



**Inter-American Convention for the Protection and
Conservation of Sea Turtles
15th IAC Scientific Committee Meeting (SC15)
Tegucigalpa, Honduras | September 17-19, 2018**

CIT-CC15-2018-Doc.7

Report on the 15th IAC Scientific Committee Meeting (SC15)

The Fifteenth Meeting of the Inter-American Convention for the Protection and Conservation of Sea Turtles Scientific Committee (SC15) took place in Tegucigalpa, Honduras at Plaza del Libertador Hotel. The meeting began with a prayer by the Ministry of Environment Biodiversity Director, Mr. Rene Soto. Welcoming remarks were given by Honduras Minister of Environment Mr. Jose Antonio Galdames, the Ambassador José Isaías Barahona Herrera, Undersecretary of State in Foreign Affairs and Vice-Chancellor of Honduras, the IAC Scientific Committee Chair, Dr. Diego Albareda, and Ms. Veronica Caceres, IAC Secretary *Pro Tempore*.

Honduras delegations presented the video “*Marca Pais*” followed by the introduction of participants and observers. The meeting was conducted with the participation of 41 attendants including delegates from 12 IAC countries - Argentina, Belize, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Peru and the United States -, the Chair of the IAC Consultative Committee of Experts, Mr. Paul Hoetjes; representatives of Honduras Natural Resources and Environment Secretariat and the National Committee on Sea Turtles, and the IAC accredited observer representing the Stetson University Institute for Biodiversity Law and Policy, ProTector and Upwell. (**Annex I – List of Participants CIT-CC15-2018-Inf.1**).

1. Presentation of Sea Turtle Conservation Activities in Honduras

Mr. Marcio Aroone, a representative from WIDECAST and Cayos Cochinos Foundation presented conservation efforts and research in Cayos Cochinos on *Eretmochelys imbricata* since 1998. Nesting peaks are in August and September, and highest numbers of nesting are in the north where the turtles seem to prefer nesting in areas with vegetation. Monitoring is conducted through an agreement with the owners of coastal properties who carry it out. Turtles in the area are also tagged. To develop these activities volunteers from universities receive a one-day training and are also accompanied by qualified technicians. Other activities include nesting beach cleaning, environmental education such as the Gararu festival, activities in schools, mangrove restoration programs. All these allow an exchange between science and conservation, and the sustainable use of resources while educating the communication on conservation. It is expected to implement a second conservation school and organize a Conservation Community Committee.

Mr. Aroone’s presentation was followed by his exposition of the National Protocol for Sea Turtle Monitoring in Honduras. This protocol is the guideline to work in nesting beaches in Honduras.

2. Adoption of the agenda and election of the meeting rapporteur

The Agenda was adopted including a) presentation of the NGO Protector's Sea Turtle conservation activities (after ProTector's request to the Scientific Committee Chair), b) presentation of Ecuador's Sea Turtle National Symposium (by request of Ecuador's delegate) and c) closing activity offered by Honduras' Minister of Environment, who organized a visit to Valle de Angeles on the last day at 4 pm. To comply with the schedule, it was agreed to begin the Scientific Committee sessions an hour earlier every day. Ms. Airam Lopez, delegate of Guatemala and the Secretary *PT* were the rapporteurs. (**Annex II - Agenda CIT-CC15-2018-Doc.1**)

The Secretary *PT* requested the delegates time for a demonstration of the videoconferencing tool Vydeo, which will be useful for the SC inter-sessional meetings. The installing link was sent to the delegates of Chile, Argentina, Mexico, Costa Rica, Belize and the Dominican Republic for a demonstration. Ecuador requested to include in the agenda a discussion to streamline inter-sessions of the groups work using technology tools such as Google Docs, Vydeo, etc.

3. Report on the 14th Scientific Committee Meeting.

The Chair of the Scientific Committee (SC) *Dr. Diego Albareda* summarized the committee activities including the work with other organizations such as CITES and the Inter-American Tropical Tuna Commission (IATTC). The Chair also mentioned the update of the IAC index beaches technical document, the implementation of the table to assess compliance with the Resolution on the Loggerhead Turtle in the Annual Report, and the foraging areas subject which was be defined during this meeting, as well as the report on sea turtles status. *Dr. Albareda* highlighted the importance of the suggestions to implement protocols for the inter-sessional work and the meeting, considering time limits and objectives to develop the activities in the SC workplan that have not been concluded, aiming to produce recommendations for the IAC Parties.

4. Report on the IAC Secretary *Pro Tempore* Activities

Ms. Veronica Caceres Chamorro, Secretary *Pro Tempore*, presented the activities report from October 2017. The summary included three IATTC meetings; meetings with Chile's Fisheries Undersecretary to support the implementation of the EP Leatherback turtle conservation actions;

Supporting of Peru's workshop to complete their sea turtle national action plan; outreach to Countries that are not yet IAC Parties (Nicaragua, Colombia, Canada, and El Salvador); supporting of El Chapetón hatchery in Guatemala, and finally support for the IAC Committees.

Ecuador requested to include in this activities the support for the training in Mexico of Galapagos rangers on Leatherback nests protection. Honduras enquired on the dialogs to ratify Nicaragua and El Salvador as IAC Parties. It was explained that there was an approach to Nicaragua's Chancellery in April, but the process is stopped due to the current political emergency in that country. As for El Salvador, the Secretary *PT* scheduled meetings with the

Ministry of Environment and Fisheries Authority CENDEPESCA, the week of September 22-28 to resume the dialogues that began in 2011.

5. Report on the 11th Consultative Committee of Experts

Mr. Paul Hoetjes, Chair of the Consultative Committee of Experts (CCE) provided the recommendations from the 11th meeting of the CCE in March 2018. The United States, enquired on the procedure for the Scientific Committee to receive recommendations from the Consultative Committee, and how these become recommendations for the Parties. The Chair of the CCE explained that the CCE revises and adjusts the recommendations according to the procedures or political matters, and then transfer them to the Conference of Parties. The United States asked if the CCE has the authority to veto the SC recommendations, the CCE Chair replied yes, in the sense that the CCE could decide to negatively advise to the COP on a recommendation from the SC, however, the COP would still be aware of the SC recommendation and would form its own decision.

Ecuador highlighted that climate change is a cross-cutting issue for SC activities. The Chair of the SC mentioned the comprehensive work of the Caribbean Netherlands' delegate to collect information about the impact of climate change on sea turtles, stressing that this is an ongoing matter, although it has not been included in this meeting agenda.

Reports on the IAC Scientific Committee Inter-sessional activities and presentation of results

6. Nesting

6a. Review of the updated Technical Document on Sea Turtle Nesting in the IAC Index Beaches 2014 – 2018. (CIT-CC15-2018-Doc.2 adopted as CIT-CC15-2018-Tec.14 at <http://www.iacseaturtle.org/documentos-eng.htm>)

Dr. Jeffrey Seminoff, the United States delegate, explained the updating process of the technical document CIT-CC15-2018-Tec.14 on sea turtle nesting in IAC index beaches 2014-2018. Dr. Seminoff clarified that although five years of data may not be enough to establish a population trend, gathering the data is a positive effort. Ms. Luz H. Rodríguez, from the IAC Secretary *PT*, presented the process to collect the information using the forms on index beaches 2014-2018, and how this data was assembled with that from previous years. The SC delegates were requested to revise the graphs in the draft and to develop observations and comments to verify the information.

Brazil stressed to pay attention to results observed in the nesting index beaches report, especially in those cases, such as the Green Turtle in Galapagos - Ecuador, where declines in nesting are observed. The delegate stressed the need to issue recommendations or alerts for the Parties when these situations are observed after possible causes have been consulted with the Party involved.

Ecuador pointed out the importance of not only use the index beaches data but also the rest of the information in the annual report. “We are surprised by the last 10 years decline of

green turtle nesting in Galapagos. This could be linked to changes in temperature as the monitoring effort in Galapagos beaches remains the same. It is important that the SC suggest other aspects that should be monitored in Ecuador's index beaches"

Peru stated that the Green Turtles from Galapagos migrate to this country, and believes that the reduction has more to do with incidental catches in gillnets than with climate change. The issue is mainly observed in Paracas (Peru), whereas in Arica (Chile) sea lions attack sea turtle, and these come out beheaded. The delegate mentioned that this factor should be considered as well.

Chile stated that there is interaction with longlines in the north of the country, and confirms reports in Arica of sea lions attacking and beheading sea turtles. Chile has work tables to identify the causes and could provide information on the factors related to incidental catches that could have an incidence in the decline of Ecuador's population. The delegate stressed that working with incidental catches is a challenge as most of the interactions are with the artisanal fleet which monitoring is more difficult.

The United States highlighted that this feedback enhances the recommendations for the index beaches technical document. The delegate added that issues such as climate change and interaction with fisheries are part of the scope of the Scientific Committee. "All of us in this Committee are scientist called to bring information to this annual meeting that allows developing recommendations to the IAC Parties. I think that what Peru mentions on incidental catches is worth it to invest our time to produce a recommendation to the Consultative Committee regarding incidental catches happening in Peru", expressed the delegate. He also stated that the situation is completely the opposite in Mexico, where the green turtle population has increased substantially.

Brazil added that an interpretation of the data is required in the technical documents produced by the Scientific Committee. "At the moment we produce documents that are only a portrait of the information in the IAC Annual Report. The Scientific Committee is not analyzing and discussing the results shown in our technical documents, therefore the work is not completed as recommendations for the Parties are not being produced" said the delegate.

Costa Rica stated that the precautionary principle should be considered to develop recommendations "We have enough evidence to inform the Parties why trends are going up or down" added the delegate.

The Dominican Republic added that the green turtle population in Isla Catalina has increased, and that tagging is important to have an idea on population's movement.

Honduras mentioned that it is important to consider variables such as the health of the ecosystem, to explain what is observed in nesting trends. He also said that documenting the situations observed must keep going to bring this information to policy areas.

Ecuador agreed with revising other factors mentioned in addition to the data from nesting beaches and requested the SC to provide suggestions on what to do in Galapagos.

The United States suggested developing a Red Paper or specific recommendation on the Green Turtle nesting decline in Galapagos to inform the CCE, Ecuador and the IAC Conference of the Parties.

The CCE Chair agreed with the recommendation document and added that similar information is required on fisheries, the impact of Sargassum in the Caribbean, and Climate Change. He also said that the SC should work on these issues and activate the alarms at the CCE. The CCE Chair added that Isla Aves is of concern, as the information from this site is limited.

The Scientific Committee agreed on the following steps to complete the Technical Document on Nesting Index Beaches:

1. Each country will revise its information presented in this meeting
2. Given the case, each country will send an explanation on what is thought to be happening in those beaches with significant changes regarding negative nesting values and will indicate if there have been changes in monitoring effort. If there are no changes, each country will state that effort has been constant in each beach.
3. Each country will submit missing information (in yellow) not later than **October 15, 2018**, to the Working Group preparing the document. The United States and Secretary *PT*.
4. Based on the comments and explanations, the Nesting WG will develop recommendations.
5. The final document will be finished by October 30, 2018
6. The document will be available in the IAC Website

The Scientific Committee agreed to prepare the recommendations on the decline of Green Turtle nesting in Galapagos.

7. Fisheries

7a. Report on the IAC Region Sea Turtle Excluder Devices (TEDs) (CIT-CC15-2018-Doc.3 at <http://www.iacseaturtle.org/docs/dets/CIT-CC15-2018-Doc.3 TEDs 2018 ENG Web.pdf>)

Dr. Heriberto Santana, the delegate from Mexico presented the Sea Turtle Excluder Devices (TEDs) history in Mexico. Experiments began in 1998 with seven designs until producing the current model. Between 1991 and 1993 there was a training program for 6,000 crew members of the shrimp fisheries fleet on the efficient use of TEDs. The compulsory use of TEDs in the Gulf of Mexico was established in 1993, followed by the same regulation in the Mexican Pacific established in 1996. Following, the delegate explained the process to request information to update the IAC region TEDs list, thanking all those who helped in the process and the support of the Secretary *PT* following up on the process. Next, the delegate requested the countries that had not submitted the information to do it so.

Dominican Republic expressed to have requested the information to the Director of their

fisheries authority CODOPESCA.

