Inter-American Convention for the Protection and Conservation of Sea Turtles
XI Meeting of the Scientific Committee
Lima, Peru
September 24-26, 2014

CIT-CC11-2014-Doc.7

Report of the Eleventh Meeting of the IAC Scientific Committee

1. Opening Remarks and Welcome

The Eleventh Meeting of the Scientific Committee (SC11) of the American Convention for the Protection and Conservation of Sea Turtles (IAC) was held in the auditorium of the "Dirección de Hidrografía y Navegación de la Marina de Guerra de Perú" in Lima, Peru. The welcoming remarks were given by the Contralmirante (r) Germán Vásquez Solís Talavera, Chair of the Board of Directors of the "Instituto del Mar de Perú"(IMARPE), and the opening remarks were dedicated by Ambassador Nicolas Roncagliolo Higueras, the IAC Focal Point from the Ministry of Foreign Affairs.

2. Presentation on Sea Turtles in Peru

Ms. Evelyn Paredes (IMARPE /Peru) gave a presentation about the five species of sea turtles present in Peru. In Peruvian waters, the green turtle is the most abundant and nests on the northern beaches (Tumbes, Sechura, Virrilá, Lobos de Afuera Islands and Paracas Bay), followed by the olive riddley turtle, with increasing population trends. Juvenile loggerhead turtles approach coastal waters to feed, while adults remain offshore. The species southern boundary reaches the Pisco region.

In Peru, sea turtles are threatened by interactions with fisheries, artisanal and industrial, targeted and incidental for human consumption, and accidents with fishing boats; or by interactions with marine debris concentrated by currents. Major leatherback and green turtles fisheries existed until the 1980´s. At present, the Peruvian government is developing an action plan for the conservation of sea turtles. In addition, IMARPE is working on a project to monitor sea turtle abundance, aggregations, morphometrics, epibionts, and feeding habits, both in the northern region (Virrilá Estuary) as well as in the south-central region (Ensenada la Aguada, Paracas). Results are showing greater turtle abundance with higher seawater temperature. Studies are also investigating other sea turtle issues including movement patterns through satellite tracking, genetics, nesting, or bycatch. IMARPE conducts several outreach and awareness activities with the support of the National Forest and Wildlife Service, the Permanent Commission of the South Pacific, and several NGOs such as Ecoceanica, Planet Ocean, and Pro Delphinus among others, mainly in the southern area.

3. Participants Presentation and Election of Rapporteur

The meeting was attended by delegates and scientists from 13 Parties to the IAC (23 participants) with additional representation from the Permanent Commission of the South Pacific (CPPS), and World Wildlife Fund (WWF) as observers (Annex I). Mr. Javier Quiñones (Peru) was selected rapporteur with the assistance of the IAC *Pro Tempore* Secretariat.

4. Agenda Adoption

The agenda was adopted without changes (Annex II).

5. Report from the Chair of the Scientific Committee

Mr. Jorge Zuzunaga summarized inter-sessional activities of the Scientific Committee Working Groups (WG) on the topics of Climate Change, Fisheries Interactions, Strandings, and Annual Reports-Index Beaches. He then mentioned that groups met their goals and documents are included in the SC11 agenda.

6. Report from the IAC *Pro Tempore* Secretariat

Ms. Verónica Cáceres Chamorro provided a summary of the *Pro Tempore* Secretariat activities since the SC10. In her presentation, the following aspects were highlighted:

a) International Cooperation: From October 2013 to September 2014, the following documents were produced: (1) Benefits of Ramsar sites for sea turtles (CIT-RAMSAR), (2) Conservation Status of the Hawksbill Turtles in the Wider Caribbean, Western Atlantic and Eastern Pacific (CIT-CITES), and (3) The importance of *Sargassum* and the Sargasso Sea to the Atlantic Sea Turtles (CIT - Sargasso Sea Alliance). In addition, the Secretariat worked collaboratively with the Convention on the Conservation of Migratory Species of Wild Animals (CMS) on the development of an action plan for the loggerhead turtle (*Caretta caretta*).

b) Financial Resources: Two proposals submitted to the Marine Turtle Conservation Fund (MTCF-USFWS) were granted. The first was to support the IAC meetings and the IAC technical assistant contract. The second was a collaborative project partnering with the Government of Chile to work on the reduction of leatherback incidental captures in the Eastern Pacific. The Secretariat thanked the increasing support being received from the IAC Parties for organization of meetings. Countries were invited to become hosts in future IAC meetings.

c) Support to Inter-sessional Working Groups: the PT Secretariat is currently providing support to 11 IAC Working Groups (SC, CCE, COP).

7. Reports from the Scientific Committee Working Groups

The IAC WG coordinators made their interventions explaining the inter-sessional work undertaken and their achievements.

8. Report of the Seventh Meeting of the Consultative Committee (CCE)

Mr. Paul Hoetjes, chair of the Consultative Committee of Experts CCE presented an overview of the seventh meeting, CCE7. He highlighted the following aspects: a) Analysis of the level of compliance with the IAC Resolutions based on Annual Reports; b) Analysis of the information presented in the Exception requested by Costa Rica; and c) Conservation of the leatherback in the Eastern Pacific.

9. Discussion of the Draft Stranding Protocol

Mr. Didiher Chacon (Costa Rica), coordinator of the Stranding WG talked about the sea turtle strandings in Central America (El Salvador, Nicaragua, Guatemala, and Costa Rica). Hundreds of stranded animals have been reported, with no definitive cause of death. Mortality may be related to

interactions with fisheries (including use of explosives), red tides or other toxins. Stranded animals have edemas, are malnourished, have abscesses and signs of strangulation. The areas of weakness suggested were: a) Lack of a legal framework; b) Little communication among competent organizations, which limits the information exchange; c) lack of human or technological capabilities; d) Lack of protocols; and e) Isolated efforts to handle strandings, usually done by NGO´s. The Stranding WG has developed a draft protocol and recommended that a survey be conducted aimed at characterizing the capacity for handling strandings across the IAC countries.

Brazil proposed that prior to the development of a new protocol, it would be important to analyze existing protocols and experiences in the IAC countries. Once this analysis has concluded then the SC can take a decision on whether a new protocol needs to be developed. Brazil has already given their protocols to the WG for their consideration.

Ecuador agreed that the subject was complex and therefore the WG should continue their analysis.

Argentina added that a protocol is an important step in the process of making a diagnosis, but this issue is broader and recommended developing a comprehensive framework that oriented the IAC actions. He highlighted that the protocol was useful to manage the beach work, and along with the proposed survey by questionnaire, would show the capabilities of the IAC countries to respond to stranding events. Answers from the questionnaire should provide information about needs and asymmetries in the region, and allow appropriate recommendations to be made. Therefore, the survey was a good tool to initiate this work.

***Recommendations**: (a) Preparation of work plan for the Stranding WG with activities and outputs; and (b) Collection of information on capabilities by conducting a survey.*

10. Exceptions

The Costa Rica Delegate presented the exception his country sent to the IAC in the 2014 Annual Report on the harvest of *L. olivacea* at Ostional Beach, and his Government's answer to the question the SC asked prior to the SC11 meeting regarding the methodology utilized to estimate abundance of nesting females. The answer indicated that Costa Rica uses two methods, those based on publications by Chávez-Morera and by Valverde. They requested that they be allowed to use both methods for the next seven years, before deciding which method is the best to monitor olive ridley abundance.

Several delegates discussed how the techniques produce similar population trends of *L. olivacea*, but disagreed in their estimation of the turtle abundance; one consistently arriving at higher estimations than the other. After a debate on this issue in plenary, it was agreed that there was a need to compare both methods as soon as possible by conducting a census and thereby determining which was the most accurate. The SC indicated that conducting the census was important to evaluate the accuracy of both methods used, with the goal being to define the most statistically robust method to be used in the long term to guarantee the reliability of the data utilized in the management of the exception. The recommendations were included in the document CIT-CC11-2014-Doc.2 (Annex III).

***Recommendation:** The document CC11-2014-Doc.2 with the Scientific Committee's recommendations on the Costa Rica exception was approved. This document will be sent to the Consultative Committee of Experts for their consideration.*

Panamá

Mr. Marino Abrego, on behalf of the Panama National Authority of Aquatic Resources (ARAP in Spanish) presented progress on the implementation of recommendations in the CIT-COP6-2013-R1. The delegate explained the legal status of the exception at the Isla de Cañas Wildlife Refuge, as made by the legal departments in ARAP and by the Environment National Authority (ANAM, in Spanish). They explained that the Panama exception does not contradict Resolution COP6-2013-R1 adopted in the IAC COP6. Accordingly, the Resolution Directive Board JD 010-94 does allow turtle egg harvest in this protected area for subsistence of the local community, but only if the extraction is sustainable. However, ANAM has not renewed or established a harvest agreement with the community for the use of the *Lepidochelys olivacea* eggs. ANAM is in the process of developing a management plan for the use of this resource in a manner that ensures its sustainability. The delegate clarified that since 2009, ANAM has not established new regulations, nor has modified any regulation with respect to the harvest of sea turtle eggs at the Isla de Cañas Wildlife Refuge. The harvest of sea turtle eggs in this refuge is being evaluated to determine the need to modify the Resolution that created this protected area pursuant to the IAC Resolution on the Exception. In addition, ANAM is working on the following steps: Developing a local evaluation of the current situation at the Isla de Cañas Wildlife Refuge, implementation of a sea turtle monitoring program, and developing a protocol for the harvest of the sea turtle eggs and improving conditions of the existing turtle hatchery.

