

Inter-American Convention for the Protection and Conservation of Sea Turtles
VIII Meeting of the Scientific Committee
San José, Costa Rica
September 28-30, 2011

CIT-CC8-2011-Doc.9

Report of the Eight Meeting of the IAC Scientific Committee

1. Welcome Remarks

The Eighth Meeting of the Scientific Committee of the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) began with welcoming remarks by Ms. Veronica Caceres, *Pro Tempore* Secretary. The opening remarks were given by Ms. Jenny Asch from the National System of Conservation Areas (SINAC) of the Ministry of Environment, Energy and Telecommunications of Costa Rica and IAC Focal Point.

2. Presentation of Participants

The Eighth Meeting of the IAC Scientific Committee, was attended by delegates and advisers from 14 countries (Argentina, Belize, Brazil, Chile, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Netherlands, Panama, Peru, USA and Venezuela), the Chair of the IAC Consultative Committee of Experts as well as 4 observers from accredited NGOs (PRETOMA, Sea Turtle Conservancy, Turtle Island Restoration Network and WWF) in total 26 participants attended (Annex I).

3. Election of Rapporteur

The delegate of Venezuela, Ms. Begoña Mora, was elected as the rapporteur.

4. Adoption of the Agenda

The meeting agenda was presented by the Chair of the Scientific Committee and was approved without changes by the plenary (Annex II).

5. Report from the Chair of the IAC Scientific Committee

The meeting proceeded with a report from the SC Chair, Mr. Jorge Zuzunaga, delegate from Peru. The presentation highlighted the objectives of the IAC, which are to promote the protection, conservation and recovery of sea turtle populations, and the protection of the habitats of which they depend. Mr. Zuzunaga further mentioned some steps that can be taken by the convention, emphasizing the importance of TEDs. He highlighted the responsibilities of the Scientific Committee according to the text of the Convention on the adoption of the specified measures. The Chair also summarized the agreements and recommendations from the Seventh Meeting of the IAC Scientific Committee, which took place in Panama City, Panama from September 1- 3, 2010, and mentioned the following items:

a. Approval of the new IAC Annual Report Format and Instructions

The new IAC annual report format was created based on the proposal presented by the "Annual Report" Working Group to the Scientific Committee during their seventh meeting. Since the format was not adopted during that meeting, two working groups, with support of the *Pro Tempore* Secretariat, continued to work on the format throughout the intersessional period. The new format was presented and approved with minor changes at the COP5. Subsequently, the *Pro Tempore* Secretariat circulated the new format among the Focal Points who then used this new format to submit their 2011 annual reports.

The previous format presented problems with the consolidation and analysis of information. By using the information reported in the new format the Scientific Committee hopes to prepare a technical report and later present it to the IAC Parties thus fulfilling one of the main responsibilities of the Scientific Committee.

b. State of knowledge on gillnet fisheries with sea turtle interactions

During the Seventh Meeting of the Scientific Committee, the Fisheries Working Group developed three forms to collect information on sea turtle interactions with coastal fisheries. At that time the Committee was unable to agree on the changes to be made to the forms in order to satisfy the particular characteristics of the fisheries in each of the IAC countries. The COP5 requested that we agree on the design of the forms at this meeting given that they are a useful tool for gathering information. In addition, it must be agreed on the how to make these forms so that they can be adapted to the unique characteristics of the fisheries in each country.

c. Draft procedures for cases where exceptions exist

During its last meeting, the Scientific Committee commented on the Consultative Committee's draft procedures to follow in the case of an exception. The proposal was presented again at the Consultative Committee's fourth meeting, where further changes were recommended. The proposal was then presented and approved at the COP5. Therefore, from now on any exception reported will be reviewed using the format of the document approved by the COP5.

d. 2011-2012 Scientific Committee work plan

A working group was formed during the seventh Committee meeting to work between sessions with the objective of updating the 2011-2012 Scientific Committee Work Plan. Together with the *Pro Tempore* Secretariat, the group worked on finalizing this document which was later approved by the COP5 with some minor changes. This meeting has the task of extending the current work plan to include the year 2013.

e. Multinational proposal for a regional hawksbill program

Based on the Resolution "Conservation of the hawksbill turtle (*Eretmochelys imbricata*)"

COP3/2006/R-1 and regional initiatives for this species (ICAPO) the previous Committee meeting recommended that a working group be formed and, together with the *Pro Tempore* Secretariat, that they prepare a multinational proposal for a regional program. This topic was once again included as an agenda item of the present Scientific Committee meeting.

The members of the group were: Eduardo Espinoza (Ecuador), Laura Sarti (México), Marino Abrego (Panamá) and Jeffrey Seminoff (United States). The first draft was to be presented at this Eight Meeting of the Scientific Committee.

f. Review of the “Manual for Sea Turtle Management and Conservation Techniques at Nesting Beaches in Central America”

One of the agreements of the Seventh Meeting of the Scientific Committee was to send their proposed changes to the document “Manual for Sea Turtle Management and Conservation Techniques at Nesting Beaches in Central America” to the *Pro Tempore* Secretariat for its final approval. In line with this agreement, the *Pro Tempore* Secretariat circulated the document to the members of the Scientific Committee prior to the eight meeting. Sixty five comments were received along with many other suggestions/changes within its text. .

The document being presented at this meeting by the *Pro Tempore* Secretariat has incorporated the majority of these comments and suggestions, however, there are still 29 comments that need to be discussed and finalized during this meeting.

g. Analysis of the 2010 Annual Reports submitted

During the Seventh Meeting of the Scientific Committee, it was agreed that the 13 reports submitted in 2010 be analyzed and a report prepared for the COP5. This analysis was done by three working groups:

- Important nesting sites: Begoña Mora, Neca Marcovaldi, Eduardo Espinoza and Julia Horrocks
- Fisheries: Gilberto Sales, Andrés Domingo and Francisco Ponce
- Compliance with resolutions: Laura Sarti, Jeffrey Seminoff, Didiher Chacón, and René Márquez

The results of this analysis were presented at the Fourth Meeting of the Consultative Committee of Experts, however, since the analysis was based on the older version of the Annual Report format, the Consultative Committee did not comment on them.

h. Letter of appreciation for Dr. Jack Frazier

It was agreed that the elected Chair would prepare a letter of appreciation for Dr. Jack Frazier for all of his hard work and endeavors during his term as Chair. The Chair fulfilled this agreement by way of the *Pro Tempore* Secretariat. The Chair also had the

opportunity to personally pass on the Committee's appreciation to Dr. Frazier during the II Scientific-Technical Regional Sea Turtle Meeting held in November of 2010 in Guayaquil, Ecuador.

In his report, the Chair of the Committee also referred to the main agenda items of the 8th meeting, emphasizing the need to obtain tangible results, suggesting that the review of the document on sea turtle habitat use, prepared under the framework of the MoU between IAC-IATTC, be finalized and ready to be presented to the IAC Focal Points. Similarly, to review the comments made on the "Manual for Sea Turtle Management and Conservation Techniques at Nesting Beaches in Central America" and agree on how this Manual will be used. As for the forms and instructions for collecting information on sea turtle interactions with gillnets, the Chair hopes to present them to the IAC Focal Points as a product of the Scientific Committee so that those who would like to use them as a part of their observer programs to characterize the fisheries interacting with sea turtles may do so and describe why it is important to identify what coastal fisheries have the greatest interactions with sea turtles and the fact that very little is known about them in the IAC region. He also mentioned the approval and dissemination of a format that allows information to be collected on the types of TEDs currently being used by the Party countries. In regards to the analysis of the 2011 Annual Reports submitted by the Party countries using the new format, a technical report will be prepared and presented to the IAC Parties. The 2012-2013 Scientific Committee Work Plan must also be approved during the present meeting. On the draft Terms of Reference for the IAC Database, progress must be made on a document that includes the objective of the database, the basic needs that the database must cover and how the information will be used by the Scientific Committee, as well as the way the data and contents of the annual reports will be reported. To meeting will be concluded with the updating of the IAC Directory of Experts.