Mexico recommended to revisit the issue of non-crustacean trawl fisheries as interactions of sea turtles with these fisheries are evident, and research regarding devices that could be used in this fisheries should be considered.

7b. Update on the Leatherback status in the IAC region

- Presentation on the EP and Northwest Atlantic Leatherback Status

The IAC Leatherback Task Force Coordinator, Dr. Bryan Wallace did a Skype presentation on the Leatherbacks from the Eastern Pacific and the Northwest Atlantic.

- Discussion on the Northwest Atlantic Leatherback

Dr. Wallace is a co-author of the WIDECAST report he presented, where a long-term analysis shows that all populations in the Caribbean Regional Management Unit are declining, and that causes vary from habitat degradation in Guyana to incidental catches near nesting beaches.

Dr. Didiher Chacon, delegate from Costa Rica who is also a co-author of the study, also stated that several factors are causing the long-term impact in the population, and special attention needs to be paid to what is happening in the foraging areas considering the countries where traditional use of sea turtles is allowed, and those such as Trinidad and Tobago where there are incidental catches.

The CCE Chair expressed his concern, as he thought that the Northwest Atlantic Leatherback population was in good shape, and the evidence is showing the opposite. The CCE Chair requested the Scientific Committee developing recommendations to take action, and the Secretariat to use these alarming data to reach out to Trinidad and Tobago, and Canada to draw their attention to the issue.

Costa Rica recommended forming a Work Group to 1) analyze the Northwest Atlantic Leatherback report to produce recommendations that can be included in the Resolution on EP Leatherback or develop a new Resolution for the Caribbean, and 2) to provide strategic steps for the IAC Secretary *PT* to reach out to Trinidad and Tobago, and Canada. The WIDECAST report this presentation was based on was sent to the SC15 delegates to be used as the reference for developing the recommendations.

It was agreed to form a Working Group within the Scientific Committee (Costa Rica, Argentina, and Caribbean Netherlands) that will analyze the Northwest Atlantic Leatherback report and will develop recommendations to the IAC Parties. These could include actions to update the EP Leatherback Resolution or proposing a new Resolution for the population in the Caribbean, and suggest the strategic steps for the Secretary *Pro Tempore* to reach out to Trinidad and Tobago, Surinam, Guyana, and Canada, warning these countries on the status

of the Northwest Atlantic population. The first draft will be prepared by the delegates from Argentina and Costa Rica.

During the intersessional period the SC presented recommendations based on the report for consideration of the CCE and the COP (**Annex IX**).

- Discussion on the Eastern Pacific Leatherback

Mr. Eduardo Espinoza, the delegate from Ecuador presented a document on the current status of the Eastern Pacific Leatherback in Ecuador and offered it as a reference for the development of similar reports in other IAC Countries where the species occurs. (Document Spanish in **Annex VIII**)

Peru shared information about research in this country that could provide more information on the behavior of the species in pelagic waters, as the specimens impacted by incidental catches seem to belong to sub-adult instead of adult stages. Ecuador enquired on the number of Leatherback caught according to ProDelphinus survey and suggests working with other countries to establish protected areas in international waters based on international treaties such as UNCLOS.

Mexico suggested working more with artisanal fleets as this type of fisheries have a higher impact, according to surveys in his country. Efforts on training for fishermen about sea turtle release and best practices, providing them with tools to release sea turtles, and to raise awareness, should increase.

The Secretary *PT* highlighted the importance of the map presented by Dr. Wallace showing important sites near nesting beaches in Mexico, Costa Rica, and Nicaragua where there are reports of incidental catches of EP Leatherback. As one of the discussions in the IATTC is the lack of data to make decisions on bycatch, it is important that the delegates are aware that the information presented by Dr. Wallace, obtained through surveys with fishermen by LaudOPO is an indicator of the interaction in this important areas. It is critical that the SC delegates transfer this information to their authorities.

Mexico added the need to bring this information regarding interactions near nesting areas to the governmental spheres, more than to the IATTC as this RFMO doesn't operate in coastal habitats.

Chile supported Mexico and Ecuador opinions, adding that an emphasis on environmental education for the fishing sector in coastal areas is required as one of the most common management measures is the closure of fishing areas resulting in difficulties to control fishermen after their target species.

- Presentation of Fisheries Working Group Coordinator

Mr. Javier Quiñones, Peru's delegate, was elected as coordinator of fisheries working groups. The group will meet every three months to coordinate their inter-sessional work. This WG presented their workplan during this meeting.

The delegate from Peru presented sea turtle conservation progress in his country, including workshops for the Sea Turtle National Plan; fishermen training to release loggerhead turtles; ban on the consumption of sea turtle meat; implementation of LED lights in partnership with WWF-Peru; work with driftnets; the Festimar festival; and the National Plan for Conservation of Sea Turtles website <http://www.tortugasmarinas.pe/plan-nacional/>

- Stranding of Sea Turtles in the IAC Region

Mexico's delegate spoke about the latest sea turtle strandings reported in that country. The most substantial case involved Hawksbill turtles as this is a critically endangered species. However, the number of individuals was low. On the other hand, the number of olive ridleys stranded in Chiapas was larger, and the case had more dissemination. Mexican authorities are working to mitigate the impact of ghost nets, which was the main cause. The delegate added that new issues with the fishermen are arising due to densities of olive ridley as propellers suffer damages from collisions with the turtles during the nesting season.

Ecuador pointed out that reports of sea turtles entangled in drifting nets are also happening in this country showing the tragedy of the commons when no vessel is responsible for the lost fishing gear. The delegate suggested that the IAC attracts the attention towards this issue.

Belize declared reports of olive ridleys entangled in fishing gears, and considering this species is not found in this country, it is suspected that the specimens come from México and Cuba.

The Dominican Republic referred to the national marine mammals and sea turtles stranding program in partnership with the National Aquarium. When strandings occur the aquarium rescues and rehabilitate the animals.

The United States asked on the status of the IAC's mass stranding response plan discussed years ago, given the number of reports in Mexico, Belize, and El Salvador. The SC Chair pointed out that the SC developed a technical document on strandings in the IAC Region (CIT-CC13-2016-Tec.12) with the objective of creating a directory of specialists from the region. However, due to the complexity of creating a stranding network this idea was not considered. The Chair highlighted the importance for each country to develop a stranding response core, and the IAC could facilitate communication among the local experts when this events occur.

The SC Chair proposed that the delegates who reported ghost fishing such as in Mexico and Ecuador gather the information in an informative document as evidence of these cases that could be useful to inform the IAC Parties. Ecuador said that it could commit, along with Mexico to develop an informative document on sea turtle stranding in ghost fishing.

The Secretary *PT* pointed out that this information could be useful to work with the RFMOs,

where similar proposals have been submitted as it was the case in the IATTC where a resolution on tagging of fishing gears was submitted but not adopted.

There was no reference to other items on the agenda regarding the Fisheries Working Group during this segment. There was no agreement in the SC with regard to stranding or ghost fishing.

7c. Report on trawl fisheries targeting non-crustacean species interacting with sea turtles (CIT-CC15-2018-Doc.4)

The SC Chair presented the results and conclusions from the report on trawl fisheries targeting non-crustacean species interacting with sea turtles and proposed the Fisheries Working Group to use it as a reference for the group. The document showed that there are issues with interactions in six IAC Countries, and that the information collected through the questionnaire regarding each fishery target species, the social and economic importance of each fishery, and mitigation measures, provide an input for the IAC Scientific Committee Fisheries Working Group to build on the subject (Document in **Annex III**)

Mexico stated that this information could be useful for its country, considering the interaction with sea turtles and that these fisheries don't use turtle excluder devices. The delegate emphasized that it would be important to know the impact and propose TEDs or similar devices for these fisheries, therefore the information in this report is of great interest.

8. Exceptions

Regarding the project proposal and terms of reference for the analysis of *Lepidochelys olivacea* population trend in the region, and the review of the project to determine the status of cross-border trafficking of *L. olivacea* eggs, Mr. Didiher Chacon, coordinator of the Exceptions Working Group reported that the information required to prepare the products in the Scientific Committee Workplan was not collected during the inter-sessional period. Dr. Chacon mentioned that the issue involves no IAC Parties, which makes it more complex, and proposed to remove the item from the Committees' agenda.

8a. Honduras Exception

Ms. Carolina Montalvan, the delegate from Honduras explained that more time is needed to obtain the information required to present the exception as this is a cross-bordering matter involving El Salvador and Nicaragua, which delays collecting the data.

Regarding the information on nesting data from throughout the year requested by the Scientific Committee to Honduras to document the exception, Honduras expressed to be able to collect information from the 25 days closure on September 1 – 31 when monitoring effort is higher. Honduras indicated not to be able to do longer monitoring. On the other hand, the country is working on a sea turtle monitoring plan that will help in to collect more information and documenting the exception. Also, some of the recommendations provided by this committee have been implemented with progress. Therefore, the delegate requested to remove Honduras exception from the SC workplan for two years or until the country is

ready to present the exception to the IAC.

The SC agreed on removing the item on Honduras Exception from the SC workplan until the Party has enough information to present it to the Scientific Committee.

9. Sea Turtle Foraging/Feeding Areas

Regarding the review of sea turtle foraging areas in the IAC Parties, the SC Chair reported no work on this item during the inter-sessional period and proposed removing it from the Scientific Committee workplan.

It was agreed to remove the item on sea turtle foraging areas in the IAC Parties from the Scientific Committee workplan.

10. IAC Annual Report

10a. Use of information, contents, and format

Dr. Jeffrey Seminoff, the United States delegate started the discussion pointing out that the SC must be careful to not have too much information requested from the Parties in the Annual Report. The SC should select the data actually required to produce recommendations that the Parties can implement. The delegate invited the participants to think on how the SC can produce recommendations and/or products using the information requested to the Parties.

The delegate's presentation focused on the information, contents, and format of the Annual Report, inviting the participants to think about what the role is of the IAC SC. For example, should the SC only follow up on the resolutions, or should the SC synthesize information from the annual reports to provide recommendations to the Parties on topics of conservation priority.

The United States delegate pointed out that currently, the report is mixed, following up on resolutions and requesting data such as those in the annex on nesting in index beaches, used to develop the corresponding technical report. Within this framework, the delegate requested the SC to define which information in the Annual Report is useful for the SC to fulfill its role of providing recommendations to the Parties. The delegate added that it may be easier to provide information for Annual Reports via an online system, and requested the Secretary PT to summarize the proposal to have an online reporting system. The Secretary *PT* presented the proposal and costs.

As one of the first delegates participating from the beginning of the Convention, Costa Rica stated that although originally the SC requested all of the possible information in the Annual Report, in this moment priorities for the SC to focus on can be identified thus the report meets current needs.

Ecuador added that there must be an explicit link with conservation showing the purpose of the information requested in the report. The delegate explained that in Ecuador the annual

report is used as a reference showing the actions carried out in the country regarding sea turtle conservation.

Honduras pointed out the importance of the Annual Report for the country and local managers, however, the delegate considers that the practical use is not clear and it is important that the information is linked with local conservation actions.

Peru added that regarding fisheries feasible activities should be a priority and the products should be developed accordingly.

The SC Chair suggested that this discussion should focus on the process of developing recommendations to the IAC Parties, and enquired on the ways to transform the already known information into recommendations. The Chair suggested forming a Working Group to work on this matter.

The SC determined that the items requiring information from the Parties are index beaches, threats, and climate change. Information about each item will be compiled in a report every five years.

11. Collaboration with RFMOs and other International Organizations

11a. Recommendations from the Leatherback Task Force to the IATTC Working Group on Bycatch. (Annex IV)

The Secretary *PT* presented the recent work in collaboration with the IATTC including recommendations developed by the IATTC Working Group on bycatch based on information provided by the IAC in their last meeting on May 2018. Mexico supported the proposal as it applies to all the measures in the Leatherback Resolution.

Ecuador added that working with the IATTC involves delicate economic issues which makes it necessary to lobby the delegates prior to the meetings. The Secretary *PT* explained that has been done and that a delegate from the SC has not yet been appointed to work with the Consultative Committee of Experts counterpart on the implementation of the strategy to work with RFMOs and other international organizations therefore the SC Chair is currently assuming this role. The United States proposed that this job is designated to the SC Vice-Chair, and Costa Rica added that the person should also be affiliated to a fisheries agency. Ecuador suggested that the role is developed by the Fisheries WG Coordinator.