***Recommendations**: (a) Panama will send to the IAC Consultative Committee of Experts, as soon as possible, the results of the analysis made by legal advisors of the government authorities ARAP and ANAM where the legal framework for this exception is clarified; and (b) It was requested that Panama continue working in the elaboration of the Management Plan following recommendations in Resolution COP6-2013-R1.*

Guatemala

Ms. Airam Lápez (Guatemala) on behalf of the National Commission of Protected Areas (CONAP, in Spanish) presented a progress report on the implementation of CI-COP6-2013-R1. CONAP has strengthened their conservation actions and protection of sea turtles by updating the National Strategy for the Conservation of Sea Turtles (ENTM, in Spanish), a tool that will guide their actions. Actions included:

- Monitoring the application of Resolution No.01-21-2012, which allows the harvest of *Lepidochelys olivacea* (parlama) eggs only.
- Following up on the training given to the turtle conservation unit managers at turtle hatcheries to improve the management of the parlama eggs they receive.
- Developing guidelines to release parlama neonates as a mechanism for community awareness.
- Improving inter-institutional coordination for patrols aimed at reducing turtle mortality in targeted or incidental fisheries.
- Documenting turtle strandings by filling out forms, and collecting standardized information.
- Supporting the organization of the sea turtle festival, in three turtle hatcheries in the Guatemalan Pacific region (Sipacate, Monterrico and Hawaii).

The SC Chair inquired about Guatemala's compliance with the recommendation from the exceptions resolution for Guatemala on increasing the percentage of eggs donated to the hatcheries. Guatemala responded that 20% of the eggs are currently donated, but in the updated ENTM, an increase to 30% is suggested. They are also doing outreach to "parlameros" aimed at increasing voluntary donations as well.

***Recommendation**: Guatemala should present to the IAC PT Secretariat a copy of the approved National Strategy for the Conservation of Sea Turtles (ENTM) by CONAP Executive Secretariat.*

11. Analysis of Sea Turtle Nesting Abundance 2009-2013

The document entitled "IAC Index Nesting Beach Data Analysis (2009-2013), Final Report" made by. Dr. Jeff Seminoff and his technical assistant Mr. Matt Steinwurtzel was presented by Dr. Yonat Swimmer (USA). The IAC Scientific Committee recognized the value of this first analysis of index beach abundance data 2009-2013 for the different sea turtles species across the IAC countries. The document helps to visualize the abundance variability in nesting beaches, by country and by region, in the last five years. The recommendations of the document were revised and approved in plenary. The SC suggested that this kind of analysis could be prepared periodically, if possible every two years.

The plenary recommended the preparation of a pivot table to facilitate the analysis allowing the database to be easily updated data available in the Annual Reports presented to the IAC. The Brazil delegate offered his collaboration in the development of a tool that can integrate the information and facilitate periodic analysis. The tool will be ready for the next meeting of the SC12.

The chair of the CCE recommended to Honduras and Panama that they provide their nesting abundance data, so that it would be reflected in the next analysis report. Panama expressed difficulties in getting data from certain beaches, especially those managed by ANAM, not by ARAP. The Honduras delegate said that data are available for only two beaches, and it was possible that monitoring would be reduced to only one index beach, a situation that they would report on in time.

***Recommendations**: (a) the document (CIT-CC11-2014-Tec.7) was approved as an IAC technical document and it will be soon available on the Web Page; (b) It is recommended that this work is included in the COP7 meeting as part of the report from the Scientific Committee chair.*

12. Monitoring of Climate Change Parameters in Sea Turtle Habitats

Dr. Julia Horrocks (Caribbean Netherlands) presented the report from the Climate Change WG (CIT-CC11-2014-Doc. 3) (Annex IV) to analyze its recommendations in plenary. The report recommended that relevant environmental data be monitored at index beaches in the IAC countries, including: beach profile, temperature, back beach habitat characteristics, and that beach photographs should be taken to provide a record of beach changes. The importance of collecting environmental information at least twice a year, perhaps at the beginning and at the end of the nesting season, was highlighted. This is because changes in sea turtle population abundance at index beaches is not only affected by harvest or incidental captures, but there may also be a climate component that can influence the distribution of turtle nesting. The document recommended several manuals that describe the methodology for collecting environmental data. The document recommendations were approved in plenary.

***Recommendation**: The report of the Climate Change Working Group will be sent to the IAC Focal Points with the recommendation that it can be used in supporting the implementation of the Climate Change Resolution.*

***Agreement**: the WG comprised by Caribbean Netherlands (coordinator), the United States, Chile, Peru and Brazil will develop a technical document on strategies to mitigate climate change on nesting beaches which will be presented at the SC12.*

13. Marine Debris and its Effects on Sea Turtles

Dr. Diego Albareda (Argentina) presented an informative document on marine debris. The document described the negative impacts that marine debris imposes on sea turtles and mentioned existing international tools available to the IAC for create synergies and increasing support. In particular, the Convention on Conservation of Migratory Species of Wild Animals (CMS), which involves 170 countries worldwide and already has a resolution on this topic was mentioned.

The plenary suggested the completion of this document to include delimitation of the main areas where debris collects and therefore where sea turtles are most likely to interact with marine debris. A map was recommended.

Ecuador: mentioned that this document would be useful in educational campaigns and in generating awareness within the IAC countries.

Chile: said that there is a need to develop a campaign focused on encouraging fishing boats to return to port with their garbage to avoid disposal at sea. Fishermen are aware of the problem and that there are port facilities to collect this garbage. He mentioned the effectiveness of working with community leaders in getting the message to the fishermen.

The IAC chair recommended that the WG define what their contribution will be to existing global efforts on this issue. For instance, mapping of areas where sea turtle/debris interactions may be likely to occur, and providing CMS with information on sea turtle interactions with debris from stranding data.

***Agreement:** To form the WG on marine debris, with the participation of Argentina (coordinator), Caribbean Netherlands, Ecuador and Chile. The WG will use the informative document on marine debris as the basis for an IAC technical document including the SC contributions received in the inter-sessional period about the characterization of this problem in the region.*

***Recommendation**: The SC recommend the COP7 explore possibilities for the establishment of synergies between the IAC and the CMS allowing for collaboration on marine debris topics, avoiding on this way duplication of efforts.*

14. Interactions of Sea Turtles and Fisheries

Recommendations of Manuals for Handling of Sea Turtles on Board Fishing Boats- CIT-CC11-2014-Tec. 8

Dr. Diego Albareda (Argentina) presented the CIT-CC11-2014-Tec. 8 developed by the Fisheries WG for the approval of the Scientific Committee. This document compiled recommendations from six manuals for the management of incidentally captured sea turtles on board fishing boats. It also integrated recommendations made by other conventions, including the Inter-American Tropical Tuna Commission (ITTC), in the development of guidelines and basic procedures to handle incidentally captured sea turtles as a tool for first responders i.e. the fishers. Most of the selected material was developed by institutions from the countries that are Parties of the IAC, and so brings a regional perspective on the interactions of sea turtles and fisheries. It is expected that this

document will help in the implementation of the IAC Resolution "Reduction of Adverse Impacts of Fisheries on Sea Turtles" COP3/2006/R-2.

Chile: Suggested that recommended manuals should be available on the IAC Web Page, so they can be easily accessed. As for now, they are mentioned in the document references only. The uploading of this information may require asking permission of various authors.

***Recommendations**: (a) the document CIT-CC11-2014-Tec.8 was approved as an IAC Technical Document and it will be available on the IAC web Page; (b) Referral of this document to the IAC Focal Points requesting its distribution to the government agencies so this information reaches the stakeholders in the fishery sector; and (c) Request made of Focal Points to inform the Pro Tempore Secretariat of the ways in which they ensured that these technical recommendations reached users.*

15. Marine Turtle Bycatch Mitigation Experiments

In a presentation done by Dr. Yonat Swimmer (United States) (NOAA) and Dr. Joanna Alfaro (Pro-Delphinus) and delegate of CCE, they discussed techniques for reducing bycatch of sea turtles in the hook and line and gillnet fisheries using circle hooks, bait changes, and lighting methods. Eight years of experience with LED lights in Mexico showed a reduction of up to 50% of the total sea turtle catch rate, independent of the type of LED light used. In Peru, after two years of working with green LED lights (there are different colored lights that operate at different wavelengths affecting species differently) installed in nets every 10m, there was a reduction of 20-30% of primarily green sea turtle captures. There was no evidence of bycatch reduction of fish or seabirds, or target species such as flounder, nor that green lights affected rays or sharks. To date, the majority of the experiments have been done in laboratory, so there is need of more testing of the techniques at sea.