6. Report from the *Pro-Tempore* Secretariat

Ms. Verónica Cáceres proceeded with the presentation of the report from the *Pro-Tempore* Secretariat. Ms. Cáceres began with a summary of the items presented during the COP5 and the latest efforts of the Convention. Efforts were made to get new countries to join to the Convention, the last ones being Chile in February of 2010 and Argentina in June of 2011. Additional outreach has been done in order to try and increase IAC membership especially in the Dominican Republic, Columbia, El Salvador, Nicaragua (these last two with the help of the MAREA Program), Trinidad and Tobago, Cuba, Jamaica, Suriname and French Guyana. She mentioned international cooperation between the IAC *Pro Tempore* Secretariat and other conventions and regional organizations highlighting the MOUs signed with CITES, OSPESCA, CPPS and, more recently, with the IATTC. In addition, the RAMSAR Convention on Wetlands has expressed interest in signing an MOU with the IAC given that many RAMSAR sites are important nesting and feeding grounds for sea turtles. Ms. Cáceres mentioned the funds being administered by the *Pro Tempore* Secretariat from the two grants awarded by the Sea Turtle Conservation Fund of the US Fish and Wildlife Service, one to strengthen IAC Capacity Building focusing on expanding IAC membership in the Caribbean region (May 2010) and another one to support the Fifth IAC Conference of the Parties and meetings of its subsidiary bodies in the framework of the 10th anniversary of the Convention

(June 2011). Participation of the *Pro Tempore* Secretariat in various regional meetings such as the second RAMSAR meeting of the Caribbean Wetlands Regional Initiative in Bonaire, the IV Regional Pacific Sea Turtle Symposium in Medellin, Colombia, the IV Meeting of the Western Hemisphere Migratory Species Initiative (WHMSI) and the 30th International Sea Turtle Biology Symposium in San Diego, California Symposium during the 2010-2011 period was mentioned. She highlighted the fact that the Convention has been very busy over the past two years holding six IAC meetings (subsidiary bodies and COP5) and the Regional Hawksbill Workshop in addition to coordinating a number of working groups. Lastly, a summary of the resolutions approved during the COP5 was presented, which was held from 1-3 June 2011 in Bonaire, as well as the activities carried out to commemorate the IAC's 10th anniversary, which included preparing a special report that highlights the achievements of the Convention and its Contracting Parties over the past ten years. This report has been distributed to the Parties and subsidiary bodies and it is now available on the Convention website.

7. Report on the 4th Meeting of the IAC Consultative Committee of Experts

The current Chair of the Consultative Committee, Mr. Paul Hoetjes (the Netherlands) presented the Report on the Fourth Meeting of the IAC Consultative Committee of Experts (CCE). Mr. Hoetjes mentioned that the meeting took place from 22-24 March 2011 in Bahía, Brazil. The following is a summary of the main topics discussed at the meeting and their recommendations:

- a. New Annual Report Format. Changes were made for its clarification and they agreed that the CCE must follow-up on the Parties compliance with resolutions. They also proposed extending the deadline to submit the reports so that the COP5 may approve the new format before it is due.
- b. Terms of Reference for the Consultative Committee of Experts. The CCE made slight modifications to the current Terms of Reference. They changed the rule regarding quorum to hold CCE meetings within the Rules of Procedure for the Convention so that the CCE would not need to reach quorum in order to hold a meeting and thus allowing the group to meet more often. Both recommendations were approved by the COP5.
- c. Consultative Committee Biannual Work Plan. The Works Plan was updated to include the 2012-2013 period.
- d. Fisheries and TEDs Working Group. It was agreed that the Consultative Committee's TEDs and Fisheries Interactions Working Group would be merged with the Fisheries Working Group of the Scientific Committee so that efforts are not duplicated.
- e. IAC Tenth Anniversary. Agreed to support the preparation of a document that reflects upon the past 10 years, including successes, strengths, weakness and opportunities of each Party country. This document was presented at the COP5. The creation of a database for Annual Reports was also recommended.
- f. Procedures to review exceptions. The document regarding exceptions was reviewed and modified. It was approved at the COP5.
- g. Terms of Reference for the Scientific Committee. The Terms of Reference of the Scientific Committee were reviewed in order to identify any overlapping responsibilities; none were found.

- h. Agenda items for the COP5. The CCE requested that the Terms of Reference for the Consultative Committee of Experts, the Procedures to review exceptions reported by the Parties, the 2012-2013 Consultative Committee Work Plan, the new Annual Report format and progress made on the possibility of applying for GEF funds be added to the COP5 agenda.
- i. GEF proposal on climate change. The United States agreed to help the Pro Tempore Secretariat inquire into the process to apply for GEF funds. If a viable option, funds would be requested from the Parties in order to hire a consultant to draft the proposal. Brazil and Mexico offered their assistance during the application process.
- j. A new Chair (the Netherlands) and Vice-Chair (Brazil) of the Consultative Committee were elected. The location of the Fifth Meeting of the Consultative Committee has not yet been determined.

8. Review of the informational document on sea turtle habitat use in the framework of the MOU between the IAC-IATTC

The meeting proceeded with the presentation of the informative document on sea turtle habitat use in the framework of the MOU between the IAC and the IATTC. The *Pro Tempore* Secretariat began by explaining the origin of this document, which was the result of a proposal by the COP5 to the Scientific Committee to submit an informational document to be presented to the IATTC so that they may take into consideration the habitats used by sea turtles and where interactions with longline fisheries occur in order to be able to recommend measures to avoid the incidental capture of these species. The initial draft document was prepared by Dr. Bryan Wallace, an expert collaborating with the IAC. The document was then reviewed by a working group of the Scientific Committee, which was conformed of: Neca Marcovaldi, Jeffreyrey Seminoff, Laura Sarti, and René Márquez. The version of the document presented before the Scientific Committee at this time already contains the comments and additional information provided by the working group. During its review at the meeting, it was agreed that the document should be expanded to include all species of sea turtles, so that it may be disseminated to other organizations and have a greater impact. In addition, various delegates emphasized the importance of this type of cooperation since the IATTC has an vast amount of information on sea turtles and different areas where these species are found and it is a great way to influence the decision making process of international organizations in favor of sea turtle conservation. A working group was formed in order to review and complete this document so that it may be presented to the Focal Points. The working group consisted of Jeffrey Seminoff (USA), Julia Horrocks (the Netherlands), Eduardo Espinoza (Ecuador) and Francisco Ponce (Chile). It was agreed that the working group would present a finished document at the end of the meeting.

It was agreed at the time to send an official letter of appreciation on behalf of the IAC to Dr. Wallace for his help in preparing the first draft of this document.

9. Discussion of the comments received on the nesting beach manual

The document “Manual for Sea Turtle Management and Conservation Techniques at Nesting Beaches in Central America”, which incorporated earlier comments sent by some members of

the Scientific Committee, was presented. While trying to review some of the main comments in plenary, it was agreed that it would be better to form a working group that would continue reviewing the document. As a part of this review and taking into consideration the proposed changes, it was agreed that the document should include all species of sea turtles and be converted into one that can be used throughout the Americas and not only in Central America as was originally planned. It was suggested that a separate section for topics such as the effect of tides and recording dead turtles be introduced in the document as well as a section with reference documents on topics like climate change, satellite tags, stranding and diseases. All delegates were asked to send photographs that may be used in the manual to avoid any problems with copyrights. It was agreed to form a working group that would incorporate and review all of the pending comments and have a finished product to be presented to the Parties.

