	Updated database.	X	X			Scientific and Consultative Committees and Secretariat	
f. Carry out inter-sessional working groups formed by the Scientific Committee.	Reports on the results of working group(s).	X	X	X	X	Scientific Committee Working Groups	
g. Update list of different types of TEDs used/approved by IAC Party countries.	Updated list of TEDs.		X		X	Fisheries WG	
h. Information complied on best practices and procedures for handling sea turtles onboard that were incidentally caught in coastal fisheries.	Document on best practices submitted.	X Prepare list of recommended manuals (January)	X Translate and distribute document with recommendations (May)			Fisheries WG	
i. Climate change working group to provide recommendations on actions to help IAC Parties implement the climate change resolution.	a. Circulate modified climate change resolution table with the Consultative Committee (CCE).	X PTS asks Focal Points to submit environmental data being collected at nesting beaches (March)				Climate Change WG	
	b. Recommendations on indicators to detect the impact of climate change on selected index beaches.		X			Climate Change WG	

j. Inter-sessional working group on sea turtle strandings will compile existing protocols on this topic.	a. Protocols compiled.	X				Strandings working group	
	b. Document summarizing information with recommendations given.		X			Strandings working group	
k. Make recommendations on high-priority projects that need financing and other types of support needed to achieve intended objectives.	Number of high priority project profiles.		X		X	Scientific Committee	
l. Promote actions within the IAC hawksbill and leatherback Resolutions.	a. Improved compliance and implementation of actions in resolutions by Parties. b. Eastern Pacific Ocean leatherback project being reviewed by MTCF.	X (Chile presents proposal to MTCF)	X			Scientific Committee	
m. Consult experts on technologies for tagging sea turtles at high seas, habitat and stranding modeling.	a. Tagging expert identified b. Habitat modeling expert identified c. List of wildlife experts (stranding group) prepared	X				Scientific Committee	
	c. Conference calls held with experts.		X			Scientific Committee and PT Secretariat	
n. Identify synergies with other organizations related to the IAC to share information (SPAW, IATTC, CPPS, WIDECAST, ICCAT, RAMSAR, SWOT, ICAPO, ASO, WWF).	Summary of possible activities/synergies with other organizations in meeting report		X		X	Scientific and Consultative Committees	

	o. Identify and provide Ramsar Secretariat with information on sea turtles at Ramsar sites (i.e. benefits, population status)	Technical document sent to IAC-Ramsar Focal Points	X Document finished in January and final document circulated in February	X			IAC-Ramsar document working group	
	p. Identify and where appropriate inform the relevant Party and the Ramsar Secretariat when the ecological character of a Ramsar Site providing sea turtle habitat has changed, is changing or is likely to change.			X			Scientific Committee and PT Secretariat	
3.3 To address requests from the Conference of the Parties and the Consultative Committee and make recommendations accordingly.	a. Send recommendations to the CCE and COP, as requested.	Number of documents with recommendations sent.		X		X	Scientific Committee	
3.4 To foster alliances and synergies with competent specialists and organizations that shall facilitate the achievement of the IAC objectives.	a. Make recommendations that promote synergies and coordination mechanisms with entities relating to achieving the IAC objectives.	Number of specialists and organizations identified and/or contacted. Number of meetings at which members of the SC promoted the IAC by presenting its activities.	X	X	X	X	Scientific Committee	
	b. Update and maintain a directory of scientists and/or experts in fields related to the IAC.	Directory on the IAC web site updated.	X	X	X	X	Scientific and Consultative Committee	

ANNEX IX

CIT-CC10-2013-Doc.06

Agreements and Recommendations of the 10th IAC Scientific Committee Meeting (SC10)

Climate Change and Sea Turtles

1) The SC10 approved changes made to the Annual Report's table on Resolution CIT-COP4-2009-R5, *Adaptation of sea turtle habitats to climate change*, as proposed in the Report from the Climate Change Working Group to the 10th IAC Scientific Committee Meeting (CIT-CC10-2013-Doc. 2). The modified table will be submitted to the Consultative Committee for review at its next meeting. The table with the suggestions of the Consultative Committee will be sent to the IAC Focal Points for final approval.

2) The SC10 recommends IAC Focal Points assist the IAC Secretariat in approaching the United Nations Convention on Climate Change so that a copy of the Resolution *Adaptation of sea turtle habitats to climate change* (CIT-COP4-2009-R5) can be sent to their national focal points participating in the COP-19 of the Climate Change Conference for their information as well as to seek synergies between the two conventions.