The Scientific Committee agreed to assign the delegate from Costa Rica Dr. Didiher Chacon to follow up on the strategy to work with OROPs and International Organizations.

11b. Discussion on establishing a process for other organizations or individuals to request data from the IAC Secretariat and/or IAC Committees

After a discussion moderated by the United States, the consultation process to request information suggested by the Scientific Committee was 1) a case-by-case assessment, 2) the Scientific Committee evaluates the request and analyzes if the process would be of benefit to

the IAC, and produces recommendations to the Consultative Committee, 3) the Consultative Committee resolves if the proposal is worth to send the request to the Focal Points for them to decide on providing the information or not to a third party outside the IAC Committees.

Chile mentioned that their fisheries information is public and each researcher can request and use the information, following the established Fisheries Undersecretary procedures. The representative of the NGO Upwell suggested developing a form for each type of data request. The United States delegate concurred with the proposal and will be in charge of producing a framework for data requests from external parties. In the case of the IAC Annual Report nesting data, the delegate suggested to include a disclaimer saying the data can only be used with the data owner's permission.

The SC Chair suggested requesting the Consultative Committee to develop the IAC procedure to share and use information.

11c. Collaboration with CITES regarding the study about the trafficking of sea turtle products in the IAC region

There was a discussion on the preliminary report "Status, scope and trends of the legal and illegal international trade in marine turtles, its conservation impacts, management options and mitigation priorities" submitted by CITES Secretary for the IAC SC comments. The IAC Secretary *PT* summarized the support of the SC Hawksbill Working Group developing the terms of reference, providing feedback on priority countries the report should include and possible organizations to carry it out in the IAC region.

Costa Rica manifested concern and dissatisfaction with the preliminary report as lots of information has not been included in the report. The delegate added that CITES only provided 24 hours for comments in the first revision, an insufficient amount of time. He also requested that once the consultants have completely finished the document, this is submitted to the IAC Scientific Committee with enough time (at least two weeks) to produce final recommendations.

The CCE Chair manifested his concerns on the comments about this report and supported that the Scientific Committee makes recommendations to ensure a better result.

11d. Presentation of the Form per species to prepare the report on Sea Turtles Conservation Status

The SC Chair said that there was no work on this item during the inter-sessional period and proposed that the Annual Report working group analyze it and make a recommendation about it.

12. Working Groups

The following Working Groups gathered during the session:

- a. Annual Report: United States, Brazil, Argentina, Belize, CCE Chair

- b. Index Beaches: the United States and Brazil
- c. Fisheries: Peru, Ecuador, Chile, and Mexico
- d. Exceptions: Costa Rica, Guatemala, Dominican Republic

The agreements adopted by the Scientific Committee according to the Working Groups recommendations are in **Annex VI** of this document.

13. ProTector Presentation

Ms. Lidia Salinas, representative of the NGO ProTector presented the organization work in partnership with Loma Linda University. This organization began activities in 2006 aiming to create a baseline in the north of Honduras including Roatan and Utila, where they have worked for the last 12 years. In 2008, they began research in the South of Golfo de Fonseca. In 2012, a study was carried out in Pumpkin Hill to determine why sea turtles were using only one portion of the beach for nesting. It seems that the beach slope and good vegetation are the reason. This is the only nesting population of hawksbill in La Bahia Island. This population could be critical for the distribution of Hawksbills in the western Caribbean.

14. IAC Scientific Committee Workplan 2018

The Scientific Committee Workplan 2018-2019 was updated following the activities and recommendations proposed by the Working Groups. (**Annex V- CIT-CC15-2018-Doc.5**)

15. Proposals of resolutions and agenda items for COP9

The Scientific Committee proposed the following items for COP9 agenda:

1. Recommendations on Galapagos Green Turtle nesting trend
2. Technical Document on Index Beaches 2009-2018
3. Recommendations on the Northwest Atlantic Leatherback
4. Scientific Committee Workplan 2019-2020

The Scientific Committee did not propose resolutions to the COP9

16. Review and Adoption of the meeting Agreements and Recommendations

The SC delegates adopted the agreements and recommendations to develop during the inter-sessional period included in **Annex VI** of this reports (**CIT-CC15-2018-Doc.6**).

17. Other business

- **Ecuador Sea Turtle Symposium 2018**

Mr. Eduardo Espinoza, the delegate from Ecuador, presented Ecuador Sea Turtle Symposium and enquired the delegates to share this information. It is expected that the IAC take part in the working table that will be carried out to discuss the implementation of the Convention,

during this symposium.

- **Tools to improve communication and inter-sessional work**

The delegates received a link and instruction to install Vydio, however, time during the meeting was not enough to carry out the corresponding test.

18. Preparation of the next meeting (CC16)

- **Chair and Vice-Chair**

The Scientific Committee re-elected the delegate from Argentina Dr. Diego Albareda as Chair and elected the delegate from Costa Rica Dr. Didiher Chacon as Vice-Chair. Both will work in the position for the following two years.

- **Proposal of a host country for the SC16**

The delegates were invited to propose places for the meeting. Mexico will consult to inform the Secretaria *PT* on the probability.

19. Cultural Evening y Closing Remarks

The Ministry of Environment of Honduras, kindly invited the delegates to visit Valle de Angeles, followed by Honduras traditional gastronomy in a special dinner at *El Patio* restaurant. Mr. Rene Soto, Biodiversity Director said the meeting closing remarks on behalf of the Honduras Minister of Environment.

ANNEXES

- Annex I.** CIT-CC15-2018-Inf. 1: List of Participants
- Annex II.** CIT-CC15-2018-Doc.1: Agenda
- Annex III.** CIT-CC15-2018-Doc.4: Report on trawl fisheries targeting non-crustacean species interacting with sea turtles.
- Annex IV.** CIT-CC15-2018-Inf.2: IAC Participation in the IATTC 2018 Meetings
- Annex V.** CIT-CC15-2018-Doc.5: Workplan 2017-2019
- Annex VI.** CIT-CC15-2018-Doc.6: Recommendations and Agreements of the 15th IAC Scientific Committee Meeting
- Annex VII.** Photos of the SC15 Meeting.
- Annex VIII.** Draft Report on Ecuador´s Leatherback Turtles
- Annex IX.** CIT-CC15-2018-Doc.8: Recommendations on the Northwest Atlantic Leatherback

ANNEXES

Annex I List of Participants - CIT-CC15-2018-Inf. 1

PAIS/COUNTRY	NOMBRE/NAME	ORGANIZACIÓN/INSTITUTION	E-MAIL
DELEGADOS/DELEGATES			
Argentina	Diego Albareda	Presidente Comité Científico/Scientific Committee Chair	diego.albareda@gmail.com
Belize	Kirah Forman	Belize Fisheries Department	kirahforman@yahoo.com
Brazil	Alexsandro Dos Santos	Fundación Projeto TAMAR	alex@tamar.org.br
Costa Rica	Didiher Chacon Chaverri	WIDECASST América Latina	dchacon@widecast.org
Ecuador	Eduardo Espinoza Herrrera	Parque Nacional Galápagos	eespinoza@galapagos.gob.ec
Guatemala	Airam López	Departamento de Vida Silvestre - CONAP	aroulet@conap.gob.gt
Honduras	Belkis Carolina Montalván	Secretaría de Recursos Naturales - SERNA	carolmontalvan1568@gmail.com
Mexico	Heriberto Santana	Instituto Nacional de Pesca - INAPESCA	heriberto.santana@inapesca.gob.mx
Peru	Javier Quiñones	Instituto del Mar de Perú - IMARPE	javierantonioquinones@gmail.com
Dominican Republic	Cristiana De La Rosa	Viceministerio de Recursos Costeros y Marinos	cristiana.delarosa@ambiente.gob.do
United States	Jeffrey Seminoff	NOAA	Jeffrey.seminoff@noaa.gov
Chile	Leslie Bustos	Subsecretaría de Pesca	lbustos@subpesca.cl
COMITÉ CONSULTIVO DE EXPERTOS/CONSULTATIVE COMMITTEE OF EXPERTS			
Caribbean Netherlands - Bonaire	Paul Hoetjes	Presidente Comité Consultivo/Consultative Committee Chair	Paul.Hoetjes@rijksdienstcn.com

PAIS/COUNTRY	NOMBRE/NAME	ORGANIZACIÓN/INSTITUTION	E-MAIL
DELEGACIÓN HONDURAS/HONDURAS DELEGATION			
Honduras	José Antonio Galdames	Ministro de Ambiente/ Minister of Environment	
Honduras	José Isaías Barahona Herrera	Vice Canciller – Ministerio de Relaciones Exteriores / Vice Chancellor – Ministry of Foreign Affairs	
ST National Committee	Rene Soto	DiBio MiAmbiente	sotorana1959@yahoo.com
ST National Committee	Marcio Aronne	Cayos cochinos	marcio@cayoscochinos.hn
ST National Committee	María Arteaga	BICA/Uitla	bicautilainfo@gmail.com
ST National Committee	Wendy Cerrato	DiBio/MiAmbiente	wcerrato@miambiente.gob.hn
Honduras	Dennis Montalván	DIE-ENA	dennis.montalvan@yahoo.com
Honduras	Daniel Viraco	Canal 6	
Honduras	Paola Martinez	SAG	paolaim@hotmail.com
Honduras	Anny Castro	Agencia EFE	acastro@acan-efe.com
Honduras	Rafael Centeno	DiBio MiAmbiente	Rafael31293centeno@gmail.com
Honduras	Diana Reyes	PNUD/DiBio	Reyesdiana735@gmail.com
Honduras	Napoleón Morazán	DiBio/PNUD	
Honduras	Lurbin Quinteros	Cancillería	lurbinquinteros@gmail.com
Honduras	Nestor Perez	Cancillería	
Honduras	Scarleth Pineda	DiBio/MiAmbiente	spineda85miambiente@gmail.com
Honduras	Cristian Casasola	DiBio/MiAmbiente	casasola.cristian@yahoo.com
Honduras	Eveny Josue Flores	UCI/MiAmbiente	eveny2k@yahoo.es
Honduras	Kelin Julissa Castellán	SAG/DIGEPESCA	yulicastell2000_23@hotmail.com
Honduras	Stephany Rodas	MiAmbiente/OCP	srodas@miambiente.gob.hn
Honduras	Ederin Castro	SEDIS	ederin_avila90@outlook.com
Honduras	Walter Galindo	MiAmbiente	Waltergalindo203@gmail.com
Honduras	Flor Fajardo	UCI/MiAmbiente	ucimiambiente@gmail.com
Honduras	Carlos Guzmán	Miambiente	carlosrm1985@hotmail.com
OBSERVADORES/OBSERVERS			
Honduras	Lidia Salinas	ProTECTOR	lidiamerica@hotmail.com
United States	Travis Hearne	Institute for Biodiversity Law and Policy - Stetson University	thearne@law.stetson.edu
United States	George Shillinger	UPWELL	george@upwell.org
SECRETARIA CIT/IAC SECRETARIAT			
CIT	Verónica Cáceres	CIT	veronica@seaturtle.org
CIT	Luz Helena Rodríguez	CIT	asistentecit@gmail.com
CIT	Paul Schiffan	Interpreter	pschiffan@yahoo.com
CIT	Francis Benaton	Interpreter II	fran.bennaton@gmail.com