10. Discussion on proposed data collection forms and their instructions for gillnets interacting with sea turtles.

The Committee proceeded to work on the proposed data collection forms and their instructions on gillnet interactions with sea turtles. The *Pro Tempore* Secretariat clarified that these were made with the objective of identifying what types of nets are interacting most often with sea turtles. The Sixth Meeting of the Scientific Committee agreed that gillnets had the most frequent interactions with turtles and they requested that the Parties present a summary of interactions with these types of nets. Only five Party Countries presented the information in the document “State of knowledge on gillnet fisheries and their interactions with sea turtle”, which is still pending review. In addition, the Fisheries Working Group of the Seventh Meeting of the Scientific Committee designed three forms in order to collect more detailed information. These were reviewed at the present meeting.

During the discussion, it was clarified that these forms are a useful tool for the countries to collect information. It was further mentioned that as a tool, they should be made available to everyone on internet, given that there are other organizations working on this issue that might also be interested in using these forms. Some of the delegates mentioned that their countries might have legal problems presenting the information requested in the forms and the working group will have to take this into consideration. It was agreed that the forms would be modified in such a way that they can be used at each country’s discretion. It was also suggested that it would be very helpful if the country could carry out a pilot project using these forms and present their report before the Scientific Committee. It was agreed that the fisheries working group would be responsible for modifying forms 1-3 so that they may be adopted as a tool for general use by the Parties.

11. Formation of Working Groups

The meeting proceeded to form the working groups and identified the expected results from each one of the groups. Five groups were formed to work on the following topics: Annual Reports and Database, the Nesting Beach Manual, Fisheries, a Multinational Proposal for a Hawksbill Program and the Informative Document on Sea Turtle Habitat Use.

After hearing the comments in plenary session on the documents that the working groups

need to finish and, because many of these documents have already been circulated or commented on in past meetings and a lot of work and comments have been made between sessions, the *Pro Tempore* Secretariat requested that in order to make progress and finish these documents, the Committee gives each working group their vote of confidence in order to avoid circulating countless times the same documents that they have already been given the opportunity to comment on within reasonable timeframes. The Scientific Committee approved this request so that the products of the working groups may be considered the finished products of the meeting.

12. IAC Expert Directory

The *Pro Tempore* Secretariat mentioned that the Directory of Experts had been sent out to all members of the Scientific Committee requesting their assistance to update it. The information received was then incorporated into the document and the Directory of Experts will now be sent to the Consultative Committee for its final review and, after that, it will be published on the IAC website.

13. Updating the Scientific Committee Work Plan

The 2011-2012 Work Plan for the Scientific Committee was presented, mentioning that the document forms part of the larger, general Work Plan for the Convention. The current meeting must identify the activities that they wish to carry out in 2012-2013. It was emphasized that each item that was included must have specific results, since on earlier occasions the Work Plan was thought to be too general. The activities were reviewed one by one and specific activities were suggested for each one. The updated document is one of the products of the meeting and is further described in the agreements and recommendations.

14. Presentation and approval of Working Group Results

Nesting Beach Manual Working Group

The objective of the working group was to incorporate the comments received on the Nesting Beach Manual and present a finished document in only one language. The members of the working group were René Marques (México), Laura Sarti (México), Julia Horrocks (the Netherlands), Emma Harrison (Sea Turtle Conservancy), Marino Abrego (Panamá) and José Martínez (Guatemala). The group reviewed and incorporated all of the comments made to the document in both English and Spanish. While reviewing the pending comments, the group also corrected and incorporated additional information in the document, among them, a table on the kemp's ridley turtle (*L. kempii*). Additional references were included as well as a paragraph on recommendations regarding how to use this manual. The group agreed to send the completed document to the *Pro Tempore* Secretariat who would then distribute it electronically through the IAC website.

Fisheries Working Group

The objectives of the working group were: to review the gillnet forms and its instructions,

provide recommendations to the Focal Points on these forms, and review the TEDs inventory. The group was made up of Álvaro Segura (WWF), Francisco Ponce (Chile), Jorge Zuzunaga (Perú), Jairo Sánchez (Costa Rica), Paul Hoetjes (CCE Chair) and Marlene Menard (USA). Form 1 is the form that will be used to collect general information on fishing gear and fisheries that interact with sea turtles. Form 2 focuses on bycatch data in gillnets and form 3 compiles information on the fleet. It was suggested that form 1 be the form that the Parties submit to the Scientific Committee, while forms 2 and 3 are used to back up the information, but will not be submitted. The working group modified the first three forms and created an additional form. Form 1 was modified to make it more general so that each country could report information on all fisheries and fishing gear that interact with sea turtles and not only information relating to gillnets. The group also prepared instructions for using the forms.

Multinational Proposal for a Regional Hawksbill Program Working Group

The objective of the working group was to present a draft multinational proposal for a regional Pacific hawksbill program. The group was made up of: Jeffrey Seminoff (USA), Eduardo Espinoza (Ecuador), Laura Sarti (México) and Marino Abrego (Panamá). The group prepared the document based on the report from the Regional Workshop for the Hawksbill in the Wider Caribbean and Western that was held in Quintana Roo, México, in September of 2009. The group recommended that in order to prepare a multinational proposal, a regional workshop should be held with experts working with hawksbill turtles in the Pacific. The group agreed to work on a project profile for holding the workshop as well as its fundraising.

IAC Annual Report Working Group

The objectives of the working group were: to prepare a technical report based on the results of an analysis of the 2011 reports and present it to the Parties; review the expectations reported and give recommendations to those countries that reported them; as well as prepare a Terms of Reference for the IAC Database. The working group was comprised of Robin Coleman (Belize), Begoña Mora (Venezuela), Jorgelina del Pilar Oddi (Argentina), David Jaén (Honduras), Alex Santos (Brazil) and Laura Sarti (México) as advisor.

Technical Report on Annual Reports

The group worked on a form that was provided by Laura Sarti to help analyze the Parties compliance with IAC resolutions. The group pointed out that the majority of the countries submitted their 2011 annual reports and there were only four Parties that did not present them. The majority of the Parties are carrying out follow-up activities as well as have a current National Action Plan in place or one in progress, with the exception of two countries. The majority of the Parties have reported having national legislation and are carrying out actions to mitigate threats, although in the majority of the cases the effectiveness of these actions cannot be measured. The main threats reported by the Parties are habitat degradation and fragmentation from both natural and anthropogenic causes, illegal harvesting of sea turtles and their products, illegal trafficking, weak legislation and enforcement, inadequate management of tourism activities, contamination, disease, bycatch, climate change and predation by wild and domestic animals.

The recommendations made by the working group regarding Annual Reports were:

- Only new information should be included in the Annual Report so that information is not repeated.
- Begin actions to mitigate the threats reported, if they have not already done so.
- Strengthen research to identify populations and foraging and mating grounds in order to establish protected areas or seasonal closures for fisheries and strengthen enforcement and inspection measures.
- Continue implementing national protection, monitoring or enforcement plans oriented towards sea turtle protection and conservation.
- Develop mechanisms that quantify the effectiveness of these actions.
- Increase compliance with the leatherback turtle, fisheries and climate change resolutions of the IAC, with respect to the results obtained by assessing the 2011 annual reports.
- Request those Parties that have left some empty fields in the Annual Report form to send that information to the *Pro Tempore* Secretariat, indicating the proper answer YES, NO, NA, and attaching additional information if available.

Exceptions Working Group

The working group informed that only two countries reported exceptions in their Annual Reports. These two countries were Guatemala and Panama. The working group analyzed the exceptions reported and submitted recommendations for the countries. In both cases, the Scientific Committee recommends that the IAC requests further information on the exceptions before validating them and sending them to the Consultative Committee of Experts.

However, the group felt it was convenient to mention certain recommendations for each one of the countries that reported exceptions. In both cases, the exceptions deal with use of sea turtle eggs.