The LED lights are imported technology that has a 20% import tax. This increases the cost of saving a turtle, estimated at USD $120-200 per turtle. Costs can be lowered if more countries decide to apply this technology, if agreements are made with manufacturers and trading companies or if local companies manufacture the technologies themselves. There are technologies that can be used to protect different protected species simultaneously, but they still require experimental work. Using GO-PRO cameras, that cost between USD 200-300, is promising for observations as they are small and easily adaptable, and cheaper than having an observer on board, especially when small fishing boats are used. Based on the results of these experiments and because there are limited resources, it is necessary to identify priorities in the use of technologies to reduce bycatch of sea turtles. Some ideas are being explored, for instance the use of acoustic technologies that can disperse several animals, or the local assembly of line cutters and de-hookers to reduce costs and increase effectiveness.

The Caribbean Netherlands asked how the lights are used and installed in the nets. It was explained that the use changes depending on the length of the net and depth at which it fishes. For example in Chile for the sword fish fishery in oceanic waters they use nets that are 1km in length. In those nets, lights are arranged regularly in the net at the surface. For coastal fisheries they use smaller nets to which a string of lights can be attached in the body of the net.

Argentina asked whether different water characteristics could affect the effectiveness of the LED lights. It is believed that they can have an effect, as in the case of Brazil, the LED illumination is ineffective when used in rough or turbid seas.

The United States said that NOAA is willing to collaborate in experiments to mitigate incidental captures with countries that are members of the IAC. This could create new opportunities and would require the Scientific Committee to prepare proposals for joint experiments.

16. Formation of Working Groups

Participants begin their work in groups, according to the following topics: Fisheries and Strandings.

The Fisheries WG is coordinated by Chile (Mr. Francisco Ponce) with the participation of Argentina (Dr. Diego Albareda), Brazil (Mr. Alex dos Santos and Dr. Neca Marcovaldi), Ecuador (Mr. Eduardo Espinoza), Panama (Mr. Marino Abrego), Costa Rica (Mr. Didhier Chacón), Peru (Ms. Evelyn Paredes and Mr. Javier Quiñones), Guatemala (Ms. Airam Lopez), United States (Dr. Yonat Swimmer) and Mr. Miguel Donoso (Advisor-Chile).

The Stranding WG is coordinated by Costa Rica (Mr. Didhier Chacon) with the participation of Argentina (Dr. Diego Albareda), Brazil (Mr. Alex dos Santos and Dr. Neca Marcovaldi), Chile (Mr. Miguel Donoso and Mr. Francisco Ponce), Peru (Ms. Evelyn Paredes), Panama (Mr. Marino Abrego), Guatemala (Ms. Airam Lopez), and United States (Dr. Yonat Swimmer).

17. Scientific Committee Work Plan (2015-2016)

The WG to prepare SC Work Plan (2015-2016) was coordinated by Belize (Mr. Isaias Majil) with the participation of Honduras (Ms. Carolina Montalván), Mexico (Dr. René Márquez), Guatemala (Ms. Airam Lopez), and Caribbean Netherlands (Dr. Julia Horrocks). The WG presented their proposal to the plenary considering contributions from the other WG. The Scientific Committee adopted the Work Plan document CC11-2014-CIT-Doc. 4 (Annex V).

18. Discussion of Results and Working Groups

Each WG coordinator presented its work plan in plenary for consideration.

The Fisheries WG proposed the following activities: a) Chile will report progress on the IAC – Chile project with the Marine Turtle Conservation Fund on characterization of coastal fisheries that interact with the leatherback turtle in Chile, including detailed description of the fishery, identification of areas with frequent interactions, training of fishermen in species identification and release techniques of incidentally captured turtles, and the use of formats for data collection; b) Provide an updated list of TEDs (Turtle Excluder Device) used in the IAC countries; c) Analysis of the interactions of sea turtles with trawl fisheries for species other than crustaceans, and d) Define potential marine habitat for the leatherback turtle.

The Stranding WG proposed the following activities: a) Finalize the questionnaire for characterization of stranding capacity in the IAC region ready for its implementation; b) Based on the questionnaire results, make changes to the draft stranding protocol as necessary; c) Update the directory of e-mails for the WG with the inclusion of new members; d) Analyze the information provided by Brazil on the topic; e) Chile and Costa Rica will develop a flowchart of the steps to follow when a stranding is reported; and f) Prepare a directory of experts on the subject.

The Climate Change WG proposed the preparation of a technical document on strategies to mitigate impacts of climate change on nesting beaches to be prepared during the inter-sessional period and to be presented at the SC12.

The work plan of the Fisheries and Stranding WG CIT-CC11-2014 Doc.5 was approved in plenary (Annex VI). This document contains more detailed activities of these groups.

The Marine Debris WG was formed and it is comprised by Argentina (Dr. Diego Albareda – Coordinator), Caribbean Netherlands (Dr. Julia Horrocks), Ecuador (Mr. Eduardo Espinosa) and Chile (Mr. Francisco Ponce). The WG will prepare a technical document to be presented at the SC12, which will include an analysis of available information on the negative effects of marine debris on sea turtles and characterize this problem in the region. This work will be conducted during the inter-sessional period and will be presented at the SC12.

19. Collaboration with other International Organizations

The *Pro Tempore* Secretariat presented the work carried out within the framework of *Memoranda* of Understanding and other collaborations in the past year. The committee recommended that:

IAC-Ramsar: Continue to encourage the Focal Points of the two conventions to identify common activities as there are 108 Ramsar sites where sea turtles are found. Identify nesting beaches in the Parties of the IAC that may be proposed for listing as potential Ramsar sites. It is recommended to explore the possibility of a side event at the Ramsar COP in June 2016, with the support of the ASO (Sea Turtles Southwestern Atlantic) network on the topic of wetlands and benefits to sea turtles.

IAC-Permanent Commission of the South Pacific (CPPS): Identify issues of common interest, thus the IAC Secretariat can propose future collaboration to CPPS as part of their Coastal and Marine Action Plan on technical assistance and capacity building issues. The CCPS delegate informed the meeting that CPPS can provide technical and financial support to the development of this collaborative work.

IAC-CITES: The SC asked the IAC PT Secretariat to consult with the CITES Secretariat on the possibility of including the report resulting from the CIT-CITES consultancy about the Conservation Status of the Hawksbill in the Wider Caribbean, Western Atlantic and Eastern Pacific Region developed by Dr. Cathi Campbell for discussion at the CITES Animals Committee and/or COP.

IAC-SPAW Protocol: It is recommended that the report on the Conservation Status of Hawksbills be shared with SPAW Protocol executive director with a suggestion for this to be discussed at SPAW COP (8-9 December / 2014). The Caribbean Netherland (Focal Point), Belize and Panama will support the request for the inclusion of this document in the meeting agenda.

IAC-CMS: IAC is recommended to explore synergies with CMS on the issue of marine debris, since they already have a resolution and is a good opportunity to join forces.

Delegates of the Scientific Committee agreed to ask their respective Focal Points to include issues of IAC interest at the different international conventions and meetings they participate in. In particular, it was recommended that illegal trade of sea turtles be an issue discussed in the SPAW COP to be held in December 2014.

20. Agenda Items for the Seventh IAC Conference of the Parties (COP 7)

It was recommended that in the COP7 agenda the document "IAC Data Analysis for Index Nesting Beaches (2009-2013)" (CIT-CC11-2014-Tec.7) should be included as part of the report of the chair of the SC. On the subject of relations with other international organizations, it was recommended to

the COP7 that synergies be explored between IAC and CMS on issues related to the *Caretta Caretta* Action Plan and impacts of marine debris.

21. Other Issues

No other issues for discussion were proposed.

22. Approval of Recommendations and Agreements of the CC11

The document Recommendations and Agreements CC11 (CIT-CC11-2014-Doc.6) (Annex VII) was adopted in plenary.

23. Election of Chairman and Vice Chairman and Hosting of the Next SC Meeting

Dr. Diego Albareda (Argentina) was elected as the Chairman of the Scientific Committee and Mr. Francisco Ponce (Chile) as Vice Chair. Their positions would remain valid for two years or two meetings (SC12 and SC13).