Annex II
Agenda - CIT-CC15-2018-Doc.1

Day 1/September 17, 2018

- 08:00-08:30 Registration of participants
- 08:30-08:40 Prayer
- 08:40-08:45 Honduras National Anthem
- 08:45-09:00 Video – The Country’s Brand
-
- 09:00-09:20 Opening Ceremony and welcoming remarks
Ing. José Antonio Galdames/ Minister of the Environment
Ambassador José Isaías Barahona/ Vice Chancellor
- 09:20-09:30 Welcome speech by the Scientific Committee Chair, Dr, Diego Albareda, and the Secretary *Pro Tempore*, Ms. Veronica Caceres Chamorro.
- 09:30-09:50 Coffee Break
- 09:50-10:15 Introduction of participants and reading of accredited organizations participating in the meeting as observers/CIT-CC15-2018-Inf.1
-
- 10:15-12:00 **Sea Turtle Conservation Activities in Honduras. Honduras Delegation**
- 10:15-10:40* Presentation of Cayos Cochinos research/*Lic. Marcio Aroone*
- 10:40-11:20* Presentation of the National Protocol and Monitoring/*Lic. Marcio Aroone*
- 11:20-12:00* Presentation of research on the closure of Olive Ridley turtle/*Lic. Luis Turcios*
-
- 12:00-01:00 Lunch
-
- 01:00-01:10 Adoption of the agenda and election of meeting rapporteur/**CIT-CC15-2018-Doc.1**
Dr. Diego Albareda, SC Chair
- 01:10-01:30 Report on the 14th IAC Scientific Committee Meeting Activities
Dr. Diego Albareda, SC Chair
- 01:30-01:45 Report on the IAC Secretariat *Pro Tempore* Activities
Ms. Veronica Caceres, IAC Secretary PT
- 01:45-02:00 Report on the 11th Consultative Committee of Experts Meeting.
CIT-CCE11-2018-Doc.5
Mr. Paul Hoetjes, Chair of the Consultative Committee of Experts

Reports on the IAC Scientific Committee Inter-sessional activities and presentation of results

Nesting

02:00-02:30 Review of the updated Technical Document on Sea Turtle Nesting in the IAC Index Beaches 2014 – 2018. – **CIT-CC15-2018-Doc.2**
USA, Brazil delegates and IAC Secretariat PT

Fisheries

02:30-03:30 a. Report on Sea Turtle Excluder Devices (TEDs) used in the IAC region
CIT-CC15-2018-Doc.3
Dr. Heriberto Santana, Mexico Delegate

b. Update on the current situation of the Leatherback turtle in the IAC Region
Fisheries Work Group Coordinator, Mr. Javier Quiñones, Peru Delegate

-Presentation on the Caribbean and EP Leatherback Conservation Status
Dr. Bryan Wallace – IAC Leatherback Task Force Coordinator

-Updated report on the compliance with the Leatherback Resolution

-Communication system for members of the EP Leatherback Task Force

-Report on the countries with information on Leatherback occurrence and threats

- Standardization of bycatch records to identify other threats

- Presentation of a standardized stranding protocol

c. Report on trawl fisheries interacting with sea turtles targeting non-crustacean species with results from the interactions diagnosis presented in the SC13 **CIT-CC15-2018-Doc.4**

Dr. Diego Albareda, SC Chair

03:30-3:40 Coffee Break

Exceptions

03:40-04:00 Review of the proposal and terms of reference for the Analysis of *Lepidochelys olivacea* population trend in the region; and review of the project to determine the status of cross-border trafficking of *L. olivacea* eggs. *Working Group Coordinator (Working Group: Costa Rica, Honduras, Panama, Guatemala, and Mexico)*

Feeding Areas

04:00-04:40 Report on the review of sea turtles feeding areas in the IAC Countries, as described in the SC14 Report and preparation of a final product to be presented to COP 2019. *Working Group Coordinator (Argentina and Peru) (Working Group: Argentina, Caribbean Netherlands, Peru, Chile, Panama, and Ecuador)*

04:40-05:00 Summary of the Day

Day 2/September 18, 2018

08:30-09:00 Registration of participants

IAC Annual Report

09:00-09:40 IAC Annual Report use of information, contents, and format.
Dr. Jeffrey Seminoff, USA Delegate

Collaboration with RFMOs and other International Organizations

- 09:40-10:15
- a. Recommendations from the Leatherback Task Force to the IATTC working group on bycatch – *Member of the Leatherback Task Force CIT-CC15-2018-Inf.2*
 - Documents:
BYC-08-ES – Report of IATTC co-chairs of the working group on bycatch
 - b. Progress report on the implementation of the strategy to work with RFMOs – IATTC and 2019 schedule – *SC Chair/ Secretary PT*
 - Documents:
IATTC-93-03 ADD.1
PROPOSAL IATTC-93 K-1
 - c. Discussion on establishing a process for other organizations or individuals to request data from the IAC Secretariat and/or IAC Committees. *Dr. Jeffrey Seminoff, USA Delegate*
 - d. Report on collaborations with CITES regarding the study about the trafficking of sea turtle products in the IAC region. – *Secretary PT*
 - Document:
Status, scope, and trends of the legal and illegal international trade in marine turtles – CITES Secretariat

10:15-10:35 Coffee Break

10:35-11:00 Presentation of the Form per species to prepare the report on Sea Turtles Conservation Status – *Working Group (Brazil, Argentina, Panama, Uruguay, and Ecuador)*

11:00-12:00 Working Groups Session: Annual Report WG – proposal on the Scientific Committee areas of work, WG Index Beaches)

12:00-01:30 Lunch Break

01:30- 3:30 Working Groups Meeting and preparation of recommendations to COP

3:30-03:50 Coffee Break

3:50-05:00 Working Groups Recommendations – *WG Coordinators*

Day 3/September 19, 2018

08:30-09:00 Registration of participants

09:00-09:30 Presentation on Peru’s Sea Turtle Action Plan. *Mr. Javier Quiñones, Peru Delegate*

09:30-10:30 **Work Plan Scientific Committee 2018**

Update Scientific Committee Work Plan **CIT-CC15-2018-Doc.5**
Ms. Carolina Montalvan, Delegate Honduras - WG Coordinator

10:30-10:50 Coffee Break

10:50-12:00 Proposals of resolutions and /or agenda items for COP9

12:00-01:30 Lunch Break

01:30-02:30 Review and Adoption of Recommendations from the meeting.

02:30-03:30 Other business: The delegates are invited to propose other topics relevant to the meeting

03:30-04:00 Coffee Break

Preparation of the next meeting (CC16)

04:00-04:30

Election of President and Vice-president

Proposals to host CC16

-Delegates are invited to bring their hosting proposal for the next meeting.

Cultural Evening

06:00 Visit to *Valle de Angeles*
Dinner with traditional food
Closing remarks by Ministry of Environment

Annex III
Report on trawl fisheries targeting non-crustacean species interacting with sea turtles

CIT-CC15-2018-Doc.4

Incidental Catches of Sea Turtles in Trawl Fisheries Targeting Non-Crustacean Species

INTRODUCTION

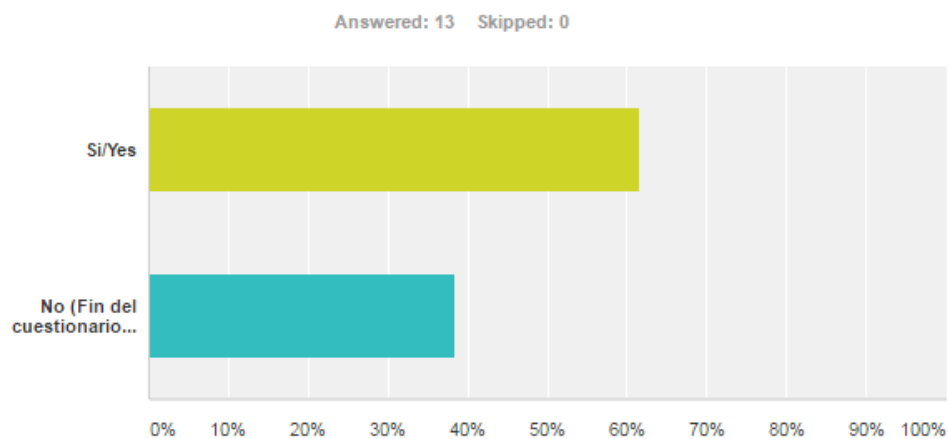
As stated in the technical document “Sea Turtles and Fisheries” (2006), incidental catches in lost or discarded fishing gears such as trawl nets, longlines, and gillnets represent major causes of sea turtle mortalities. Annex III of the Text of the IAC Convention makes mandatory the use of Turtle Excluder Devices (TEDs) in all shrimp trawl fisheries vessels operating within each IAC Party jurisdiction. However, incidental catches in other fisheries targeting non-crustacean species are also known. With the objective of a better understanding of the issue, the IAC Scientific Committee (SC) Fisheries Working Group (FWG) developed a 10 question questionnaire (Annex I) submitted to all the Scientific Committee members to provide information from their countries to be presented at the Committee’s annual meeting in 2016.

The results of the questionnaire presented below will provide a baseline reference to the WG, to further the analysis on incidental catches in trawl fisheries targeting non-crustacean species in the IAC region. This document will contribute to following up on the compliance with IAC resolutions, such as the Resolution on the impact of fisheries on sea turtles, on the Eastern Pacific Leatherback, and on the Conservation of the Loggerhead Turtle.

RESULTS

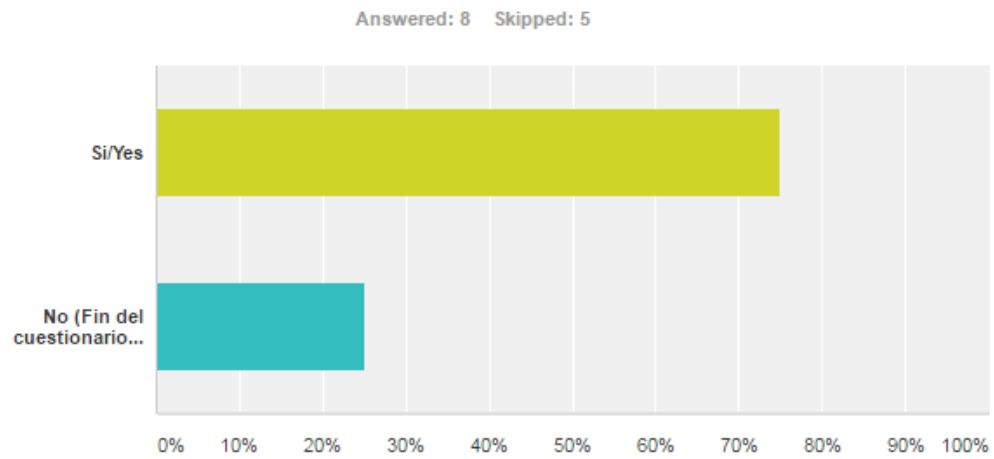
Answers submitted by the Scientific Committee delegates from 13 of the 15 IAC Parties were received. Trawl fisheries targeting non-crustacean species are nonexistent in five of the 13 countries (i.e. Belize, Costa Rica, Guatemala, Honduras, and Venezuela) and in Mexico and Chile, there are no incidental catches of sea turtles in these trawl fisheries. There are no trawl fisheries in the Caribbean Netherlands, therefore, the questionnaire is not applicable to this country, and Uruguay did not submit the information. Following are the graphs and table developed according to the answers received.

1. Are there trawl fisheries NOT directed at crustaceans in your country?



Answer Choices	Responses	
Si/Yes	61.54%	8
No (Fin del cuestionario/End of the questionnaire)	38.46%	5
Total		13

2. Is there sea turtle bycatch in trawl fisheries NOT directed at crustaceans in your country?



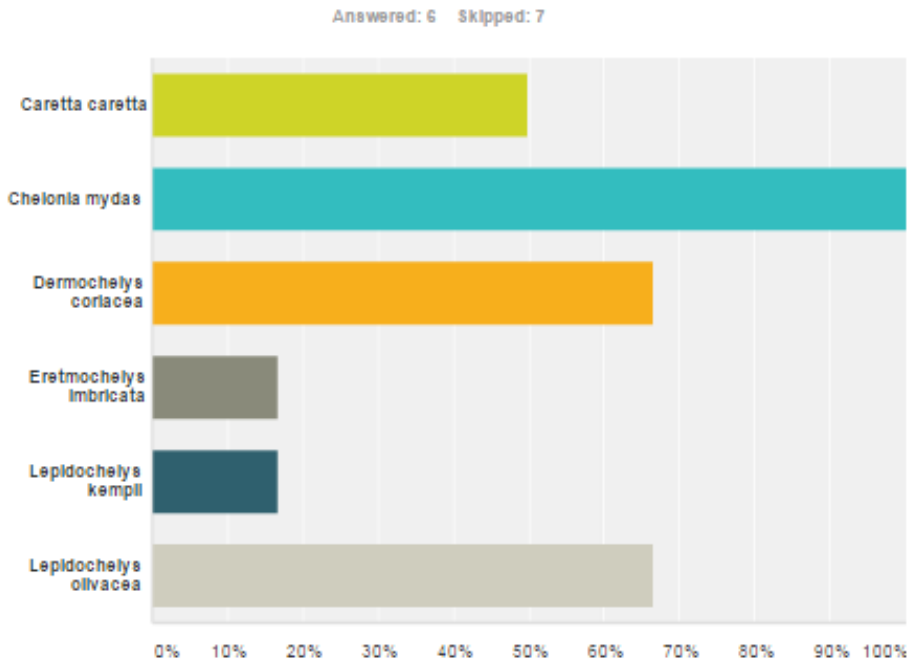
Answer Choices	Responses
Si/Yes	75.00% 6
No (Fin del cuestionario/End of questionnaire)	25.00% 2
Total	8

3. List the target species in trawl fisheries NOT directed at crustaceans that bycatch sea turtles in your country.

In Argentina, this type of multi-specific fishery (including species other than those mentioned) is known “*variado costero*” (coastal variety) and goes from the shoreline to 50 m deep. Argentina and Brazil reported two species in common.