In the case of Panama, it deals with the harvesting of olive ridley turtle (*Lepidochelys olivacea*) eggs. The recommendations submitted by the working group were:

- More data are needed on the population size and trends and, therefore, they recommend continuing to collect this type of information in order to establish appropriate management measures.
- Until research exists that allows the population trends to be known, it is recommended that the protection and management measures expressed in this report be implemented in accordance with the mandates established by the IAC and declared in Law No. 8 of 4 January 2008.
- It is crucial to strengthen vigilance and inspection mechanisms to reduce illegal harvesting.
- It is recommended that funds be earmarked for the National Sea Turtle and Conservation Program in order to carry out research activities, improve enforcement and inspections.
- A Management Plan that establishes the activities and strategies that must be implemented within the Isla Cana Wildlife Refuge is needed.

In the case of the exception presented by Guatemala, it is related to the harvesting of sea turtle eggs (*Lepidochelys olivacea*, *Chelonia mydas* and *Caretta caretta*) for human consumption. The following recommendations were made by the working group:

- Stress the mandatory donation of 20% of the eggs collected and brought to the pre-established hatcheries.
- More data is needed on the population sizes and trends for all species.
- Establish periods when eggs can be harvested, if necessary.
- Establish pilot projects/areas where the harvesting program takes place and monitor it.
- Search for financing options to reinforce research activities and improve enforcement and inspection.

Database Terms of Reference

During the present meeting, it was not possible to finalize the preparation of a Terms of Reference for the IAC Database. The Working Group recommended using the information available to create a database in ACCESS. The delegate of Brazil agreed to help in the creation of a database to be used by the *Pro Tempore* Secretariat to store information from the Annual Reports.

Working group on the informational document on sea turtle habitat use

The objective of this working group was to prepare an informative document on sea turtle habitat that was ready to be presented to the Focal Points. The group was made up of: Jeffrey Seminoff (United States), Julia Horrocks (the Netherlands), Francisco Ponce (Chile) and Eduardo Espinoza (Ecuador).

The working group modified the existing document by adding relevant information on hawksbill and olive ridley turtles as well as information on bycatch hotspots and the current conservation status for each species. They also included a clause within the document that states that some of the data presented have not yet been published. The group summarized the information on each species and incorporated additional references. The Working Group fulfilled their proposed objective.

15. Recommendations and agreements of the Eight Scientific Committee Meeting

The plenary adopted the following agreements and recommendations during the Eight Meeting of the Scientific Committee document CIT-CC8-2011-Doc.8:

1) Document on sea turtle habitat use in the framework of the MoU between IAC-IATTC

Approve document CIT-CC8-2011-Doc.2 “Conservation Status and Habitat Use of Sea Turtles in the Eastern Pacific Ocean” and request the assistance of the *Pro Tempore* Secretariat in translating and submitting the document to the IAC Focal Points with the recommendation that this document will be presented at the next Scientific Advisory

Committee meeting of the Inter-American Tropical Tuna Commission (IATTC) in the framework of the MoU between these two organizations.

2) Document IAC Nesting Beach Manual

Finish reviewing document CIT-CC8-2011-Doc.3 “Nesting Beach Manual” through the Working Group made up of the following delegates: René Márquez (México), Laura Sarti (México), Julia Horrocks (The Netherlands), Marino Abrego (Panamá) and the observer Emma Harrison (STC). The group will send the revised version to the *Pro Tempore* Secretariat on November 4th, 2011 and the *Pro Tempore* Secretariat will proceed with the graphic design and dissemination. The SC recommends that the document be distributed electronically in English and Spanish through the IAC website and, furthermore, that this manual becomes the first product of a series of technical documents of the IAC Scientific Committee.

3) Fisheries Working Group

- a. Data collection forms for sea turtle interactions in gillnets.

Approve the document CIT-CC8-2011-Doc.4 “Data collection forms for IAC Parties to provide the IAC with information on Sea Turtle Interactions with Gillnets and other Types of Fishing Gear” and its four tables with the changes made by the Working Group (Annex III). The SC recommends they be submitted to the Focal Points, suggesting that they be applied in the form of pilot tests during the year 2012. The SC hopes to receive the information collected by those Parties that apply it and any recommendations for its improvement in 2013.

- b. List of Turtle Excluder Devices (TEDs) used by IAC Party Countries

Prepare a list of the types of TEDs used by the Party countries through the Working Group comprised of the following delegates: Fransico Ponce (Chile), Jairo Sancho (Costa Rica), Jorge Zuzunaga (Peru), Marlene Menard (USA), Paul Hoetjes (Consultative Committee Chair) and observer Álvaro Segura (WWF). The presentation of these results will be included in the agenda of the next meeting CC9.

4) IAC Annual Report Working Group

- a. Technical report

The Chair of the SC will prepare the technical report on the results of the analysis of the 2011 annual reports done by the annual report Working Group. This report will be submitted to the Focal Points for their information.

Ask the *Pro Tempore* Secretariat to send a formal note to the Focal Points that have still not submitted their 2011 annual report requesting that they be made available no later than October 30, 2011.

b. Analysis of the information on important nesting sites

Prepare an analysis of the information on nesting abundance reported in the table on important nesting sites (Annex 2 of the 2011 Annual Report) in order to report on the usefulness of this data for making recommendations to the Parties on the status of sea turtle populations in the area of the Convention. The analysis will be led by the delegate Jeffrey Seminoff (USA) and will be carried out between sessions. In order to do this, the Parties will be requested to send supplementary information to the *Pro Tempore* Secretariat no later than January 15 of 2012. The presentation of these results will be included as an agenda item for the next meeting CC9.

Ask the *Pro Tempore* Secretariat to send a formal note to the Focal Points that have still not submitted their 2011 annual report requesting that they be made available no later than October 30, 2011.

c. Exceptions

Approve the recommendations on the analysis of the exceptions presented by Guatemala and Panama in their 2011 annual reports. The Chair of the Scientific Committee must send these recommendations to the *Pro Tempore* Secretariat requesting that they be remitted to the interested Parties.

d. Database

Prepare a Database for the use of the *Pro Tempore* Secretariat to store the information contained in the IAC annual reports. The delegate Alex Santos (Brazil) will be in charge of preparing the proposal for the database and it will be carried out inter-sessionally. The presentation of these results will be included as an agenda item for the next CC9 meeting.

5) Pacific Hawksbill Working Group

Review during the inter-sessional period the viability of preparing a Multinational proposal for a Regional Pacific Hawksbill Program based on the document presented by the CC8 Working Group comprised of the following delegates: Eduardo Espinoza (Ecuador), Jeffrey Seminoff (USA), Laura Sarti (México) and Marino Abrego (Panamá). If this proposal is found to be viable, the SC recommends holding a workshop of experts and groups that work with Hawksbills in the Pacific in order to write the multinational proposal. For this, the working group will have to prepare a project profile for the workshop so that they may, in conjunction with the *Pro Tempore* Secretariat, look for the necessary funds. The progress made on this matter will be presented at the next CC9 meeting.

6) Expert Directory

Send the IAC Directory of Experts, which was revised by the SC, to the Consultative Committee for their input.

7) 2011-2013 Work Plan

Approve the Work Plan corresponding to the 2012-2013 period, which was prepared using the base document CIT-CC8-2011-Doc.5, identifying the following activities:

- a. Prepare a format for the presentation of the Technical Report through which the SC will present the Parties with the results of their analysis on the contents of the Annual Reports.
- b. Analyze the technical information included in the Tables attached to the Annual Reports of the Parties referring to the important nesting sites (concur with Agreement 4b).
- c. Analyze the proposal for a Database to store information included in the IAC Annual Reports (concur with Agreement 4c).
- d. Prepare a Proposal for a Regional Plan for Pacific Hawksbills (concur with Agreement 5).
- e. Include the preparation of a list of the different types of TEDs (concur with agreement 3b).

8) Outreach and collaboration with intergovernmental regional organizations relevant to sea turtle conservation

Begin dialogues to promote the signing of a Memorandum of Understanding with the International Commission for the Conservation of Atlantic Tunas (ICCAT). In order to do this, the *Pro Tempore* Secretariat will, with the assistance of Ms. Marlene Menard (Advisor to the United States delegation) and the SC delegates of those countries party to ICCAT, establish communication with the ICCAT Executive Secretariat.