Fisheries Interactions with Sea Turtles

3) The SC10 approved the updated list of Turtle Excluder Devices (TEDs) used in the IAC region by adding new legislation from Costa Rica, Ecuador and Panama. This information is included in the report from the fisheries working group to the SC10 (CIT-CC10-2013-Inf.2) and will be distributed to the IAC Focal Points.

4) It was agreed that Peru, Ecuador, Mexico and Chile would continue working on the draft proposal for a project to mitigate bycatch and collect data on fisheries interactions with eastern Pacific *D. coriacea*, within the framework of the EPO leatherback taskforce.

5) The IAC Scientific Committee has been informed and offered their support for Chile, with assistance from the *Pro Tempore* Secretariat, to submit a project proposal to the Marine Turtle Conservation Fund on October 1, 2013 regarding a characterization of the fisheries interacting with the Eastern Pacific *D. coriacea* in Chile's artisanal fisheries.

6) Having obtained favorable results in pilot tests conducted in 2013 in Chile and Argentina, the SC10 recommends IAC Party countries implement the forms to collect information on gillnets (found in the SC8 report).

7) It was agreed that the assistance of an expert from NOAA for habitat modeling analysis would be requested. The consultation with this expert will initially be done through a conference call.

8) The fisheries WG work plan was approved and its activities are provided in detail in the report of this working group (CIT-CC10-2013-Inf.2). These activities were included in the SC 2014 work plan.

IAC Annual Reports and Index Beaches

9) The SC10 approved the technical document entitled "*Selecting Index Nesting Beaches in the IAC Region and Data Collection Guidelines*" (CIT-CC10-2013-Tec.5) to be used by the IAC Party countries Parties.

10) The SC10 approved the modifications made to Table 2 of the IAC Annual Report regarding index sites or beaches important to sea turtle conservation and its instructions, reflecting the decision of the COP6 to use index beaches. The modified table in the Annual Report will be used starting in 2014.

11) The SC10 prepared a preliminary list of index beaches for IAC Party countries. The *Pro Tempore* Secretariat will request the preamble and preliminary list of index beaches from Venezuela (in the coming weeks). This information will be incorporated into the list and the *Pro Tempore* Secretariat will send it, along with the technical document number 5 on index beaches, on October 15, 2013 to IAC Focal Points for approval. Focal Points have one month to approve the list.

Proposal for Form an Inter-sessional Working Group on Sea Turtle Stranding

12) The SC10 agreed to form a Sea Turtle Stranding Working Group made up of the following members: Chile, Ecuador, Guatemala, Peru, Panama and Costa Rica (coordinator). The group will compile information on stranding protocols and present its work plan and results of the literature gathered at the next meeting of the IAC Scientific Committee (SC11).

Activities within the Framework of the IAC-Ramsar MoU

13) The SC10 approved the outline for preparing the IAC-Ramsar technical document.

14) To prepare this technical document, a working group was formed and consists of the following members: Mexico (coordinator), Panama, Costa Rica, Guatemala and Honduras. The deadline for submitting the finished document is January 2014. This document will be circulated with the SC for comments and subsequently with specialists of the Ramsar Convention.

Activities within the Framework of the IAC-CPPS MoU

15) It was agreed that the *Pro Tempore* Secretariat will send a formal request to the CPPS Secretariat to reserve a space for the participation of an IAC member in the electronic repository course that will be held in Guayaquil in November 2013. Due to funding reasons

and the location of where the meeting will be held, the IAC Secretariat will request that Ecuador's Focal Point identify the right person to participate in this activity according to the profile sent by CCPS.

2014 Work Plan

16) The SC10 updated their Work Plan corresponding to the 2014 period (CIT-CC10-2013-Doc.4) and added the following inter-sessional activities for their working groups:

Fisheries WG

- Prepare a document containing the protocols on best management practices and resuscitation of sea turtles onboard.

Climate Change WG

- Prepare a document on indicators to detect impacts of Climate Change

Sea Turtle Stranding WG

- Compile existing protocols on sea turtle stranding

IAC-Ramsar WG

- Technical document sent to IAC-Ramsar Focal Points

Annual Report and Index Beaches WG

- Prepare a report on the state of sea turtle populations to be presented at COP7.

Location of SC11

17) The location of the SC11 will be Lima, Peru with support from the Government of Peru.