The Government of Chile offered to host the Twelfth Scientific Committee meeting, in the city of Viña del Mar. The proposal was welcomed and accepted.

24. Closing

After completing all agenda items, the meeting was adjourned with closing remarks from Mr. Jorge Zuzunaga and the IAC Secretary. Delegates expressed their appreciation for the excellent work done by the SC chair during the past four years and thanked the hosts for their warm hospitality. The hosts provided a closing cocktail where the new collaboration between IMARPE and the "Research Laboratory Peru-Korea in Science and Marine Technology for Latin America (KOPELAR)" was presented. This is a new opportunity that could lead to future collaborative work with the IAC.

ANNEXES

ANNEX I. Participants List CIT-CC11-2014-Inf. 1

Country	Name	Institution	E-mail
Delegates			
Argentina	Diego Alejandro Albareda	Programa Regional de Investigación y Conservación de Tortugas Marinas en Argentina PRICTMA	diego.albareda@gmail.com
Belize	Isaias Majil	Marine Protected Areas Coordinator Fisheries Department	isaiasmajil@yahoo.com
Brazil	Maria Angela Marcovaldi	Fundación Proyecto TAMAR	neca@tamar.org.br
	Alexsandro Santana dos Santos	ICBBio/Tamar	alex@tamar.org.br
Chile	Francisco Ronaldo Ponce Martínez	Unidad Biodiversidad y Patrimonio Acuático División Administración Pesquera Subsecretaría de Pesca y Acuicultura	franciscoponce@subpesca.cl
	Miguel Donoso (Advisor)	Pacífico Laud	seaturtle@vtr.net
Costa Rica	Didihier Chácon	Widecast- Latinamerica Executive Director	dchacon@widecast.org
Ecuador	Eduardo Espinoza Herrera	Galapagos National Park	eespinoza@spng.org.ec
United States	Yonat Swimmer	Fishery Research Biologist NOAA NMFS PIFSC	yonat.swimmer@noaa.gov
Guatemala	Airam Lopez Roulet	Recursos Hidrobiológicos Departamento Vida Silvestre CONAP	aroulet@conap.gob.gt
Honduras	Carolina Montalvan	Technician at the Secretariat of Natural Resources and Environment	carolmontalvan1568@gmail.com
México	René Sigfrido Márquez	Scientific Committee Vice-chair	lkempii@prodigy.net.mx
Caribbean Netherlands	Julia Anne Horrocks	University of the West Indies	julia.horrocks@cavehill.uwi.edu
Panama	Marino Eugenio Abrego	Autoridad de los Recursos Acuáticos de Panamá	meabrego0303@yahoo.es
Peru	Jorge Zuzunaga	Instituto del Mar del Perú Presidente del Comité Científico	jzuzunaga@imarpe.gob.pe
	Evelyn Paredes	Instituto del Mar del Perú	eparedes@imarpe.gob.pe
	Javier Quiñones	Instituto del Mar del Perú	jquinones@imarpe.gob.pe

Consultative Committee of Experts IAC			
Caribbean Netherlands	Paul Hoetjes	Ministry of Economic Affairs Chair of the Consultative Committee of Experts	paul.hoetjes@rijksdienstcn.com
Sectoral ONG	Joanna Alfaro	Pro Delphinus/ Sectoral Member of the Consultative Committee	joga201@exeter.ac.uk jas_26@yahoo.com
Observers and International Organizations			
Ecuador	Hector Huerta	Permanent Commission e del Pacífico Sur- CPPS	hhuerta@cpps-int.org
Peru	Luis Taipe	Ministerio de la Producción Produce	ltaipe@produce.gob.pe
Peru	Samuel Amoros	Word Wildlife Fund for Nature – WWF - Peru	samuel.amoros@wwfperu.org
***Pro Tempore* Secretariat**			
	Verónica Cáceres	*Pro Tempore* Secretary	secretario@iacseaturtle.org
	Martha Prada	Technical Assistant	mprada.cit@gmail.com

ANNEX II. Agenda CIT-CC11-2014-Doc. 1

Time	***Agenda Item***	***Presenter***
	Day 1	
8:30 am	Participant registration	
9:00	1. Welcome and opening remarks	Calm. (r) Germán Vásquez Solís Talavera Chairman of IMARPE Board of Directors Emb. Nicolás Roncagliolo Higueras- IAC Focal Point
	2. Presentation Sea Turtles Peru	Evelyn Paredes, IMARPE
	3. Introduction of participants and election of meeting rapporteur	Jorge Zuzunaga, SC Chairman
	4. Adoption of the agenda CIT-CC11-2014-Doc.1	
	5. Report from the Chair of the IAC Scientific Committee	
10:15	**Coffee break**	
10:30	6. Report on activities of the Secretariat *Pro Tempore*	Verónica Cáceres Secretary PT
11:00	7. Reports on inter-sessional activities of the Committee a. Fisheries WG b. Stranding WG c. Nesting Abundance /Annual Report WG d. Climate Change WG	WG Coordinators (Chile, Costa Rica, USA, Netherlands, México)

	e. IAC-RAMSAR WG	
12:30 pm	**Lunch**	
1:30	8. Report of the of 7th IAC Consultative Committee Meeting and discussions of recommendations to SC	Paul Hoetjes, CCE Chairman
2:00	9. Sea Turtle Stranding Protocol discussion CIT-CC11-2014-Doc.Strandings	Costa Rica Delegate
3:00	**Coffee break**	
3:15	10. Presentation of Exceptions a. Review exceptions presented by Costa Rica in 2014 Annual report b. Review recommendations of the Consultative Committee c. Prepare recommendation to Consultative Committee and COP7 CIT-CC11-2014-Doc.2 d. Report on implementation of exceptions (Panama, Guatemala)	SC Chairman/Plenary Panamá Delegate Guatemala Delegate
4:15	11. Nesting abundance analysis 2009-2013 CIT-CC11-2014-Tec. 7	Dr. Yonat Swimmer, USA Delegate
5:00	Meeting Adjourns	

	Day 2	
9:00 am	12. Parameters to monitor climate change on sea turtle habitats CIT-CC11-2014-Doc. 3	Dr. Julia Horrocks, Netherlands Delegate
9:30	13. Marine Debris and Sea Turtles discussion CIT-CC11-2014-Doc.Marine Debris	Dr. Diego Albareda, Argentina Delegate
10:00	14. Fisheries Interactions discussion Recommendation of Best Practices Manuals for incidentally caught Sea turtles CIT-CC11-2014-Tec.8	Dr. Diego Albareda, Argentina Delegate
10:30	**Coffee break**	
10:45	15. Presentation Sea turtle bycatch mitigation experiments	Dr. Yonat Swimmer, and Dr. Joanna Alfaro (CCE)
11:00	16. Working groups by topic. a) Exceptions b) Fisheries c) Strandings d) SC Work Plan 2015 e) Marine Debris f) Annual Report WG (Review 2014 reports)	
12:30 pm	**Lunch**	
1:30	Working Groups continue	
3:00	**Coffee Break**	
3:30	17. Update the SC Work Plan (2015) CIT-CC11-2014-Doc. 4	SC Chairman/Plenary
4:00	18. Discussion of preliminary recommendations from working groups	WG Rapporteurs
5:00	Meeting Adjourns	

	Day 3	
9:00 am	19. Working groups present results and final recommendations CIT-CC11-2014-Doc.5 *The meeting is invited to make recommendations to COP as necessary.* **Coffee Break 10:15 am**	WG Rapporteurs
11:30	20. Collaboration with other International Organizations a. Presentation on results of IAC-CITES consultancy on Status of Hawksbill Turtles in the Wider Caribbean/Western Atlantic and Eastern Pacific b. Presentation Concept note IAC –Sargasso Sea Alliance	IAC Secretariat PT
12:30 pm	**Lunch**	
1:30	21. Propose COP7 agenda items	SC Chairman
2:00	22. Other business	
3:00	**Coffee break**	
3:15	23. Adopt SC11 recommendations and agreements CIT-CC11-2014-Doc.6	Plenary
4:15	24. Preparation of next meeting (SC12) -Election of Chair and Vice Chair - Propose locations and dates	Plenary
5:00	25. Closing remarks	SC Chairman

ANNEX III. Recommendations on Exceptions for Costa Rica CIT-CC11-2014-Doc.2

CIT-CC11-2014-Doc.2

RECOMMENDATIONS ON EXCEPTIONS UNDER ARTICLE IV (3A AND B) FOR SUBSISTENCE HARVESTING OF *Lepidochelys olivacea* EGGS IN COSTA RICA

Recalling that Article IV of the Convention, paragraph 2a states that the Parties have prohibited the intentional capture, retention or killing of, and domestic trade in, sea turtles, their eggs, parts or products;

Further recalling that Article IV, paragraph 3a states that each Party may allow exceptions to satisfy economic subsistence needs of traditional communities, taking into account the recommendations of the Consultative Committee of Experts established pursuant to Article VII, provided that such exceptions do not undermine efforts to achieve the objective of this Convention;

Noting that at the fifth Conference of Parties that procedures for cases where exceptions exist were adopted (CIT-COP5-2011-R2);

Considering that *Lepidochelys olivacea* is classified as vulnerable, a status recently given to the species by the IUCN;

Acknowledging that all other species of sea turtles classified as "endangered, vulnerable and critically endangered" must be protected from any negative impacts resulting from an exception;

Recognizing that *Lepidochelys olivacea* on the beaches of the Eastern Pacific Ocean (Mexico to Panama) is the only turtle species that can tolerate a carefully controlled amount of egg harvesting, and only when the population to be harvested has demonstrated a status of "*recovery or verifiable stability*;*"*

Considering that this exception existed prior to Costa Rica becoming a party of the IAC, and today remains under the control of the different relevant governmental organizations;

Considering that the review of the IAC Scientific Committee in their 11th meeting and the IAC Consultative Committee of Experts in their 7th meeting revealed that Costa Rica presented well organized technical information in its 2014 Annual Report with a five year plan to manage this exception.