9) Appreciation letter to Dr. Bryan Wallace

Thank Dr. Bryan Wallace for his generous support in preparing the first draft of the document CIT-CC8-2011. Doc.2 “Background Information on Sea Turtle Habitat Use”. The Chair of the Scientific Committee will prepare the respective letter to be sent by the *Pro Tempore* Secretariat.

10) Location of the CC9

Depending on the availability of funds, the Focal Points will be consulted as to their capacity to offer support in holding the meeting and thus define its location.

16. Closing Remarks

The Chair of the Scientific Committee thanked the members for their participation and hard work during the meeting. He especially thanked Costa Rica for their support and warm welcome, as well as the observers for their support and work during the meeting. The Chair also thanked the *Pro Tempore* Secretariat and the translators for all of their good work during the meeting.

Annex I
Participant List of the VIII Scientific Committee Meeting

País/Country	Nombre/Name	Institución/Institution	E-mail
Delegados/Delegates			
Argentina	Jorgelina del Pilar Oddi	Secretaria del Ambiente y Desarrollo Sustentable	joddi@ambiente.gob.ar
Belize	Robin Coleman	Wildlife Conservation Society	rcoleman@wcs.org
Brazil	Alex Santos	Fundação PRO-TAMAR/Projeto TAMAR	alex@tamar.org.br
Chile	Francisco Ponce	Subsecretaría de Pesca	franciscoponce@subpesca.cl
Costa Rica	Jairo Sancho	Programa Marino SINAC	jairo.sancho@sinac.go.cr
Costa Rica (Asesora)	Eugenia Arguedas	SINAC	eugeniaarguedas@yahoo.com
Costa Rica (Punto Focal)	Jenny Asch	SINAC-MINAET	Jenny.asch@sinac.go.cr
Ecuador	Eduardo Espinoza	Parque Nacional Galápagos, Ministerio del Ambiente	eespinoza@spng.org.ec
Guatemala	José Martínez	Recursos Hidrobiológicos CONAP	josemartinezmencos@yahoo.com
Honduras	David Jaén	Dirección de Biodiversidad	david_jaen@yahoo.com
México	René Márquez	Vicepresidente, Comité Científico CIT	lkempii@prodigy.net.mx
México (Asesora)	Laura Sarti	Programa Nacional para la Conservación de las Tortugas Marinas CONANP- SEMARNAT	lsarti@conanp.gob.mx
The Netherlands	Julia Horrocks	University of the West Indies	julia.horrocks@cavehill.uwi.edu
Panamá	Marino Eugenio Abrego	Autoridad de los Recursos Acuáticos de Panamá, ARAP	meabrego0303@yahoo.es
Perú	Jorge Zuzunaga	Ministerio de la Producción	jzuzunaga@produce.gob.pe
USA	Jeffrey Seminoff	Marine Turtle Ecology and Assessment Program, NOAA-NMFS-Southwest Fisheries Science Center	Jeffrey.seminoff@noaa.gov
USA (Advisor)	Marlene Menard	Office of Marine Conservation (OES/OMC), U.S. Dept. State	MenardMM@state.gov
Venezuela	Begoña Mora	Oficina Nacional de Diversidad Biológica, Ministerio del Poder Popular para el Ambiente	bmora@minamb.gob.ve, moraceli@gmail.com

Comité Consultivo/Consultative Committee			
Chair CC	Paul Hoetjes	RCN-EL&I	paul.hoetjes@rijksdienstcn.com
Observadores/Observers			
Costa Rica	Emma Harrison	Sea Turtle Conservancy	emma@conserveturtles.org
Costa Rica	Randall Arauz	Pretoma	rarauz@pretoma.org
Costa Rica	Alvaro Segura	WWF	ASegura@wwfca.org
USA	Todd Steiner	Turtle Island Restoration Network	tsteiner@tirn.net
Secretaría/Secretariat			
	Verónica Cáceres	IAC PT Secretary / Secretaria PT CIT	secretario@iacseaturtle.org
	Belinda Dick	IAC Secretariat/Secretaria CIT	contact@iacseaturtle.org
	Sabrina Flamenco	IAC Secretariat/Secretaria CIT	sflamenco@gmail.com

**Annex II
Agenda
8th IAC Scientific Committee Meeting**

Day 1

<i>Time</i>	<i>Topic</i>	<i>Speaker</i>
8:00	Participant Registration	
8:30	Welcome remarks	Ms. Jenny Asch – MINAET-IAC Focal Point - Costa Rica
9:00	Presentation of participants and elect rapporteur	Ing. Jorge Zuzunaga, Chair Scientific Committee
9:30	Adoption of agenda	
9:45	Report from the Chair of the IAC Scientific Committee	Ing. Jorge Zuzunaga
10:15	Report from the <i>Pro Tempore</i> Secretariat	Ms. Verónica Cáceres, IAC PT Secretary
10:30 Coffee break		
11:00	Report on the 4th meeting of the IAC Consultative Committee of Experts	Mr. Paul Hoetjes, Chair Consultative Committee
11:30	Review document Background Information on sea turtle habitat use in the framework of the MoU between IAC-IATTC. CIT-CC8-2011-Doc.2	Plenary
1:00 -2:00 PM Lunch		
2:00	Review proposal of the IAC Manual for sea turtle managing and conservation techniques in nesting beaches. CIT-CC8-2011-Doc.3	Plenary
3:30	-Discussion on data collection forms for gillnet and coastal fisheries data and interaction with sea turtles. CIT-CC8-2011-Doc.4 -Recommendations	Plenary
4:00 Coffee break		
4:15	Working Groups - Annual reports: Prepare technical report and review exceptions - Fisheries: Design TED inventory forms - Data Base: Proposal ToR for IAC Data Base	
6:00	Meeting Adjourns	

Day 2

<i>Time</i>	<i>Topic</i>	<i>Speaker</i>
<i>Working Groups</i>		
8:30-12:30	- Continue work on assigned tasks - Prepare recommendations Coffee break 10:00 am	
12:30 Lunch		
1:30	Working groups continue	
3:45 Coffee break		
4:30	Discussion of Working Group results by topic	Plenary
5:00	Write recommendations for each topic	Plenary
6:00	Meeting Adjourns	

Day 3

<i>Time</i>	<i>Topic</i>	<i>Speaker</i>
8:30	Experts Directory in fields related to the IAC	SC Chair / Plenary
9:00-12:30	Review and update the work plan of the Scientific Committee CIT-CC8-2011-Doc.5 a) Review the 2011-2012 plan approved by the COP5 b) Expand the work plan to include 2013 c) Identify activities to carry out the assigned tasks d) Identify activities with MOUs Coffee break 10:00 am	SC Chair / Plenary
12:30 Lunch		
1:30	Working Groups present their final results	Chair of each working group
3:45 Coffee break		
4:00	Approve the agreements and recommendations of the meeting	SC Chair / Plenary
5:00	Closing remarks	SC Chair and IAC PT Secretariat

**Annex III
CIT-CC8-2011-Doc.4**

Data collection forms for IAC Parties to provide the IAC with information on Sea Turtle Interactions with Gillnets and other Types of Fishing Gear

I. INTRODUCTION

The Third IAC Conference of the Parties, held in 2006, approved Resolution COP3/2006/R-2 on the “Reduction of the adverse impacts of fisheries on sea turtles”; considering the possible impacts of fishing on sea turtle populations caused by incidental capture and mortality. This resolution urges the Parties to send the Secretariat of the Convention any information and documents on sea turtles they produce.

Sea turtle bycatch in gillnets has been identified as an important source of mortality even though very limited information is available for countries in the IAC region. Therefore, during the 6th Meeting of the IAC Scientific Committee (SC), it was decided that it was important to know the impact this type of fishing gear is having on sea turtle populations in countries of the Convention and proposed collecting the basic information necessary to carry out a more in depth study on the topic so that the Scientific Committee will be able to provide solid recommendations to the IAC Party countries regarding bycatch in gillnets.