Species	Country Party
<i>Mugil lisa</i> (Lisa)	Argentina
<i>Brevoortia aurea</i> (Saraca)	Argentina
<i>Micropogonias furnieri</i> (Corvina rubia)	Argentina, Brazil
<i>Cynoscion guatucupa</i> (Pescadilla)	Argentina, Brazil
<i>Umbrina canosai</i>	Brazil
<i>Macrodon ancylodon</i>	Brazil
<i>Prionotus punctatus</i>	Brazil
<i>Urophycis brasiliensis</i>	Brazil
<i>Paralichthys spp</i>	Brazil
<i>Brachyplatystoma vaillantii</i>	Brazil
Merluccius gayi	Ecuador
Paralichthid flounders	United States
Sciaenid finfish	United States
Placopecten scallops	United States
Illex squid	United States
Loligo Squid	United States
Pequeños pelágico	Panama
Pargo	Panama
Mero	Panama
Tiburón	Panama
Dorado	Panama
Atún	Panama
Doncella	Panama
Pajarita	Panama
Merlucius gayi peruanus (Merluza)	Peru

4. What are the species of sea turtle bycaught in trawl fisheries NOT directed at crustaceans in your country?



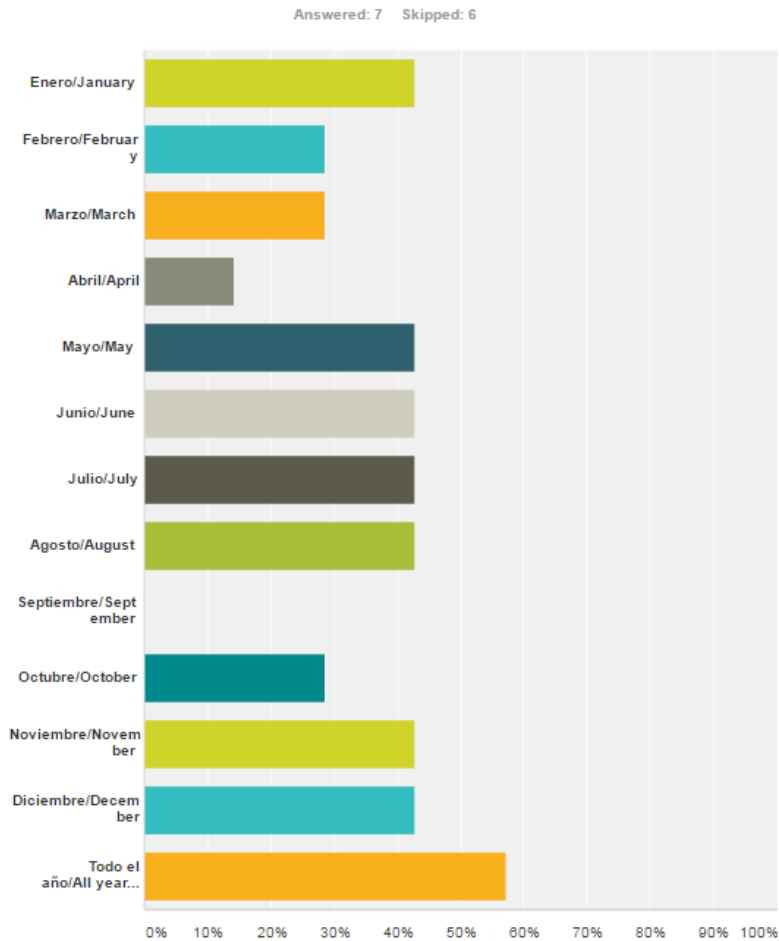
Answer Choices	Responses
<i>Caretta caretta</i>	50.00% 3
<i>Chelonia mydas</i>	100.00% 6
<i>Dermochelys coriacea</i>	66.67% 4
<i>Eretmochelys imbricata</i>	16.67% 1
<i>Lepidochelys kempi</i>	16.67% 1
<i>Lepidochelys olivacea</i>	66.67% 4
Total Respondents: 6	

5. What is the geographic location of these fisheries (ports or places of fleet base) in your country?

PORTS/LOCALITIES	COUNTRY
General Lavalle (Provincia de Buenos Aires)	Argentina
San Clemente del Tuyú (Provincia de Buenos Aires)	Argentina
Mar del Plata (Provincia de Buenos Aires)	Argentina
30° south to 41° south	Chile
Posorja	Ecuador
Anconcito	Ecuador
Puerto López	Ecuador
Manta	Ecuador
Puerto Bolivar	Ecuador
Atlantic Central Coast and New England: from North Carolina to Massachusetts	United States
Panama Pacific (Except for no-fishing zones and Marine Protected Areas)	Panama
North cost of the border with Ecuador (03°23"S) until approximately 07°00"S. The South limit of this fisheries varies until approximately 08°00"S or 09°00"S.	Peru
Most of the incidental catches of Leatherbacks in Peru are in drift gillnets targeting Tuna at the North coast in Tumbes area (03°23"S-04°00"S).	Peru
In Tambo de Mora and San Andres (12°30"S-14°00"S) are there is evidence of incidental catches of sea turtles in several occasions during the last years.	Peru

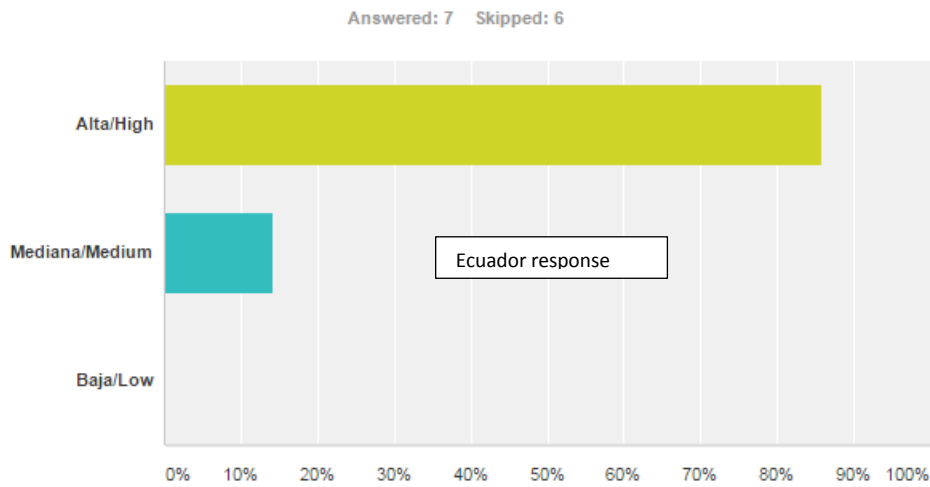
6. *What month(s) of the year do these fisheries operate in your country?*

In most of the countries (57,14%) these fisheries operate throughout the year. Chile reports that these fisheries don't operate on September; in Panama, they don't operate on February, March, April, September, and October; and in Ecuador, there is no operation on April and September. These three countries (Chile, Panama, and Ecuador) coincide on these fisheries not operating in September.



Answer Choices	Responses
Enero/January	42.86% 3
Febrero/February	28.57% 2
Marzo/March	28.57% 2
Abril/April	14.29% 1
Mayo/May	42.86% 3
Junio/June	42.86% 3
Julio/July	42.86% 3
Agosto/August	42.86% 3
Septiembre/September	0.00% 0
Octubre/October	28.57% 2
Noviembre/November	42.86% 3
Diciembre/December	42.86% 3
Todo el año/All year around	57.14% 4
Total Respondents: 7	

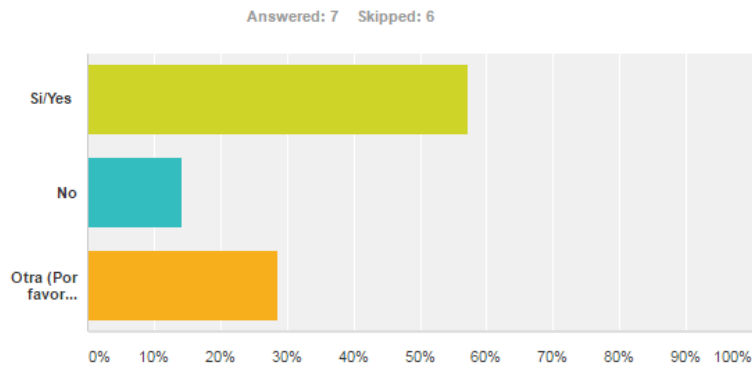
7. What is the socio-economic importance of these fisheries in the influence areas where they fish?



Answer Choices	Responses
Alta/High	85.71% 6
Mediana/Medium	14.29% 1
Baja/Low	0.00% 0
Total	7

8. Do observer programs exist for these fisheries in your country?

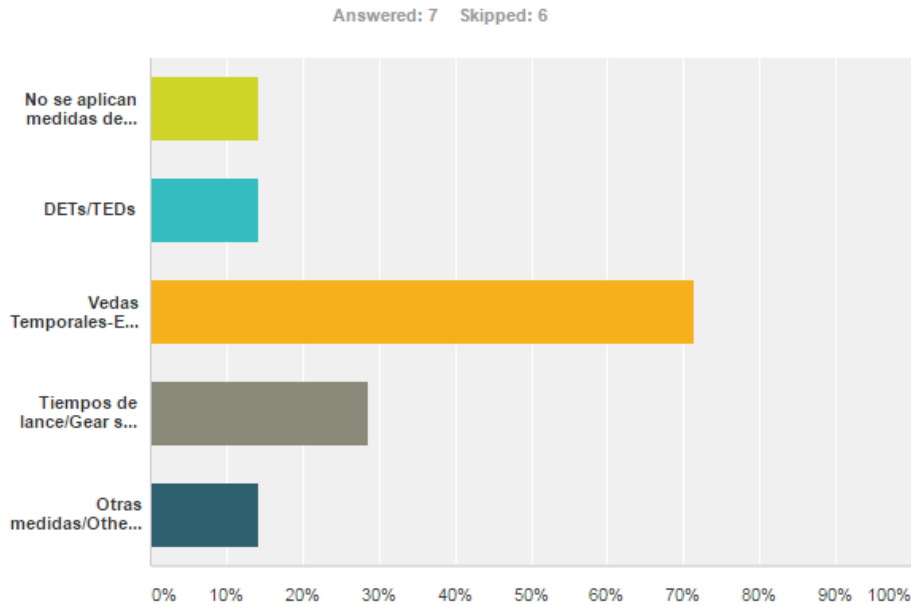
Panama states that the country Aquatic Resources Authority carries out inspections to shrimp trawl vessels only. Brazil informs that there is governmental observers program that has not been implemented and therefore is not working. However, in this country, some research programs monitor these fisheries using onboard observers.