The IAC Scientific Committee makes the following recommendation to Costa Rica on its exception:

MEASURES RECOMMENDED TO COSTA RICA TO MEET THE REQUIREMENTS OF ARTICLE IV (3) REGARDING EXCEPTIONS:

After reading the report on the exception and the results presented in the Five Year Plan the following recommendations are made:

1) Due to the need to select one standardized sampling method to quantify the nesting population at Ostional Beach, and considering that this method has not yet been defined in the Five Year Plan submitted by Costa Rica, it is recommended that a census be conducted to assess the accuracy and precision of the two methods currently used (methods Chávez- Morera and Valverde) in order to choose the most statistically robust one to be used in the long-term to manage the exception. It is requested that Costa Rica provide a report with the results of this study to the IAC Scientific Committee within a maximum of two years.

2) It is recommended that while results from the aforementioned study are being obtained, Costa Rica continue to manage its exception as described in the Five Year Plan.

3) The Scientific Committee recognizes Costa Rica's leadership in the region in its management of the legal harvest of *L. olivacea* eggs in Ostional over a period of several years. However, the exception for the legal egg harvest may limit/undermine efforts to meet the objectives of the Convention because of the opportunities it provides for the illegal trade of eggs from other *L. olivacea* populations and from other sea turtle species. The Scientific Committee therefore recommends that Costa Rica develop and use a chain of custody of eggs from the beach to the final consumer. Developing such appropriate methodology for post-harvest management could then be shared with other countries with exceptions, and those that may request exceptions in the future, and that potentially face similar challenges with illegal trade.

4) It is recommended to monitor additional indicators to determine the status of the nesting population of Ostional olive ridleys and to determine the impact of the egg harvest on it. These indicators should include at minimum those suggested in the IAC nesting beach manual including: number of neonates (a recruitment index), number of viable clutches, and percent of non-viable clutches.

ANNEX IV. Parameters to Monitor Climate Change in Sea turtle Habitats CIT-CC11-2014-Doc. 3

CIT-CC11-2014-Doc. 3

PARAMETERS TO MONITOR CLIMATE CHANGE IN SEA TURTLE HABITATS

Report of the Climate Change Working Group IAC Scientific Committee (2013-14)
Prepared by Dr. Julia Horrocks (WG Coordinator, Caribbean Netherlands)

Background

A Resolution on adaptation of sea turtle habitats to climate change (CIT-COP4-2009-R5) was passed by COP4. This Resolution was identified by the CCE as the Resolution with the lowest level of compliance, leading to an inter-sessional working group being established on this topic. The Working Group members are currently Brazil, the Caribbean Netherlands (Dr. Julia Horrocks, Coordinator), Chile, Peru and the USA.

The first three tasks of the WG were to 1) Review the six Actions upon which information is currently requested in the Resolution Action Table as well as the instructions for completion of the Action Table, to see whether information being requested from the Parties was clear or needed to be clarified, 2) Review what kinds of information Parties have been submitting through examination of Annual reports for 2011-2013 for all Parties, specifically comparing information provided in Part III Threats section of the Annual Report with the responses to Actions in regard to the Resolution 5, and 3) Develop a list of specific parameters that can be included in the Action Table so that Parties can indicate whether or not they are collecting data on them. This work was finalized at the 10th SC meeting leading to recommended revisions of the Action Table for Resolution 5 (CIT-CC10-2013-Doc.5) which were included in the 2014 IAC Annual Report.

Inter-sessional work of the WG after SC10

Task 4 was to assess whether Parties are collecting habitat data that could be used by the SC to monitor trends in climate change impacts on index nesting beaches and foraging grounds, and whether these data could be incorporated into Tables 2 and 3 of the Annual Reports. Because index foraging grounds are not yet listed for the Parties, unlike index beaches, the task for this inter-sessional period was restricted to environmental data on nesting beaches.

The rationale behind Task 4 of the Climate Change Working Group work plan was to examine whether a recommendation should be made for Parties to report on environmental characteristics of the index nesting sites where they are monitoring populations of sea turtles, in a format that will allow investigation of trends of climate change impacts on index site quality. There are already recommended strategies for mitigation of impacts of temperature increases and sea level rise which rely on information on ecological characteristics of nest sites for implementation (e.g. see Fuentes et al 2012). Several Party countries have already indicated that climate change is affecting sea turtles and their habitats in their national reports (Threats Section III) and several countries have indicated that they are conducting research and monitoring in particular areas "to improve knowledge of the effects on, and vulnerability of sea turtles and their habitats, to climate change" (Action Table for R5). However, there is currently no opportunity in the Annual Reports for countries to provide summary data on an annual basis to permit analysis. Other countries report that they are not

collecting any environmental data at their index sites, but if provided with recommendations on what to collect and how, may decide to do so in the future.

1. Preparation of Habitat Data table

As a first step in the WG's work, it was proposed that Parties provide feedback on what habitat data they already collect at index beach sites and what methods they use, including brief details on techniques followed or manuals used. To obtain this information, a table of possible environmental parameters that Parties may collect data on was prepared by the WG (Habitat Data Table; see below) and circulated to the Focal Points by the Secretariat. Argentina, Chile, Peru, Brazil, the Caribbean Netherlands and the United States responded. Argentina, Chile and Peru do not collect these types of data because they do not have nesting beaches. Brazil and the Caribbean Netherlands completed the tables. The USA was still working on preparing the information at the time this report was submitted to the Secretariat.

Please place an X in the answer that applies to your index nesting beach

PLEASE INDICATE IF YOU ALREADY RECORD ANY OF THE FOLLOWING TYPES OF INFORMATION THAT MAY BE RELEVANT TO MONITOR IMPACTS OF CLIMATE CHANGE ON YOUR INDEX BEACH(ES)?

COUNTRY:			**If Yes, how often?**		
	YES	**NO**	**Annually**	**Periodically**	**Brief methodology/Reference manual used**
I. Physical features of the index beach					
Examples provided; add others as needed					
Beach slope*	x			x	
Beach width**					
Beach elevation***	x			x	
Beach erosion/accretion^					
Sand colour					
Sand particle/granule size					
Sand temperature					
Sand compaction					
Vegetation area/cover					
Vegetation identification	x		x		
Linear extent of coastal development along beach (hotels, condos, roads, port)	NA				
Linear extent of sea defences along beach (e.g. sea walls, gabions etc)	NA				
Nearshore water quality (nitrates, phosphates, SPM etc)					
Wave height/frequency					
Current speed/direction					
Aerial photography					
Other					
II. Parameters that are influenced by the physical features of the nesting beach					
Examples provided; add others as needed					
Frequency of false crawls relative to successful nests	x		x		
Frequency of nest inundation due to tidal surge	x		x		
Frequency of nests relocated due to threat of tidal surge/erosion	x		x		
Sex ratio of clutch					
Other					
III. Climatic conditions at index beach					
Examples provided; add others as needed					
Number of climatic events that cause high sea swells (e.g. hurricanes, storms)	x		x		
Rainfall					
Air temperature					
Other					

Definitions of terms

*The beach face or foreshore measured as an angle relative to horizontal.

**Distance from the mean high tide line either to the start of the beach vegetation line or to the landward edge of the beach, measured at right angles to the shoreline

***Vertical height between low water mark and sand surface on backshore

^Often measured as the distance from a fixed object behind the beach (tree, building) to the high water mark, at right angles to the shoreline

2. Review of Habitat Data tables

The responses were illustrative of several issues and the comments below relate to these.

The Focal Points appeared to have sought information from sea turtle projects working on the index beaches, rather than expanding the search to coastal zone agencies within their countries that may routinely monitor environmental characteristics on particular beaches.