In order to do this, a Gillnet Working Group was established and they designed three types of forms: one that contains basic information that includes all types of fisheries (not only the nets) that interact with sea turtles; another one to gather specific information on interactions with gillnets through existing observer programs; and also, one to collect basic information on the fleets involved in these fisheries.

These forms were presented at the 7th SC meeting, at this meeting their approval was still pending; however, the COP5 recommended that the Scientific Committee finish the forms and be presented to the Parties as a tool help collect data on gillnet fisheries.

During the 8th SC meeting, the forms and their instructions were reviewed and modified by the Fisheries Working Group, adding a new form to the set. The recommendation made by the Committee states that the approved forms and their instructions be sent to the Parties of the Convention for their use and that the IAC PT Secretariat will receive the results of their application (forms 1 and 4) in 2013.

II. OBJECTIVES

- Contribute to an evaluation of the level of interaction of sea turtle populations with fishing activities carried out using gillnets.
- Have baseline data available on the different types of fishing activities that interact with sea turtles for each country.

III.FORMS

Form 1

Provides basic information collected on all types of fisheries (not only those using nets) that interact with sea turtles, thus allowing the countries to have baseline data. This form is designed to provide the IAC SC with information on the level of interaction with fisheries.

Form 2

This form was designed specifically for gillnet fisheries in order to obtain data on this activity in fishing zones and on interactions with sea turtles for each fishing set. The entries must be completed by an observer onboard.

Form 3

Allows reporting on general information on the vessels that were in operation during the fishing season or for the entire year and that interacted with sea turtles, according to the type of fishing activity carried out and target species of the fishery.

Form 4

Provides information collected on sea turtle interactions in fishing operations using gillnets. This information is obtained by using data provided in forms 1 and 2. This form is designed to provide information to the IAC's Scientific Committee.

FORM 1: Baseline Data on All Types of Fisheries Interacting with Sea Turtles

Directions to fill out the form

This form must be completed by a representative of the national authority (Focal Point) responsible for sea turtle conservation. This form is designed to provide the IAC Scientific Committee with information on the level of interaction of sea turtles with fisheries and it should be submitted to the IAC *Pro Tempore* Secretariat once completed.

- 1. Country:** Name of the country where the information was gathered.
- 2. Fishing area (polygon coordinates):** Indicate the global fishing zone of the fishery, delimiting a polygon with its geographic coordinates in degrees and minutes and latitude and longitude.
- 3. Community/Port of Landing:** This field allows the identification of those communities participating in the fishing activity in the fishery identified. Note the community or port of landing (Each place or port may have various landing sites, consider the place or port as one).
- 4. Type of fishing gear and its use:** In this field indicate the type of fishing gear that interacts with sea turtles and how it is being used. In order for their characterization, please use one of the following descriptions provided below:

Type of fishing gear used

- Set gillnets (fixed to the bottom by an anchor) GNS
 - Drifting gillnets (not connected to the bottom) GND
 - Fixed gillnets (on stakes or staked to the bottom) GNF
 - Drifting trammel nets (two or three panels) TND
- Set trammel nets (fixed to the bottom by an anchor) TNS
- Fixed trammel nets (on stakes or staked to the bottom) TNF
 - Combined set trammel nets-gillnets GTNS
 - Combined drifting trammel nets-gillnets GTND
 - Combined fixed trammel nets-gillnets GTNF
- Drifting entangling nets END
- Set entangling nets ENS
- Fixed entangling nets GEF
- Encircling gillnets GNC
- Trawl nets AN
- Longline ESP

How it is used:

-Surface (S): the top rope (float line or cork line) is near the surface of the water or at a depth of less than one meter below it.

- Midwater (M): the top rope (float line or cork line) is always below the surface of the water at a depth of at least one meter or more and the weighted bottom rope, or the inferior end of the net, or the hooks are always separated from the bottom by a distance of at least one meter or more.

- Bottom (F): the weighted bottom rope, or inferior end of the net, or the hooks are less than one meter from the bottom of the sea.

For example, if the fishing gear used is a set gillnet in midwater, its abbreviation would be GNS-M

5. **Target Species:** Enter the scientific name and common names of the specie(s) intentionally targeted by this fishery using they type of fishing gear indicated in column 4.
6. **Specie(s) of Sea Turtles Captured:** place an X in the box that corresponds to the species that are incidentally captured by the fishing gear indicated in column 4, when the target species was as specified in column 5. The species are identified by their code as assigned by FAO in the following table. In the case of unidentified specimens, place an X in the box for species not identified (NN).

Scientific name	Common Name(s)	FAO Code
<i>Caretta caretta</i> (Linnaeus, 1758)	Loggerhead turtle	Cc
<i>Chelonia mydas</i> (Linnaeus, 1758)	Green turtle	Cm
<i>Dermochelys coriacea</i> (Vandelli, 1761)	Leatherback turtle	Dc
<i>Eretmochelys imbricata</i> (Linnaeus, 1766)	Hawksbill turtle	Ei
<i>Lepidochelys kempii</i> (Garman, 1880)	Kemp's Ridley turtle	Lk
<i>Lepidochelys olivacea</i> (Eschscholtz, 1829)	Olive Ridley turtle	Lo
<i>Specie not identified</i>		NN

7. Characteristics of the Fishing Fleet:

- **Number of vessels:** Indicate the number of vessels that were operating in the fishery during the reported year.
- **Length (measured in meters):** Length of the vessel measured in a straight line, rounded to the nearest meter, between the foremost part of the stem and aftermost part of the stern.
 - o Max: indicate the length of the largest vessel that participated in the fishing operations during the reported year.
 - o Avg: indicate the average length of the vessels that participated in the fishing operations during the reported year.
 - o Min: indicate the length of the smallest vessel that participated in the fishing operations during the reported year.

FORM 2: Data Collected Onboard Gillnet Fishing Vessels

This form is designed specifically for gillnets, geared towards obtaining data on the fishing activity and sea turtle interactions. Data are collected by the onboard observers.

Directions to fill out the form

1. **Vessel Name:** Write the official name of the vessel.
2. **Registration Number:** In addition to the vessel name, and probably the most important, is its registration number.
3. **Number of Crew:** Indicate the number of crew onboard the vessel where the observation was made.
4. **Departure:** Write the date the vessel left the port or community to carry out its normal fishing activity. Use the format: day (dd), month (mm), year (yy).
5. **Arrival:** The date the vessel arrived at the port or community. Use the format: day (dd), month (mm), year (yy).
6. **Captain or Skipper:** indicate the name of the captain in charge of the fishery
7. **Net Type and its Use:** The interaction recorded here is gillnets with turtles, but there are countries that use several different types of gillnets (entangling nets). In this field indicate the type of fishing net used that interacts with sea turtles and how it is used. In order for their characterization, please use one of the following descriptions provided below:

- Set gillnets (fixed to the bottom by an anchor) GNS
 - Drifting gillnets (not connected to the bottom) GND
 - Fixed gillnets (on stakes or staked to the bottom) GNF
 - Drifting trammel nets (two or three panels) TND
- Set trammel nets (fixed to the bottom by an anchor) TNS
 - Fixed trammel nets (on stakes or staked to the bottom) TNF
 - Combined set trammel nets-gillnets GTNS
 - Combined drifting trammel nets-gillnets GTND
 - Combined fixed trammel nets-gillnets GTNF
- Drifting entangling nets END
- Set entangling nets ENS
- Fixed entangling nets GEF
- Encircling gillnets GNC

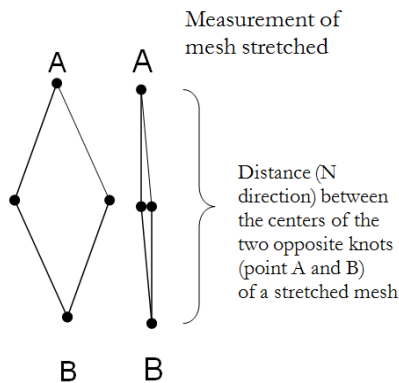
How it is used: refers to the location of where the net is placed in the water column.