Answer Choices	Responses
Si/Yes	57.14% 4
No	14.29% 1
Otra (Por favor explique)/ Other (please specify)	28.57% 2
Total	7

9. What mitigation measures are applied to these fisheries in your country?

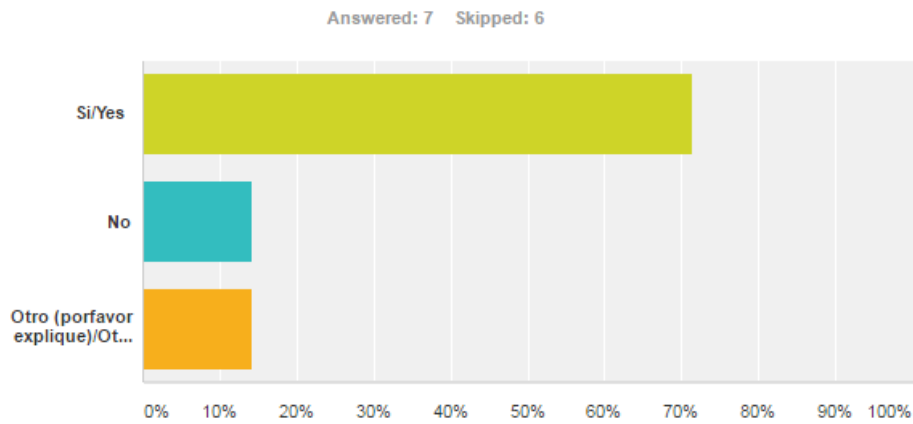
Answers show that spatial-temporal closure is the most common mitigation measure used. The United States uses TEDs as a mitigation measure in the flounder fishery, but there is no mitigation in other fisheries. Panama and Ecuador report limiting the time of operation of the fishing gear. Argentina informs no use of mitigation measures.



Answer Choices	Responses
No se aplican medidas de mitigación/No mitigation measures are applied	14.29% 1
DETs/TEDs	14.29% 1
Vedas Temporales-Espaciales/Temporary-space closures	71.43% 5
Tiempos de lance/Gear set time limits	28.57% 2
Otras medidas/Other measures	14.29% 1
Total Respondents: 7	

10. Are you aware of technical documents or scientific literature that document this issue?

Brazil reports that the information is in grey literature, and Argentina states not having technical documents.



Answer Choices	Responses	
Si/Yes	71.43%	5
No	14.29%	1
Otro (porfavor explique)/Other (please specify)	14.29%	1
Total		7

CONCLUSION

The questionnaire results were presented during the 14th Scientific Committee meeting (Panamá 2017); to the consideration and analysis of the delegates during plenary. The information gathered allowed the first approach to incidental catches of sea turtles in trawl fisheries targeting non-crustacean species in the IAC region. Only 6 (six) countries reported incidental catches in these fisheries (Argentina, Brazil, Ecuador, Panama, Peru, and the United States) and the species more commonly caught in these countries are: *Chelonia mydas* (6/6), *Dermochelys coriacea* (4/6), *Lepidochelys olivacea* (4/6) and *Caretta caretta* (3/3). The identification of the problem along with the information gathered through the questionnaire (target species of the fisheries; ports of operation of the fleets; the social and economic importance of the fisheries, and mitigation measures implemented) provided a baseline for the Scientific Committee Fisheries Working Group to further the issue.

Annex III.I

Encuesta sobre la Captura Incidental de Tortugas Marinas en Pesquerías de Arrastre No Dirigidas a Crustáceos

Survey about Bycatch of Sea Turtles in Trawl Fisheries Not Directed at Crustaceans

Fecha límite 1 de Diciembre 2015 / Deadline December 1st 2015

(English version below)

Estimados Delegados del Comité Científico de la CIT,

Tal como quedó expresado en el documento técnico de la CIT sobre "Tortugas Marinas y Pesquerías" (2006), la captura incidental en artes de pesca tales como redes de arrastre, palangre y redes agalleras, así como la ingesta o enmalle en artes de pesca descartados o perdidos, representan las principales fuentes de mortalidad para las tortugas marinas. El Anexo III del Texto de la CIT establece la obligatoriedad del uso de DETs en pesquerías de arrastre de camarón, en todas las embarcaciones que operen en la jurisdicción de cada país Parte. No obstante, también se conoce la existencia de captura incidental de tortugas marinas en pesquerías de arrastre no dirigidas a crustáceos. Con el objeto de iniciar un entendimiento de este tema, el Grupo de Trabajo de Pesquerías (GTP) del Comité Científico (CC) de la CIT, elaboró este cuestionario de 10 preguntas. Este cuestionario servirá al GTP como una referencia inicial, para orientar y profundizar en el análisis de la captura incidental en pesquerías de arrastre no dirigidas a crustáceos en la región de la CIT. Este insumo, contribuirá al cumplimiento de las resoluciones adoptadas en la CIT, tales como la de Pesquerías, Baula del Pacífico Oriental (Resolución COP7) y Tortuga Cabezona (Resolución COP7). Para efecto de disponer de esta información para ser analizada por el GTP, durante la próxima reunión del CC12 en Chile, solicitamos a los delegados del CC llenar este cuestionario a más tardar el 11 de Septiembre de 2015.

Gracias,

Francisco Ponce, Coordinador del Grupo de Trabajo de Pesquerías del CC
Diego Albareda, Presidente del Comité Científico de la CIT

Dear Delegates of the IAC Scientific Committee,

As was expressed in the IAC's technical document on "Sea Turtles and Fisheries" (2006), bycatch in fishing gear such as trawls, longlines, and gillnets, and intake or entanglement in fishing gear discarded or lost, are the main sources of mortality for sea turtles. Annex III of the IAC's text establishes the mandatory use of TEDs in shrimp trawl fisheries in all vessels operating in the jurisdiction of each Party. However, it is also known that sea turtles are bycaught in trawl fisheries not directed at crustaceans. In order to begin understanding this issue, the Fisheries Working Group (FWG) of the IAC's Scientific Committee (SC) prepared this questionnaire (10 questions). This questionnaire will serve as a baseline for the FWG, to guide and increase the analysis of bycatch in trawl fisheries not directed at crustaceans in the region of the IAC. This input will contribute to the fulfillment of resolutions adopted at the IAC, such as Fisheries, Eastern Pacific Leatherback (Resolution COP7) and Loggerhead Turtle (Resolution COP7) Resolutions. For the purpose of having this information available for analysis by FWG during the next meeting of SC12 in Chile, we ask SC delegates to complete the questionnaire no later than September 11, 2015.

Thank you,

Francisco Ponce, SC Fisheries Working Group Coordinator
Diego Albareda, IAC Scientific Committee Chair

In multiple choice questions please mark your answer with yellow
Please do not delete or modify the answers in multiple choice questions

1. ¿Existen pesquerías de arrastre NO dirigidas a crustáceos en su país?
Is there trawl fisheries NOT directed at crustaceans in your country?

- Si / Yes
- No (fin del cuestionario / end of the questionnaire)

2. ¿Existe captura incidental de tortugas marinas en las pesquerías de arrastre NO dirigidas a crustáceos en su país?

Is there sea turtle bycatch in trawl fisheries NOT directed at crustaceans in your country?

- Si / Yes
- No (fin del cuestionario / end of the questionnaire)

3. Liste las especies objetivo de las pesquerías de arrastre NO dirigidas a crustáceos que capturan incidentalmente tortugas marinas en su país

List the target species in trawl fisheries NOT directed at crustaceans that bycatch sea turtles in your country.

4. ¿Cuáles son las especies de tortugas marinas capturadas incidentalmente en las pesquerías de arrastre NO dirigidas a crustáceos en su país?

What are the species of sea turtle bycaught in trawl fisheries NOT directed at crustaceans in your country?

- Caretta caretta*
- Chelonia mydas*
- Dermochelys coriacea*
- Eretmochelys imbricata*
- Lepidochelys kempii*
- Lepidochelys olivacea*

5. ¿Cuál es la localización geográfica de estas pesquerías (puertos o localidades de base de la flota) en su país?

What is the geographic location of these fisheries (ports or places of fleet base) in your country?

6. ¿En que mes(es) del año operan estas pesquerías en su país?

What month(s) of the year do these fisheries operate in your country?

- Enero
- Febrero
- Marzo
- Abril
- Mayo
- Junio
- Julio
- Agosto
- Setiembre
- Octubre
- Noviembre
- Diciembre
- Todo el año / All year around

7. ¿Cuál es la importancia socio-económica de estas pesquerías para las zonas de influencia en donde pescan?

What is the socio-economic importance of these fisheries in the influence areas where they fish?

-
- Alta / High
- Mediana / Median
- Baja / Low

8. ¿En su país existen programas de observadores abordo para estas pesquerías?

Do observer programs exist for these fisheries in your country?

- Si / Yes
- No

Otro (por favor explique) / Other (please explain)

9. ¿En su país qué medidas de mitigación se aplican a estas pesquerías?
What mitigation measures are applied to these fisheries in your country?

No se aplican medidas de mitigación / No mitigation measures are applied

DETs / TEDs

Vedas temporales – espaciales / Temporary-space closures

Tiempo de lance / Gear set time limits

Otras medidas / Other measures

10. ¿Conoce usted documentos técnicos o bibliografía científica que documente dicha problemática en su país?

Are you aware of technical documents or scientific literature that document this issue?

Si / Yes

No

Otro (por favor explique) / Other (please explain)

Annex IV

CIT-CC15-2018-Inf.2

Implementation of a Collaboration Strategy IAC - RFMOs IAC Participation in the IATTC 2018 Meetings

Following the strategy to work with Regional Fisheries Management Organizations (RFMOs) adopted by the Inter-American Convention for the Protection and Conservation of Sea Turtles 14th Scientific Committee Meeting, where the Scientific Committee collaborates providing technical advice to RFMOs that hold the most interest for the compliance with IAC objectives, and those which with the IAC has signed Memorandum of Understanding, this document describes the IAC participation in three of the Inter-American Tropical Tuna Commission (IATTC) meetings in 2018 as follows:

1. 8^a Meeting of the Working Group on Bycatch

May 10-11, 2018 – La Jolla, California, USA

The IAC Secretary *Pro Tempore* Ms. Verónica Cáceres and Dr. Bryan Wallace IAC Leatherback Task Force Coordinator and member of the Consultative Committee participated in the IATTC 8th Meeting of the Working Group on Bycatch. The meeting was co-chaired by Dr. Yonat Swimmer (NOAA member of the USA delegation to the IAC Scientific Committee) and Dr. Manuel Correia (Venezuela). The IAC was invited to this meeting in response to a recommendation from the 7th meeting of the IATTC Working Group on Bycatch which reads “*Encourage the IATTC to collaborate with the IAC Scientific Committee to identify bycatch hotspots in leatherback inter-nesting areas*”. Accordingly, the IAC was included in the agenda and provided the information requested.

Dr. Bryan Wallace gave a presentation titled “Opportunities for the Leatherback Conservation in the Eastern Pacific”. (See https://www.iattc.org/Meetings/Meetings2018/SAC-09/BYC-08/PDFs/PRES/English/BYC-08-PRES_Opportunities-for-leatherback.pdf) where the following items were highlighted:

- Core areas used by leatherbacks in inter-nesting habitats between October and March are well defined within 50 km of the index nesting beaches in Mexico, Costa Rica and Nicaragua.
- Recognition of well-defined areas known in migratory corridors and in coastal foraging areas (adults and subadults)
- A lot of information is known regarding bycatch of leatherback in fisheries, but there are knowledge gaps regarding high seas and coastal areas, interactions with longline, purse

seine and trawl nets, and throughout the leatherback range that require better observer coverage and better reporting of the bycatch to target mitigation measures.

Based on the technical information presented by the IAC and other experts, the IATTC Working Group on Bycatch drafted the following recommendations regarding sea turtles:

- i. Organize a regional workshop on sea turtle bycatch and mitigation methods, in order to determine the level of interaction with, and the mortality caused by, different fishing gears relative to factors other than fishing, analyze existing scientific information on mitigation (including inter alia, gear depth, soak time, hook type, bait type, etc.) for the most endangered sea turtle species that are likely to interact with tuna fisheries, while considering spatial and seasonal factors and the potential effects on other species (including target species).
- ii. Consider the following options for the protection of leatherback turtles:
 - a. Time-area management measures in areas adjacent to leatherback inter-nesting habitats for a reasonable period and distance from nesting beaches during the nesting season that will provide adequate protection, per scientific evidence. This may involve temporary moratoria on fishing and an exploration of options for fishers affected by closures.
 - b. Modifying longline fishing methods to mitigate bycatch in pelagic areas, where it is difficult to determine periods and areas where leatherback turtles aggregate, such as requiring the use of circle hooks, deeper setting, or finfish bait as alternative requirements for fishers who cannot implement other mitigation measures.
- iii. Continue to participate and promote research to improve techniques to further reduce sea turtle bycatch in all gear types used in the EPO.