Parties to the IAC do vary in the number of index beaches monitored and this is likely to influence how many nesting beaches have environmental monitoring (e.g. Brazil has 18 index beaches while the Caribbean Netherlands has 2).

Some of the parameters listed were measured, but periodically rather than on a regular basis, at specific locations only and often incorporated into individual studies or student theses. These periodic studies are useful in that they provide a "snap shot" or baseline of beach condition for later comparisons.

Some of the parameters listed did not require regular monitoring e.g. sand color, sand particle size. Others are most useful if they are done at the same time interval in the same way, e.g. beach slope, beach width, sand temperature.

Data on some parameters may not have been recorded because they were not considered to be relevant e.g. extent of sea defenses on beaches within protected areas, or because they require more expensive equipment e.g. temperature dataloggers.

Data on ratio of false crawls to successful nests and nest fate inundation were collected as part of existing monitoring programmes. The former may be a useful behavioral indicator of change in index beach habitat quality, and both are indicative of coastal erosion.

3. Consultation with Dr. Marianne Fish from WWF's Adaptation to Climate change for marine Turtles (ACT) Project

Dr. Fish made a Webinar presentation to the Working Group on the ACT project on March 2013, followed up with a Skype meeting with the WG Chair (April 14, 2014). Dr. Fish recommended several technical manuals (see below), the URLs for which were circulated by the Secretariat to members of the Working Group for their review.

Guidelines for Monitoring Beach Profiles
Fish, M.R. 2011. Guidelines for monitoring beach profiles. WWF, San Jose, 16 pp

Sandwatch Manual
UNESCO. 2010. Sandwatch: adapting to climate change and educating for sustainable development. Paris: UNESCO (Available in Spanish, English, Portuguese and French).

Sea Turtle Nesting Beach Characterization Manual
Varela-Acevedo, Elda, Karen L. Eckert, Scott A. Eckert, Gillian Cambers and Julia A. Horrocks. 2009. Sea Turtle Nesting Beach Characterization Manual, p.46-97. In:Examining the Effects of Changing Coastline Processes on Hawksbill Sea Turtle (*Eretmochelys imbricata*) Nesting Habitat, Master's Project, Nicholas School of the Environment and Earth Sciences, Duke University. Beaufort, N. Carolina USA. 97 pp.

Temperature Monitoring Manual
Baker-Gallegos J., M.R. Fish & C. Drews. 2009. Temperature monitoring manual. Guidelines for Monitoring Sand and Incubation Temperatures on Sea Turtle Nesting Beaches. WWF report, San José, pp. 16

Dr. Fish was asked to recommend the minimum data that IAC Parties should aim to record on their index beaches, how often the data should be collected, and what methods should be used. Based on her comments and a review of the manuals, the following draft recommendations were prepared.

4. Recommendations for collection of environmental data relevant to monitoring of index beach habitats

Environmental data:

Beach profiles

Beach profiles can be used to measure *slope* and *beach width*. Beach width is a simple measure of sand accretion and erosion.

Permanent reference markers (i.e. trees, or structures located high enough above the beach to be unaffected by the highest storm tides) should be established to ensure that profiles are measured at exactly the same point along a pre-set compass heading perpendicular to the sea to allow comparison over time.

Either the Emery method or the Abney method for beach slope can be used, as they are comparable with each other. Ideally, Parties should choose one method and use it consistently at a particular location.

The number of transects should be influenced by how dynamic the beach is. If it is a stable beach, one transect per kilometer would be sufficient, if it is an unstable beach, more frequent transects would be needed.

The number of transects chosen and the frequency should be based on the resources available.

Parties with index beaches on the Atlantic and Pacific coasts should establish environmental monitoring at beaches on both coasts.

Temperature

Temperature readings should be taken along the same permanent transect(s) established above.

Sand temperatures should be taken at the sand surface and at average nest depth. Air temperature should be taken 1-1.5 m above the sand surface.

Back beach habitat characteristics

What is behind the beach and what % of the back beach is affected should be estimated. Habitat characteristics could include native beach vegetation, mangrove, forest, buildings, sea defenses, road etc.

Photographs of the beach

Beaches should be photo-documented every year.

Frequency of data collection:

Not all index beaches may be monitored on a regular basis, but environmental data of all index beaches should be collected at least once to provide a baseline for subsequent comparison.

For monitored beaches, data should be collected every 3 months, but at least twice per year (e.g. beginning and end of the nesting season or the nest monitoring period).

Manuals:

Both the Abney and Emery methods for beach profiling are clearly explained with useful diagrams in the ACT **Guidelines for Monitoring Beach Profiles.** The **Sandwatch** Manual describes the use of the Abney method for measuring beach slope and it also has a simple programme to plot beach profile data. The Sandwatch manual was primarily designed to quantify how environmental change on beaches will affect coastal communities. Less emphasis was put into the development of tools and methods that might enable a better understanding of how coastline change would affect biodiversity. WIDECAST's **Nesting Beach Characterization Manual** was written to address this and provides a list of rapid assessment techniques for the specific purpose of obtaining data that are useful to characterize nesting beaches (including beach profiling using the Abney method) and evaluate the vulnerability of sea turtle nesting beaches to climate change. The manual includes useful definitions and clearly laid out lists of equipment needed to take measurements. It has now been incorporated into Sandwatch and is available on their website. The ACT **Guidelines for Monitoring Sand and Incubation Temperatures on Sea Turtle Nesting Beaches** provide more specific details on how to set up a beach temperature monitoring programme on a nesting beach. Its objectives are to describe the thermal conditions of the beach and how they are affected by shading, moisture, sand grain size, and albedo *inter alia*, how to standardize the methodology for the collection of temperature data, and provide guidelines on how to establish a temperature monitoring project in hatcheries with a view to promoting collaborative regional data collection efforts.

Although the objectives of these manuals are slightly different, i.e. **Guidelines for Monitoring Beach Profiles** and **Monitoring Sand and Incubation temperatures** are the more specific and technically detailed on establishing monitoring programmes for measuring profiles and temperatures, while the **Sandwatch** manual and the **Nesting Beach Characterization Manual** describe methods to measure profiles and temperature as well as a broader range of characteristics on nesting beaches in a more user-friendly format, they are compatible with each other and all can be recommended. The links for the above mentioned manuals are included in the references section.

5. Incorporation of environmental data reporting into the IAC Annual Reports:

Incorporation of these data into the existing Table 2 (and Table 3 when environmental data to collect at index foraging sites is considered) of the IAC Annual Reports is not likely to be feasible, and may require the development of a new Table. Reporting may also be less frequent than annually, depending on the monitoring programmes.

References

Baker-Gallegos J., M.R. Fish & C. Drews. 2009. Temperature monitoring manual. Guidelines for Monitoring Sand and Incubation Temperatures on Sea Turtle Nesting Beaches. WWF report, San José, pp. 16 http://awsassets.panda.org/downloads/temperature_monitoring__manual.pdf

Fuentes, M.M.P.B., Fish, M.R., and Maynard, J.A. 2012. Management strategies to mitigate the impacts of climate change on sea turtle's terrestrial reproductive phase. **Mitig. Adapt. Strateg. Glob. Change** 17: 51-63.

Fish, M.R. 2011. Guidelines for monitoring beach profiles. WWF, San Jose, 16 pp http://awsassets.panda.org/downloads/beach_profile_monitoring__web_.pdf

Toolkit reports http://www.panda.org/lac/marineturtles/adaptation

UNESCO. 2010. Sandwatch: adapting to climate change and educating for sustainable development. Paris: UNESCO
http://www.sandwatch.ca/images/stories/food/SW%20Docs/Sandwatch%20-%20Spanish%20-%202012.pdf

Varela-Acevedo, Elda, Karen L. Eckert, Scott A. Eckert, Gillian Cambers and Julia A. Horrocks. 2009. Sea Turtle Nesting Beach Characterization Manual, p.46-97. In:Examining the Effects of Changing Coastline Processes on Hawksbill Sea Turtle(Eretmochelys imbricata) Nesting Habitat, Master's Project, Nicholas School of the Environment and Earth Sciences, Duke University. Beaufort, N. Carolina USA. 97 pp.
www.widecast.org/Resources/Docs/Varela-Acevedo_et_al_2009_Nesting_Beach_Characterization_Manual.pdf