- Surface (S): the cork line is near the surface of the water or at a depth of less than one meter.
- Midwater (M): the cork line is always below the surface of the water at a depth of at least one meter or more and the weighted bottom rope, or the inferior end of the net, is always separated from the bottom by a distance of at least one meter or more.
- Bottom (F): the weighted bottom rope, or inferior end of the net, is less than one meter from the bottom of the sea.

For example, if the fishing gear used is a set gillnet in midwater, its abbreviation for net type would be written as GNS-M.

8. **Observer:** write the name of the person acting as the observer and that fills out the form.
9. **Length*:** Write the length of the net in meters, measured as the length of the rope where the netting hangs from (where the net is mounted).
10. **Depth*:** It is the height of the net in meters, measured as the length of the tie-downs (rope that holds the net perpendicular to the top and bottom ropes) when used, or working depth of the netting panel (without stretching the mesh).
11. **Mesh Size (Stretched)*:** The measurement used is the distance (in N direction) between the centers of the two opposite knots (point A and B) of a stretched mesh in the direction that the weave of the panel is used. See diagram.

DIAGRAM TO MEASURE MESH SIZE
(STRETCHED MESH)



* The dimensions may be taken according to the measurements commonly done by the fishing community; however, the individuals in charge of the survey must convert them to the metric decimal system.

12. **Target Species:** Place the scientific and common names of the specie(s) towards which the fishing efforts are geared, using the type of fishing gear indicated in box 7.
13. **Set Number:** the consecutive order of the sets within the fishing trip or tide. The number one being the first set.

Fishing set: group of activities made up of the following phases:

- setting:** a group of maneuvers to place the fishing gear in the water
- soak time:** time that the fishing gear remains in the water between finishing the setting and beginning haul back
- haul back:** group of maneuvers to take the fishing gear out of the water

14. Setting:

Start: Initial location of the setting: Latitude and Longitude in degrees, minutes and seconds.

End: Final location of the setting: Latitude and Longitude in degrees, minutes and seconds. **Date and time of the setting:** indicate month, day – hour, minute

15. Haul back:

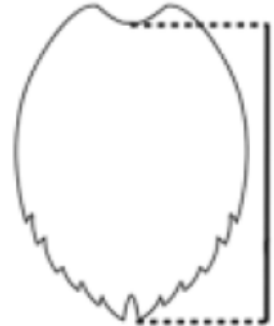
Start: Initial location of the haul back: Latitude and Longitude in degrees, minutes and seconds.

End: Final location of the haul back: Latitude and Longitude in degrees, minutes and seconds.

Date and time of the haul back: indicate month, day – hour, minute

16. **Length of flag lines:** Note the average length of the ropes that join the support buoys with the head rope of the net, in meters.

- 17. Reference point on land/fishing spot:** If the observer does not have a GPS to geo-reference the fishing sets, he/she may indicate the location of the fishing zone based on the distance from a visible point on the coast and the depth of the fishing zone.
- 18. Sea turtle species:** indicate the scientific name using the FAO codes provided in Form 1 and common name, in the case of an unidentified specimen; consider it as a species not identified (NN).
- 19. Release status of live turtles:** indicate whether the turtle was released unharmed or injured by placing an X in the corresponding box.
- 20. Fate of dead turtles:** indicate whether the specimen was kept onboard or discarded by placing an X in the corresponding box.
- 21. Curved Carapace Length (CCL):** indicate the carapace length of the live or dead turtle recorded. The nuchal-supracaudal curved carapace length is recommended by measuring from the anterior point at midline (nuchal scute) to the posterior tip of the supracaudal scute with a flexible measuring tape. See diagram.
- 22. Observations:** include any relevant comments and any data found on the tags if the turtles captured had been tagged.



FORM 3: General Information on Vessels Reporting Interactions with Sea Turtles

This form is designed to record the basic characteristics of the vessels operating during the yearly fishing season.

- 1. Vessel Name:** Write the official name of the vessel.
- 2. Registration Number:** Write the registration number assigned to the vessel by the competent authority.
- 3. Length of Vessel (meters):** Length of the vessel measured in a straight line rounded to the nearest meter between the perpendiculars of each end of the hull.
- 4. Hull Material:** Indicate the material used to construct the hull of the vessel.
- 5. Year Constructed:** Indicate the year the vessel was constructed.
- 6. Type of Engine and Horsepower:** indicate if the engine is internal or external and its potential in Horsepower
- 7. Load Capacity (ton):** Indicate the load capacity of the vessel in metric tons
- 8. Electronic equipment for fishing and navigation:** Indicate any equipment available on bridge and on deck
- 9. Number of crew members Max and Min:** Indicate the maximum and minimum crew that each vessel is authorized to have for its operation.

FORM 4: Synthesis of Information Collected on Gillnet Fisheries that Interact with Sea Turtles

This form is designed to provide the IAC Scientific Committee with information and it should be submitted to the IAC *Pro Tempore* Secretariat after its completion. It provides information collected on sea turtle interactions with gillnet operations obtained from the data provided in forms 1 and 2.

1. Country: Write the name of the country providing the information

Respondent: Name of the person who fills out the form

Organization: Name of the organization responsible for the report

Date: indicate the day-month-year in which the form was completed

- 2. Fishing area (polygon coordinates):** delimit the fishing area using a polygon with its points being determined by geographic coordinates in degrees and minutes. Coordinates using the WGS84 projection are preferred; if you use another projection please note it (this information corresponds to the information presented in column No.2 of form 1).
- 3. Community or port(s) of landing:** Indicate the place or port of landing used by the fleet involved in the fishery (column No. 3, form 1).
- 4. Target Species:** Place the scientific and common names of the species towards which the fishing efforts are geared (corresponds to column No.5 of form 1).
- 5. Net type and its use:** In this field write the type of fishing net used that interacts with sea turtles and how it is used (corresponds to column No.4 of form 1). In order for their characterization, it is requested that one of the following descriptions (abbreviations) be used:

-Set gillnets (fixed to the bottom by an anchor) GNS

-Drifting gillnets (not connected to the bottom) GND

-Fixed gillnets (on stakes or staked to the bottom) GNF

-Drifting trammel nets (two or three panels) TND

-Set trammel nets (fixed to the bottom by an anchor) TNS

-Fixed trammel nets (on stakes or staked to the bottom) TNF

-Combined set trammel nets-gillnets GTNS

-Combined drifting trammel nets-gillnets GTND

-Combined fixed trammel nets-gillnets GTNF

-Drifting entangling nets END

-Set entangling nets ENS

-Fixed entangling nets GEF

-Encircling gillnets GNC

How it is used: refers to the location of where the net is placed in the water column

- **Surface (S):** the top rope (float line or cork line) is near the surface of the water or at a depth of less than one meter below it.

- **Midwater (M):** the top rope (float line or cork line) is always below the surface of the water at a depth of at least one meter or more and the weighted bottom rope, or the inferior end of the net, is always separated from the bottom by a distance of at least one meter or more.

- **Bottom (F):** the weighted bottom rope, or inferior end of the net, is less than one meter from the bottom of the sea.

For example, if the fishing gear used is a drifting gillnet in midwater, its abbreviation for net type would be written as GND-M.

6. Net Characteristics:

Length: Since this form provides information collected from form 2, fill in: **Max:** the length of the longest net, in meters; **Min:** the length of the shortest net, in meters; **Avg:** note the average length of the nets measured as the length of the rope where the netting hangs from (where the net is mounted), in meters.