Additionally, the WG on bycatch recommended to increase observers' coverage in longline fisheries, and standardize the form to report incidental catches.

In preparation for this meeting, the coordinator of the Leatherback TF requested comments on the presentation and recommendations from the members of this group formed by Mexico, USA, Peru, Chile, Costa Rica, and Ecuador.

2. 9th meeting of the IATTC Scientific Advisory Committee (SAC) *May 14-18, 2018 – La Jolla, California, USA*

The IAC Secretary *Pro Tempore*, Ms. Veronica Caceres, participated in this meeting where the recommendations from the IATTC Working Group on Bycatch included those provided by IAC (described above).

SAC adopted the following recommendations (fragment from SAC report):

OBSERVERS

4. Request the Commission to establish a minimum standard protocol for electronic monitoring.

5. Submit summarized national observer data in a standardized format that provides information useful for generating fleet-wide bycatch estimates.

SEA TURTLES

7. The Secretariat should explore with CPCs the possibility of organizing a regional workshop on sea turtle bycatch and mitigation methods, in order to determine the level of interaction with, and the mortality caused by, different fishing gears relative to factors other than fishing, analyze existing IATTC-93-03 ADD 1 - BYC-08 Recommendations 2 scientific information on mitigation (including inter alia, gear depth, soak time, hook type, bait type, etc.) for the most endangered sea turtle species that are likely to interact with tuna fisheries, while considering spatial and seasonal factors and the potential effects on other species (including target species).

8. Continue to participate and promote research to improve techniques to further reduce sea turtle bycatch in all gear types used in the EPO.

SAC's complete report can be found in the following link:

https://www.iattc.org/Meetings/Meetings2018/IATTC-93/PDFs/Docs/English/IATTC-93-03-02_ADDENDUM%201%20Recommendations%20of%20the%20Working%20Group%20on%20Bycatch%20approved%20by%20the%209th%20meeting%20of%20the%20SAC.pdf

3. IATTC 93rd Meeting of the Commission *August 24-30, 2018 – San Diego, California, USA*

The IAC Secretary *Pro Tempore*, Ms. Verónica Cáceres, and Dr. Bryan Wallace participated in this meeting supporting the adoption of the proposed Resolution IATTC-93-PROP-K-1A to Mitigate the Impact on Sea Turtles by Vessels Fishing for Tuna and Tuna-Like Species in the Eastern Pacific Ocean (See: https://www.iattc.org/Meetings/Meetings2018/IATTC-93/PDFs/PROP/English/IATTC-93-PROP-K-1A_USA%20Sea%20turtles.pdf).

The IAC requested support from the IAC Focal Point, the Leatherback Task Force, the Scientific Committee and the IAC delegates who are also delegates to the IATTC to do lobby regarding support for the resolution proposed which recommendations included those made by the IAC which are consistent with the Resolutions on fisheries and on the conservation of leatherbacks. Weeks before this meeting, Dr. Bryan Wallace, and Secretary Veronica Caceres established communication via teleconference and e-mail with IATTC delegates from Costa Rica, Mexico, Guatemala, Peru, Venezuela, and the United States in order to analyze the resolution proposed and request their opinions about it. Dr. Rebecca Regnery sectorial representative to the IAC Consultative Committee also sent e-mails requesting support from Non-Governmental Organizations (NGOs) and the SC Chair applied the same strategy with his Committee.

During the IATTC meeting, the IAC read a statement supporting the adoption of the Resolution proposed which aligns with the Convention's objectives. Also, Secretary Caceres

and Dr. Wallace were the communication channel between North, Central and South America Countries such as Canada, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Japan, Mexico, Nicaragua, Panama and the United States, proposers of the Resolution. They also met with the NGOs Defenders of Wildlife and WWF. As a result, the changes requested by the countries were included in the proposal, which final version was presented in plenary.

During plenary, each member of the IATTC in favor of the resolution did a presentation, including the European Union. Japan and Korea stated not to be in favor of the proposal due to the lack of scientific evidence in their countries regarding the effectiveness of the mitigation methods proposed in the Resolution, such as the use of circle hooks and the Deep Setting technique. The statement was based on their concern about the impact of circular hooks on other species such as sharks, and because these methods have not been tested in their regional waters. Japanese scientists are preparing to test circular hooks, but at the moment there is not enough evidence to support the Resolution. As a consequence, because decisions in IATTC are taken by consensus, the Resolution was not approved.

The plan for next year is that the IATTC Working Group on Bycatch meet again and include in their agenda a review of sea turtle bycatch mitigation methods, assess them and develop a report for the IATTC with recommendations so the Asian block can be informed on current findings.

The IAC Secretary made a mention acknowledging the countries in favor of the resolution, and expressed the support to the IATTC member regarding questions that may have emerged, in view of a further approval of the Resolution.

It is worth mentioning that during the meeting, the European Union presented the Resolution proposal IATTC-93 E1-A on Marine Pollution, with the purpose of establishing a regulatory framework on the marking of fishing gear and the discharge of plastics from fishing vessels in the IATTC Convention Area in order to limit the negative effects of plastic residues in the ocean affecting marine life on shore and offshore. Likewise, this proposal found resistance in the Asian Countries and was not approved.

This Secretary thanks the lobby of the Scientific Committee members as well as the support contacting their countries representatives, this is the kind of support required and expected when these opportunities occur.

Annex V
Workplan 2017 - 2019 - CIT-CC15-2018-Doc.5

Actor	Topic	Proposed Action	Expected Result	Time Frame
Exceptions Working Group and delegates from Panama and Guatemala	Exceptions	<p>1) Following the Exceptions Resolution, Guatemala and Panama will develop a Management Plan for their Exceptions including the elements in Resolution CIT-COP6-2013-R1 and its Annex 1. Suggestion: Using the country official format or Amend, et al (2002) UICN gtz.</p> <p>2) Delegates from Guatemala and Panama present their countries Exception Management Plan in the CC16.</p> <p>3) The Exceptions Working Group revises the Management Plan and develops recommendations to the Parties and the CCE.</p>	<p>1) Management Plans on IAC Exceptions in Panama and Guatemala, including results from the last 5 years of implementation of Resolution CIT-COP6-2013-R1.</p> <p>2) Recommendations to the Scientific Committee on the Management Plans.</p>	2018-2019
Scientific Committee, Secretariat Pro Tempore.	IAC Website & Newsletter	<p>1) On a monthly basis, the Scientific Committee will provide news relevant to IAC's Parties to the Secretary Pro Tempore for the IAC Newsletter.</p>	<p>1) Updated news in the IAC website, and regular publication of the IAC's Newsletter.</p>	Permanent
Fisheries Working Group	Fisheries	<p>1) Defining common topics to work within the framework of the Memorandum of Understanding IAC - ACAP.</p> <p>2) Revise the Annual Report table on compliance with Fisheries Resolution and select priority information to be used in technical documents and/or for recommendations to the Parties.</p>	<p>1) Activities identified within the framework of the MoU IAC-ACAP to prepare a workplan.</p> <p>2) List of priority information in the Annual Report table on compliance with Fisheries which will be used to produce recommendations for the Parties or technical documents</p>	Inter-session 2018 - 2019
Nesting Working Group	Conservation Status in Index Nesting Beaches	<p>1) Collect information on annual nesting in index beaches using the form developed by the SC, and the IAC Annual Report. The Technical Document on IAC Index Beaches is updated every 5 years. Next update is in 2023.</p> <p>2) Finish the Technical Document on the analysis of index beaches 2009-2018 to submit it to the IAC Parties.</p>	<p>1) Annual Reports updated with nesting information that Parties and Scientific Committee delegates provide.</p> <p>2) Final Technical Document with the analysis of nesting beaches 2009-2018 to be presented at the COP9.</p>	Inter-session October 2018
Scientific Committee	Work Plan	<p>1) Update the Scientific Committee Work Plan following IAC guidelines and the COPs Resolutions.</p>	<p>1) Scientific Committee bi-annual work plan including actions, timetable, and responsibilities.</p>	Permanent

Actor	Topic	Proposed Action	Expected Result	Time Frame
Scientific Committee and coordinator of strategies to work with international organizations	Collaboration with Other Organizations and Strategic Alliances	<ol style="list-style-type: none"> 1) Review the Scientific Committee Work Plan to include topics and mechanisms towards improving the cooperation with other organization. 2) The coordinator will follow up on the strategy to collaborate with RFMOs, adopted in the SC15, to inform the Scientific Committee and the IAC Parties. 3) Develop a protocol for how external groups should request data from the IAC. Responsible: US delegate 	<ol style="list-style-type: none"> 1) Identification of synergies with similar organizations to share information (ACAP, SPAW, IATTC, CPPS, WIDECAST, ICCAT, RAMSAR, SWOT, ICAPO, ASO, WWF, CBD, CMS, IOSEA, TLT -The Leatherback Trust, CITES). 2) Scientific and Consultative Committee coordinators report on the activities carried out within the strategy to work with RFMOs presented in the next SC. 3) Protocol for how external groups should request data from the IAC to be presented to the CCE. 	<ol style="list-style-type: none"> 1) Permanent 2) Permanent 3) November 2018
Scientific Committee and Annual Report Working Group	Annual Reports	<ol style="list-style-type: none"> 1) Review technical information included in the IAC Annual Report. 2) Review the IAC Annual Report and select priority information according to the SC15 agreements, to be used to be used in technical documents and/or for recommendations to the Parties. 	<ol style="list-style-type: none"> 1) Report on technical information from the IAC Annual Reports when needed. 2) List of priority information in the Annual Report which will be used to produce recommendations for the Parties or technical documents presented in the SC16. 	<ol style="list-style-type: none"> 1) Permanent 2) Sept 2019
Scientific Committee	Projects	<ol style="list-style-type: none"> 1) Develop recommendations about high priority projects to apply for funds and other resources needed to achieve the IAC objectives. 	<ol style="list-style-type: none"> 1) Recommendations for high priority projects when needed. 	Permanent
Scientific Committee	COP and Consultative Committee of Experts Recommendations	<ol style="list-style-type: none"> 1) Address COP and Consultative Committee of Experts requests and make recommendations accordingly. 	<ol style="list-style-type: none"> 1) Make recommendations to the COP and Consultative Committee of Experts as needed. 	Permanent
Scientific Committee	IAC Technical Documents	<ol style="list-style-type: none"> 1) Develop technical documents as needed. 	<ol style="list-style-type: none"> 1) Technical document on the analysis of index beaches 2009-2018 CIT-CC15-2018-Tec.14 updated. 2) Technical documents available at the IAC's website and shared with IAC Parties. 	<ol style="list-style-type: none"> 1) Oct- 2018 2) Permanent
Scientific Committee and Working Group	Galapagos Green Turtle <i>Chelonia mydas</i>	<ol style="list-style-type: none"> 1) Prepare recommendations to the CCE, COP and the Party Ecuador on the current situation of Galapagos Green. Responsible: Delegates from USA, Chile, Peru, and Ecuador. 	<ol style="list-style-type: none"> 1) Document with recommendations on the population status of Galapagos Green Turtle according to the IAC index beaches 2009-2018 report results. 	December 15, 2018