ANNEX V. Scientific Committee Work Plan 2015-2016 CIT-CC11-2014-Doc.4

Scientific Committee Work Plan (2015-2016)				
CIT-CC11-2014-Doc.4				
Actor	**Topic**	**Proposed Action**	**Expected Result**	**Timeframe**
Scientific Committee	Exceptions	1) Follow up on the implementation of the recommendations made by CC11 about Costa Rica exception 2) Follow the progress of Guatemala exception 3) Follow the progress of Panama exception	1) Report to CCE on Costa Rica exception. 2) & 3) Report & follow-up on Panama and Guatemala exceptions to the CCE and feedback to the countries, if needed.	2015, 2016
Scientific Committee, Secretariat	Web page & Newsletter	Countries will send Secretariat relevant news on a monthly basis for the IAC Newsletter.	Update the Web page with relevant news and maintain regular publications, newsletter	Permanent /Ongoing
Fisheries WG	Fisheries	1) Send technical document CIT-CC11-2014-Tec.8 with the recommendations of manuals for best handling practices to IAC Focal Points. 2) Request in one year feedback on the mechanism used by the focal points to transfer the recommendations from the document to the pertinent agencies.	1) SC recommends the IAC Parties to use the technical document on recommendation of manuals as a guide in their bycatch mitigation programs. 2) Report from IAC Focal Points describing the mechanism used to transfer this recommendation to relevant agencies and include feedback on the document.	2015, 2016

Fisheries WG	Fisheries	Update list of TEDS´s that have been utilized/approved	Update list of TEDS´s that have been utilized/approved	2015, 2016
Fisheries WG	Fisheries	Characterize interactions of fisheries and sea turtles -IAC Leatherback Project-Chile	Report on the IAC Leatherback Project-Chile presented at the SC12	SC12, 2015
Fisheries WG	Fisheries	Investigate sea turtle interactions of trawl fisheries targeting stocks other than Crustaceans.	Report on the results to be presented at SC12 with recommendations to the IAC Parties	Inter-sessional 2015, 2016
Fisheries WG	Fisheries	Define potential marine habitat for the leatherback turtle in Eastern Pacific and South Western Atlantic	Report on the presence of leatherbacks in EPO and South Western Atlantic marine habitats mapped with geo references data from observers and fisheries	2015
Strandings WG	Strandings	1) Characterize strandings in the IAC region using a survey 2) Develop a regional protocol	1) Finalize the survey to characterize strandings, the Secretariat sends SC members the survey and the working group will make a report with the survey results 2) Develop a stranding protocol to analyze the regional situation which contains a flow diagram for decision making to deal with strandings	Inter-sessional SC12, 2015
Strandings WG	Climate change	Review mitigation strategies to counteract climate change impacts on nesting beaches habitats	Technical document on climate change mitigation strategies to be presented at SC12	Inter-sessional 2015
Marine Debris WG	Marine debris	1) Generate a technical document on marine debris and its impacts on sea turtles based on the requested information from the Scientific Committee	1) Technical document finished. 2) Make recommendation to IAC Focal Points to look for synergies with the Convention of the Migratory Species (CMS) to work collaboratively on marine debris issues	Inter-sessional 2015

Scientific Committee	Conservation status hawksbill-nesting beaches-index beaches	1) Compile annual information of nesting at index beaches using the form developed for this purpose and analyze these data periodically 2) Develop a dynamic table to perform the data analysis 3)Evaluate the conservation status of sea turtle populations in the region, based on best scientific available information.	1)Maintain and update the submitted data in a pivot table 2) Brazil can design the pivot table for this analysis 3) Present the report on analysis of nesting abundance on index beaches 2009-2013 CIT-CC11-2014.Tec.6 at COP7	2015, ongoing
Scientific Committee, Mexico	Collaboration with other organizations	Update information of RAMSAR sites and sea turtles	Report presence of sea turtles in new sites that can be designated as Ramsar sites	2015, 2016
Scientific Committee	Work plan	Update the Scientific Committee work plan following IAC guidelines and COP Resolutions	SC biannual work plan updated with actions, timetable and responsibilities.	2015, 2016
Scientific Committee	Collaboration with other organizations/strategic alliances	Make recommendations to promote synergies and mechanisms for collaborative work with other related organizations to meet the Convention objectives.	1) Include in the SC work plan mechanisms to improve communication and collaboration between IAC Focal Points and those of other international organizations such as SPAW, IATTC, CPPS, Ramsar, CITES. 2) Identification of synergies with similar organizations to share information (SPAW, IATTC, CPPS, WIDECAST, ICCAT, RAMSAR, SWOT, ICAPO, ASO, WWF)	2015, 2016
Scientific Committee	Annual Reports	Analyze technical information included in the Annual Reports	Prepare reports of the analysis of technical information included in IAC Annual Reports whenever is necessary and make recommendations to the IAC Parties	2015, 2016

Scientific Committee	Projects	Make recommendations about high priority projects and search for funding and other resources needed to achieve the IAC objectives.	Recommendations for high priority projects proposed when needed	2015, 2016
Scientific Committee, Secretariat	COP/ CCE recommendations	Address COP and CCE requests and make recommendations accordingly	Make recommendations to the CCE and COP as needed	2015, 2016
Scientific Committee, Secretariat	Expert Directory	Update and maintain an expert directory	Updated directory on IAC web site	2015, 2016

ANNEX VI. Fisheries and Stranding Working Groups Work Plan CIT-CC11-2014-Doc.5

CIT-CC11-2014-Doc.5

REPORTS AND WORK PLAN OF THE IAC WORKING GROUPS

Stranding Working Group

Members of the Working Group: Mr. Didiher Chacón (Costa Rica, Coordinator), Ms. Airam López (Guatemala), Mr. Marino Abrego (Panama), Mr. Alex Santos (Brasil), Dr. Neca Marcovaldi (Brazil), Dr. Diego Albareda (Argentina), Ms. Evelyn Paredes (Perú), Ms. Vanessa Bachmann, Mr. Miguel Donoso (Chile), Mr. Francisco Ponce (Chile), Mr. Javier Quiñones (Perú), USA (Mr. Brian Stacy) and Mr. Eduardo Espinoza (Ecuador).

On September 25, 2014, the group discussed a draft stranding protocol and the survey for characterization of strandings and the following work plan was agreed:

1. Review and edit the stranding characterization survey in a Sub-Committee (Argentina, Panama and Ecuador) within 60 days. The survey will be given to the IAC Secretariat who will send it to be completed by the IAC Scientific Committee members within 45 days. The secretariat will send the answers to the Sub-Committee. At the end of 2014, the Sub-Committee shall deliver the revised survey to the IAC Secretariat and by mid-February, 2015 the Secretariat should receive the answers provided by the Scientific Committee members.
2. By March 2015, the WG will review the survey results and edit the stranding protocol as needed.
3. Update the WG email list with inclusion of the new members, and verify that everyone received the information folder via drop-box.
4. Brazil will provide to the WG relevant information on their existing stranding documents.
5. Chile and Costa Rica (Mr. Francisco Ponce and Mr. Didhier Chacón) will develop a flow diagram (step by step guide to dealing with a stranding) to be included in the stranding protocol to be presented at the SC12.

6. With respect to specific recommendations for the protocol it was determined:
    a. Inclusion of a list of national experts.
    b. Inclusion of an option to indicate information on location of the stranding on a map alternatively to the GPS positioning information.
    c. Inclusion of mechanisms and legal procedures at national level.
7. A report with the survey results will be presented at the SC12.

Fisheries Working Group

Members of the Working Group: Mr. Francisco Ponce (Coordinator, Chile), Mr. Miguel Donoso (Chile), Mr. Didiher Chacón (Costa Rica), Mr. Eduardo Espinoza (Ecuador), Dr. Diego Albareda (Argentina), Ms. Evelyn Paredes, Mr. Javier Quiñones (Perú), Mr. Alexandro Dos Santos (Brazil), Ms. Airam López (Guatemala), Dr. Yonat Swimmer (USA), and Mr. Marino Abrego (Panamá).

Work plan:

1. Finish edits on the technical document CIT-2014.CC11-Tec.8 "Recommendations of Manuals for Handling of Sea Turtles on Board of Fishing Boats" and make it available on the IAC Webpage, along with the manuals recommended. Send document to the IAC Focal Points to be use as a guide and requesting that this information be sent to the relevant agencies in the fisheries sector. Focal Points will be asked through the Secretariat to send information about what was the mechanism used to transfer the information from the document to the relevant agencies and users and to provide their feedback.

Continue the work on interactions of sea turtles and fisheries:

2. Characterize interactions of fisheries and sea turtles (IAC Leatherback Project -Chile)

    i) Generate a detailed description of the fishing gears currently used in artisanal fishing in Chile and the type of fleet used.
    ii) Identify zones of higher interactions and types of interactions among different fishing gears with leatherback turtles.
    iii) Train artisanal fishers in sea turtle species identification, in correct manipulation of leatherback turtles on board of fishing boats, and in release techniques of entangled animals.
    iv) Train artisanal fishermen in the use of forms to collect information about sea turtle captures in the gillnet operations using data forms recommended by the IAC.