Depth: fill in: **Max:** the height of the tallest net, in meters; **Min:** note the shortest height recorded in the net measurements, in meters; **Avg:** note the average height of the nets is the height of the net in meters, measured as the length of the tie-downs (rope that holds the net perpendicular to the top and bottom ropes) when used, or the working depth of the netting panel (without stretching the mesh).

Mesh Size (Stretched): The measurement used is the distance (in N direction) between the centers of the two opposite knots (point A and B) of a stretched mesh in the direction that the weave of the panel is used.

7. **Total vessels:** Indicate the total number of vessels that participated in the fishery throughout the year or fishing season (corresponds to the first column of field No. 7 of form 1).

8. **Total trips:** Indicate the total number of fishing trips carried out by all vessels that participated in the fishery throughout the year or fishing season (corresponds to the first column of field No. 7 of form 1).

9. **Trips with onboard observer:** Indicate the number of fishing trips that had an observer onboard during the year or fishing season (this information corresponds to the totals obtained on form 2 for the season).

10. **Fishing effort:** Expressed as the area of net used in the fishing activities over the period of a year or fishing, in squared meters (m^2). In order to simplify the estimation of fishing effort, it is convenient to use a nominal approximation that considers the soak time as constant. Therefore, the effort of one vessel (f_h), is estimated as the product between the area of the net used by this vessel (∂_h) and the total number of fishing sets it made (ℓ_h) during the fishing season or year.

Total effort (f_N): is estimated as the sum of the fishing efforts of all vessels participating during the fishing season or year.

$$f_N = \sum_{i=1}^{i=N} f_h ; \text{ where effort } f_h = (\partial_h) * (\ell_h) ; \text{ The total number of fishing sets made}$$

by a vessel during the fishing season or year (ℓ_h), is estimated as the product between the total number of trips made by the vessel during the fishing season or year and the average number of sets made by the vessel on its trips with an observer during the same season or year. If the average number of sets cannot be estimated for one vessel use the estimated average number of sets per fishing trip that had an observer for the entire fleet during the season or year.

∂_h = (net length) x (net depth)

i = fishing trip

N = total number of fishing trips made by the fleet(s)

n = number of fishing trips made with a scientific observer onboard

ℓ_{nhi} = number of sets made by the vessel h on trip i with an onboard observer

$\bar{\ell}_{nh}$ = average number of fishing sets made by one vessel on the trips with a scientific observer onboard is estimated as the sum of all fishing sets made by the vessel h during the fishing trips made with a scientific observer onboard, divided by the number of fishing trips made by this vessel with a scientific observer onboard during the fishing season or year.

$$\bar{\ell}_{nh} = \frac{1}{n_h} \sum_{i=1}^{i=n} \ell_{nhi}$$

$\bar{\ell}_n$ = Average number of sets made by the fleet during the trips with a scientific observer onboard is estimated as the sum of all fishing sets made by the fleet on the trips with a scientific observer onboard, divided by the total number of fishing trips made by the fleet with a scientific observer onboard during the fishing season or year.

$$\bar{\ell}_n = \frac{1}{n} \sum_{i=1}^{i=n} \ell_{nhi}$$

11. Observed effort: The observed fishing effort (f_n) corresponds to the sum of the efforts applied on the trips made with an onboard observer.

$$f_n = \sum_{i=1}^{i=n} f_{nhi}; \quad f_{nhi} = (\partial_h) * \sum \ell_{nhi}$$

12. Sea turtle species (scientific and common name): Obtain the scientific and write the common name of the species reported.

13. Release status of live turtles:

Unharmed: indicate the number of turtles released unharmed

Injured: the number of injured turtles released

CCL: record the minimum, maximum and average CCL reported for each species of unharmed and injured turtles.

14. Fate of dead turtles:

Onboard: indicate the number of dead turtles kept onboard for any reason

Discarded: indicate the number of dead turtles discarded at sea

CCL: record the minimum, maximum and average CCL reported for each species of dead turtles left onboard or discarded.

Form 1: Baseline Data on All Types of Fisheries Interacting with Sea Turtles

Name of Information Collector: _____ Organization: _____ Date: _____

Please return this form to the IAC Pro Tempore Secretariat for the IAC Subsidiary bodies to use.

(1) Country	(2) Fishing Area (polygon coordinates)	(3) Community/ Port of Landing	(4) Type of Fishing Gear and its Use (Ex. GNS-M)	(5) Target species		(6) Species of Sea Turtles Captured			(7) Characteristics of the Fleet			
				Scientific Name	Common Name	Cc	Dc	Lk	Cm	Ei	Lo	NN
						Cc		Cm				Max.
						Dc		Ei				Avg.
						Lk		Lo				Min.
								NN				
						Cc		Cm				Max.
						Dc		Ei				Avg.
						Lk		Lo				Min.
								NN				
						Cc		Cm				Max.
						Dc		Ei				Avg.
						Lk		Lo				Min.
								NN				
						Cc		Cm				Max.
						Dc		Ei				Avg.
						Lk		Lo				Min.
								NN				

Form 2: Data Collected Onboard Gillnet Fishing Vessels

(1) Vessel Name	(2) Registration No.	(3) No. of Crew	(4) Departure: dd/mm/yy	(5) Arrival: dd/mm/yy		
(6) Captain or Skipper		(7) Net Type and its Use (Ex. GNS-M)		(8) Observer		
(9) Length (meters)		(10) Depth (meters)		(11) Stretched Mesh Size (centimeters)		
(12) Target Species				(13) Set No.		
Scientific Name		Common Name				
	(14) Setting		(15) Haul Back			
	Start	End	Start	End		
Latitude						
Longitude						
Date						
Time						
(16) Length of flag lines (meters)		(17) Reference Point on Land / Fishing Spot				
(18) Sea Turtle Species		(19) Release status live turtles		(20) Fate of Dead Turtles		(21) CCL
Scientific Name	Common Name	Unharmd	Injured	Onboard	Discarded	
(22) Observations (include here: species, Tag No. ect.)						

Form 3: General Information on Vessels Reporting Interactions with Sea Turtles

Name of Information Collector: _____ Organization: _____ Date: _____

(1) Vessel Name	(2) Registration Number	(3) Length of Vessel (meters)	(4) Hull Material	(5) Year Constructed	(6) Type of Engine and Horsepower	(7) Load Capacity (ton)	(8) Electronic Equipment for Fishing and Navigation	(9) No. of Crew Members (max and min)

Form 4: Synthesis of Information Collected on Gillnet Fisheries that Interact with Sea Turtles

(1) Country		Respondant		Organization		Date	
(2) Fishing Area (polygon coordinates)		(3) Community or Ports of Landing		(4) Target Species		(5) Net type and its Use (Ex. GND-M)	
				Scientific Name	Common Name		
(6) Net Characteristics				(7) Total Vessels			
Length (meters)		Depth (meters)		Mesh size (cm)		(8) Total Trips	
Max		Max		(9) Trips with onboard observer			
Min		Min					
Avg				(10) Fishing Effort			
				Total Effort			
(11) Sea Turtle Species		(12) Release status live turtles	Number	CCL (Min/Max/Avg)	(13) Fate of Dead Turtles	Number	CCL (Min/Max/Avg)
Scientific Name	Common Name						
<i>Caretta caretta</i>		Unharm			Onboard		
		Injured			Discarded		
<i>Chelonia mydas</i>		Unharm			Onboard		
		Injured			Discarded		
<i>Dermochelys coriacea</i>		Unharm			Onboard		
		Injured			Discarded		
<i>Eretmochelys imbricata</i>		Unharm			Onboard		
		Injured			Discarded		
<i>Lepidochelys olivacea</i>		Unharm			Onboard		
		Injured			Discarded		
<i>Lepidochelys kempii</i>		Unharm			Onboard		
		Injured			Discarded		
Species Not Identified		Unharm			Onboard		
		Injured			Discarded		

Please return this form to the IAC Pro Tempore Secretariat for the IAC Subsidiary bodies to use.