3. Keep updated the list of TED´s utilized in the IAC Parties.

4. Investigate sea turtle interactions with trawl fisheries that targets species other than Crustaceans. During Inter-sessional work, the WG Coordinator will prepare the consultation over a 60 day period (January 2015). There will be 15 days to prepare the draft, 15 days for revision by the Fisheries WG, and 30 days to complete the document and submit to the IAC Secretariat. The IAC Secretariat will to consult with the IAC Scientific Committee members, and give them two months prior to the SC meeting for answers.

5. Define potential marine habitat for the leatherback turtle.

Generate a distribution map: To obtain an initial map for leatherback turtles in the South Pacific and Western Atlantic which are foraging areas. Three sources of information will be used:

1. Published data.

2. Compilation of georeference data of interactions of leatherbacks with fisheries.

3. Compilation of georeference leatherback sightings data and data of satellite monitoring available.

The information collection will be done as follows:

Collect available information on leatherback turtle presence within the Eastern Pacific and South Western Atlantic (D. Albareda (Argentina) and Alexandro Dos Santos (Brazil)). The report will be presented at the next SC12.

Georeference interactions of leatherbacks with fisheries using published information (Ms. Evelyn Paredes, Mr. Javier Quiñones (Peru); Mr. Miguel Donoso, Mr. Francisco Ponce (Chile). The results will be presented at the SC12.

Georeference leatherback sightings or data on satellite monitoring using available information; Mr. Eduardo Espinoza (Ecuador) and Mr. Didiher Chacón (Costa Rica). The results will be presented at the SC12.

ANNEX VII. Recommendations and Agreements CC11 CIT-CC11-2014-Doc.6

CIT-CC11-2014-Doc.6
RECOMMENDATIONS AND AGREEMENTS OF THE IAC 11TH SCIENTIFIC COMMITTEE MEETING

Exceptions

1) The document (CIT-CC11-2014-Doc.2) (Annex III, SC 11 Report) with recommendations about Costa Rica exceptions was approved and it will be sent to the Consultative Committee of Experts for its consideration.

2) It was recommended to Panama to continue preparing their management plan according to Resolution CIT-COP6-2013-R1. In regard to the exception legal framework, it was recommended to send the report from Panama's legal advisers to the Consultative Committee of Experts for its consideration.

3) It was recommend to Guatemala to continue with the implementation of their sea turtle strategy and to take the necessary measures to comply with the recommendation on increasing the donation of sea turtle eggs to the turtle hatcheries according to resolution CIT-COP6-2013-R1. It is recommended that hatcheries be mindful to bury complete clutches and to avoid mixing eggs from different clutches.

Sea turtle Stranding

4) The work plan of the Sea Turtle Stranding WG was approved (Annex VI, SC11 Report). New members were added to this group, which is now comprised of: Costa Rica (coordinator), Argentina, Ecuador, United States, Peru, Chile, Panama and Guatemala.

5) It was agreed that the WG will present a report with results on the stranding characterization questionnaire and other tasks at the next Scientific Committee Meeting (SC12).

Climate Change and Sea Turtles

6) The document (CIT-CC11-2014-Doc.3) with recommendations on relevant environmental data to collect for monitoring nesting beach habitats was approved. This information will be sent to the IAC Focal Points (previous consultation with the CCE) with the recommendation to be used as a tool to guide implementation of the Climate Change Resolution CIT-COP-2009-R5.

7) The Climate Change WG will prepare a technical document on climate change mitigation strategies on nesting beaches which will be presented at the next Scientific Committee Meeting (SC12).

Fisheries Interactions with Sea Turtles

8) The document "Recommendations of Manuals for Handling of Sea Turtles on Board of Fishing Boats" (CC11-2014-Tec.8) was approved as a technical document of the Scientific Committee and it will be available on the IAC website including the links to the recommended manuals.

9) Document (CC11-2014-Tec.8) will be sent to the IAC Focal Points with the recommendation to be used as a guide to help implement the IAC Fisheries resolution CIT-COP3-2006-R2, and requesting that this information be sent to the relevant agencies in the fisheries sector. Focal Points will be asked through the Secretariat to send information about what was the mechanism used to transfer the information from the document to the relevant agencies and users and to provide their feedback.

10) The work plan of the Fisheries WG was approved (ANNEX VI, SC11 Report).

IAC Annual Reports and Index Beaches

11) The document "IAC Index Beach Data Analysis (2009-2013)" (CIT-CC11-2014-Tec.7) was approved as a Scientific Committee technical document and it will be available on the IAC website.

12) The Scientific Committee recommends the inclusion of the presentation of this document in the agenda of the 7th IAC Conference of the Parties (COP7) with the objective to show IAC Parties the value of providing information on index beaches in their Annual Reports. The data provided in these reports are essential to the Scientific Committee to analyze sea turtle

population trends and to provide guidance that will help IAC Parties to make informed decisions on sea turtle conservation and management.

13) It was agreed that the members of the Scientific Committee will provide information on index nesting beaches every year at the Scientific Committee meeting (provided that this information was not included in the Annual Report), in order to update the document on nesting abundance periodically (2 years period is recommended).

Marine Debris and their Impacts on Sea Turtles

14) The WG on Marine Debris and its Impacts on Marine Turtles was created. The WG is comprised of Argentina (coordinator), Caribbean Netherlands, Ecuador and Chile.

15) The WG will prepare a technical document on the impact of marine debris on sea turtles to be presented at the SC12. This document will include information on characterization of this problem in the region using information provided inter-sessionally by the Scientific Committee members.

Work Plan 2015-2016

16) The SC11 updated their work plan for the period 2015-2016 (CIT-CC11-2014-Doc.4) including the WG inter-sessional activities below:

Fisheries WG

- Report on Characterization of fisheries that interact with sea turtles in Chile.
- Diagnosis on fisheries interactions with trawl nets that are targeting species other than crustaceans.
- Establish the potential habitat of leatherback turtle with a distribution map.

Climate Change WG

- Technical document on mitigation strategies for nesting beaches.

Sea Tuttle Stranding WG

- Report on the results of the questionnaire on the regional characterization of stranding, identifying needs to provide support to IAC parties on this matter.

Marine Debris WG

- Technical document on impacts of marine debris on sea turtles.

The complete list of SC activities can be found in Annex V and VI, SC11 Report.

Collaboration with Other International Organizations

17) IAC-Ramsar: it is recommended to continue the communications with the Focal Points of both Conventions to identify mutual activities, considering that there are 108 Ramsar sites with sea turtles. It is recommended to continue the update of information on important

nesting beaches in IAC Parties that maybe suggested as potential Ramsar sites. It is suggested to explore possibilities to conduct a side meeting on the topic wetlands and benefits to sea turtles at the 2016 Ramsar COP with the support of ASO Network.

18) IAC-Permanent Commission of the South Pacific (CPPS): the Scientific Committee shall identify issues of common interest in the framework of CPPS Sea turtle Action Plan, so that the IAC Secretariat can make arrangements with CPPS to follow up on the proposal of CPPS coastal and marine action plan for collaboration on capacity building.

19) IAC-CITES: The Scientific Committee request the IAC Secretariat to consult with the CITES Secretariat the possibility of inclusion of the report Conservation Status of Hawksbill turtles prepared by Dr. Cathi Campbell to be discussed at the CITES Animals or COP meeting. The SC needs to provide a clear message about why we are sharing the document with the CITES secretariat and the goal of this outreach.

20) IAC-SPAW Protocol: The Scientific Committee recommends sharing the hawksbill report the with SPAW Protocol Executive Director suggesting that this document be discussed at the SPAW COP (8-9 December 2014). It was agreed that the Focal Points of Caribbean Netherlands, Belize and Panama will request the inclusion of this document in the meeting agenda under the Memorandum of Understanding IAC-SPAW.

21) IAC-CMS: It is recommended to IAC Focal Points at the COP7 they explore possible synergies with the Convention of Migratory Species (CMS) on the topic of Marine Debris, as they have a Resolution on this issue, which provides a good opportunity to work together.

Agenda items for IAC 7th Conference of the Parties (COP7)

22) The Scientific Committee recommends including under COP7 agenda item "collaboration with other international organizations" to explore possible synergies with the Convention of Migratory Species. Also it is recommended to include in the report of the SC Chair to the COP a presentation of the IAC Index Beach Data Analysis (2009-2013) (CIT-CC11-2014-Tec.7).

SC12 Hosting and election of Chair and Vice-chair

23) Dr. Diego Alejandro Albareda (Argentina) was elected as the Scientific Committee Chair and Mr. Francisco Rolando Ponce (Chile) was elected Vice-chair. Their terms are for two years or two Scientific Committee meetings (SC12 and SC13).

24) The Government of Chile offered to be the host of the SC12 meeting. The next meeting will be held in Viña del Mar, Chile.