Actor	Topic	Proposed Action	Expected Result	Time Frame
Scientific Committee and Working Group	Northwest Atlantic Leatherback <i>Dermochelys coriacea</i>	1) Prepare recommendations to the CCE and the COP, on the Northwest Atlantic Leatherback. Responsible: Delegates from Argentina, Costa Rica and the Caribbean Netherlands.	1) Document with recommendations on the analysis of the Northwest Atlantic Leatherback nesting status.	December 15, 2018
Leatherback TF and Fisheries Working Group.	Eastern Pacific Leatherback <i>Dermochelys coriacea</i>	1) Develop an inter-sessional communication mechanism for the EP Leatherback Task Force Work. 2) Develop a standardized stranding and necropsies protocol for the Eastern Pacific Leatherback Turtles. 3) Develop a model report for each Party member of the Leatherback TF (Peru, Chile, Mexico, and Ecuador) on the status of occurrence and threats to the Leatherback. 4) Collect bibliographic data on incidental catches of leatherbacks in IAC Countries to identify other threats. 5) Revise the Annual Report table on fisheries and develop an updated report on the information required from the IAC Parties aiming for a comprehensive analysis of the compliance with the Resolution on Leatherbacks.	1) Communication system established among the EP Leatherback Task Force. 2) Eastern Pacific Leatherback stranding and necropsies protocol. 3) Model report on the status of occurrence and threats to the Leatherbacks in countries part of the Fisheries WG. 4) Report on the analysis of bibliographic information on incidental catches of leatherbacks in IAC Countries fisheries. 5) Report on the information required in the Annual Report aiming for a comprehensive analysis of the compliance with the Resolution on Leatherbacks.	2018-2019
Scientific Committee, Secretary Pro Tempore.	Hawksbill <i>Eretmochelys imbricata</i>	1) Review CITES report on the sea turtle trade and submits recommendations and comments from the Scientific Committee to CITES Secretariat.	1) Recommendations from the Scientific Committee submitted to CITES Secretariat on the sea turtle trade report.	December 2018
Scientific Committee, Secretariat Pro Tempore.	IAC Directory of Experts	1) Review and update the IAC Expert Directory.	1) Updated directory available on IAC's website.	Permanent
Scientific Committee	Capacity Building	1) Support from Scientific Committee members in workshops and training on topics identified by IAC Parties, and those for which funding is available.	1) Strengthening capacities on topics related to sea turtles in the IAC Parties.	Permanent
Scientific Committee Working Group:	Sea turtle conservation status	1) Develop the terms of reference for a consultancy on sea turtle conservation status.	1) Terms of reference for a consultancy on the conservation status of sea turtles.	2019 - SC16

Annex VI

CIT-CC15-2018-Doc.6

Recommendations and Agreements from the 15th IAC Scientific Committee Meeting

1) Index Nesting Beaches Report (2009-2018)

The IAC Scientific Committee Nesting Beach Working Group (the USA and IAC Secretariat PT) will finalize the Technical Document “Analysis of Sea Turtle Index Nesting Beaches IAC Region 2009-2018” CIT-CC15-2018-Tec.14. The Scientific Committee members by October 15th, 2018 will provide their pending information to complete the analysis. The final document will be submitted to IAC Secretariat PT by October 30th to be presented to IAC COP9, and it will be available on the IAC website.

2) Exceptions

The Scientific Committee included in their 2019 workplan and next meeting agenda, the review of the implementation of the Exception Resolution CIT-COP6-2013-R1 Guatemala and Panama and the review of the exception management plan.

The IAC Secretariat *Pro Tempore* will inform Guatemala and Panama to present their management plan at the 16th meeting of the Committee next year. The document should be provided in the approved format by the country or using the document Amend (2002) UICN/GTZ.

The Scientific Committee agreed to remove from their 2018-2019 workplan the review of Honduras exception, due to lack of information for the IAC exception request format. This topic will be addressed once Honduras provides the necessary information.

The Scientific Committee agreed to remove from their 2018 workplan the activities of preparing a project proposal for a study on population trends of *L. olivacea*, and a proposal for a study of *L. olivacea* cross-border egg traffic in Fonseca Gulf. Due to the lack of information to carry out those activities because they involve IAC non-Parties.

3) Turtle Excluder Devices

The Scientific Committee adopted the document prepared by the delegate from Mexico Dr. Heriberto Santana, and IAC Secretariat *Pro Tempore* on the types of TEDs in the IAC Region. The document and the laws and regulations regarding TEDs are available on the IAC website in <http://www.iacseaturtle.org/dets-eng.htm>

4) Recommendations on the Northwest Atlantic Leatherback

The Scientific Committee will prepare recommendations for the Consultative Committee and the Conference of Parties on the status of the population of the Northwest Atlantic Leatherback, based on the *Northwest Atlantic Leatherback Status Report -WIDECAS*T.

During the intersessional period the SC presented recommendations based on the report for consideration of the CCE and the COP (**Annex IX**).

5) Recommendations on Green Turtle nesting in Galapagos

The Scientific Committee will prepare recommendations to the Consultative Committee, Ecuador and COP on the observed decline in nesting of the green turtle population in Galapagos, from what is reported in the IAC Annual Report and index nesting beach analysis. The Working Group comprised of Ecuador, Peru, Chile, and USA (Coordinator) will prepare the recommendations. The report will be a white paper with brief and concise information and recommendations that will be sent to IAC Secretariat PT by December 15th, 2018.

6) Fisheries

The Scientific Committee designated Mr. Javier Quinones, the delegate from Peru to be the Coordinator for the Fisheries Working Group. It was agreed that this working group will meet every 3 months to follow up on the activities included in the Scientific Committee workplan.

7) Ecuador East Pacific Leatherback Report

The Scientific Committee recognizes the value of the East Pacific Leatherback report prepared by Ecuador, and it is recommended to be adopted as a reference that IAC Parties could use to prepare similar reports.

8) IAC Annual Report

Legal section:

IAC Secretariat *PT* will review the instructions in this section and provide clarification where needed.

Data request and Annex Section:

The SC will continue to use the index beach data table to update the technical document on index beach analysis every five years. It is requested that IAC Parties continue to provide this information in the Annual Report. The next update will be in 2023.

The SC suggests protecting the nesting information reported in the annual report and agrees to continue requesting the data without uploading this section in the IAC website. The SC will provide a justification in the data request section by linking the data request to the value of the information for conservation.

Threat Section:

The SC will prepare a threat analysis every 5 years. To do this the SC will review the existing threat matrix and will suggest a new one that will provide information for the

analysis. The new matrix will be discussed at SC16.

Resolution Section:

The SC recommends that the fisheries WG decides on topics that relate to the information in the annual report that will be useful to prepare recommendations to IAC Parties.

Climate Change:

The Scientific Committee has developed a form to report environmental parameters. The form will be submitted by those countries that voluntarily will collect the information to be analyzed by the Scientific Committee.

9) Strategy to Collaborate with RFMOs and International Organizations

Coordination

Mr. Didiher Chacon was elected as the Coordinator to follow up on the implementation of the strategy to collaborate with RFMO and other International Organizations. He will work in coordination with Ms. Rebecca Regnery from the Consultative Committee. It was agreed that the Coordinators will present a report on the implementation of the strategy in the next SC meeting.

Collaboration with CITES

The Scientific Committee had provided recommendations to the preliminary report on Marine Turtle Trade prepared by CITES. The SC observed that there is still information from IAC region not included in the report, and recognizes that the report is still in the stage of data collection as the final document is prepared.

The IAC Secretariat *PT* will ask CITES Secretariat to allow no less than 2 weeks for the IAC Scientific Committee to provide feedback on the final Marine Turtle Trade report. The IAC Scientific Committee will provide feedback on the report by December 2018 provided that the report is available.

Process for data request to IAC

The delegate from The United States Dr. Jeff Seminoff will prepare a template with a potential process to manage data /information request to IAC. The proposal will be evaluated by the Consultative Committee.

10) Workplan 2018-2019

The workplan was updated with inter-session activities mentioned above and the results are expected to be reported on SC16. *Annex II* (Workplan 2017 – 2019 CIT-CC15-2018-Doc.5)

11) Election of Chair and Vice-chair

The delegate from Argentina Dr. Diego Albareda was asked to continue as Chair, and the delegate from Costa Rica, Dr. Didiher Chacon was elected as Vice-chair for a two-year term.

Annex VII
Photos of the 15th IAC Scientific Committee Meeting



Group photo of the delegates and participants in the IAC SC15



From left to right, Ministry of Environment of Honduras, Mr. José Antonio Galdames, IAC Secretary *Pro Tempore*, Ms. Veronica Caceres, Ambassador José Isaías Barahona Herrera, Undersecretary of Foreign Affairs and Policies, Chair of the IAC Consultative Committee of Experts, Mr. Paul Hoetjes, and the Chair of the IAC Scientific Committee, Mr. Diego Albareda.

Annex VIII

Draft report on Ecuador's Leatherback Turtle (Spanish only)

Draft prepared by Ecuador's delegate Mr. Eduardo Espinoza



Convención Interamericana para la Protección y Conservación de las Tortugas Marinas

15ª Reunión del Comité Científico

Septiembre 17-19, 2018, Tegucigalpa, Honduras

Updated 13.11.2018

Síntesis de la presencia de la tortuga Laúd (*Dermochelys coriacea*) en la costa ecuatoriana.

Este documento es presentado ante el Comité Científico (CC) de la Convención Interamericana para la Protección y Conservación de Tortugas Marinas respondiendo a lo establecido en el plan de Trabajo 2017–2019 donde el Grupo de Trabajo Baula OPO, en el documento CIT-CC14-2017-Doc.4 donde se solicita a los países partes la elaboración de un informe por país parte del estado de conservación de la Laúd y sus amenazas.

La información ha sido recabada y sistematizada por los autores de este reporte sin embargo la data original ha sido proporcionada por varios colaboradores que se enlistan en este documento (índice de colaboradores), la información reportada en este informe proviene de fuentes variadas, desde publicaciones referidas en la bibliografía, comunicaciones personales, reportes técnicos de funcionarios del Ministerio del Ambiente y de avistamientos y reportes realizados por los autores. Para facilitar la comprensión de este documento se ha sistematizado los resultados en un mismo formato y orden cronológico por tipo de evento categorizado en tres categorías: Varamiento, Pesca incidental y anidación.

Es necesario aclarar que este reporte ha sido desarrollado por la delegación de Ecuador para la 15va reunión del comité científico de la CIT en un esfuerzo por sintetizar y reportar los eventos de

ocurrencia de Laúd en la costa ecuatoriana, así mismo recalcar que la información mostrada en este informe es la recabada hasta la fecha de publicación de la presente, no significa que sea toda la información existente ya que podría existir aún bibliografía gris dispersa o información no publicada.

Se solicita a los delegados del Comité Científico de la CIT revisen el contenido del documento, y a la Secretaría pro-tempore recuerde a los países parte el cumplimiento de esta recomendación y acorde a lo resuelto en la 15va reunión del comité científico se tome como muestra este documento para otros Países parte que puedan reportar información similar.

Publicado por la Secretaría *Pro Tempore* de La Convención Interamericana para la Protección y la Conservación de las Tortugas Marinas

Este documento contiene algunos datos no publicados, análisis y conclusiones que pueden estar sujetos a cambio. Los datos del documento no deben ser citados, ni utilizados para fines ajenos a la labor de la Secretaría de la CIT y sus grupos de trabajo sin la autorización por escrito de los autores. Esta publicación puede ser reproducida en su totalidad o en partes para propósitos educativos y otros sin fines de lucro, siempre y cuando se reciba permiso escrito de el o los autores y se haga el reconocimiento de la fuente. La Secretaría Pro Tempore de CIT apreciará recibir copia de cualquier publicación que utilice este documento como fuente de referencia.

Cita del Documento

Eduardo Espinoza, Johanna Moreira, Lissette Ramírez y Roddy Macías 2018. Síntesis de la presencia de la tortuga Laúd (*Dermochelys coriacea*) en la costa ecuatoriana. CIT-CC15-2018-Tec.15. Secretaría *Pro Tempore* CIT, Virginia USA.

Esta publicación está disponible vía electrónica en: www.iacseaturtle.org y en:

CIT Secretaría *Pro Tempore*

Leesburg Pike, Falls Church, VA 22041-3803 U.S.A

Tel.: + (703) 358 -1828

E-mail: secretario@iacseaturtle.org, contact@iacseaturtle.org

Índice de Colaboradores:

- Blgo. Luciano Ponce.- Director Provincial del Ambiente de Santa Elena.
- M.Sc. Julia Cordero.- Especialista de Vida Silvestre, Dirección Provincial del Ambiente de Manabí.
- Blga. Beatriz Ladines.- Administradora de la Reserva de Producción de Fauna Marino y Costera Puntilla de Santa Elena.
- Lcdo. Carlos Méndez.- Administrador del Área Nacional de Recreación Playas de Villamil.
- Msc. Argelio Ortiz.- Administrador de la Reserva Ecológica Manglares Cayapas Mataje.
- Lcdo. Elvis Chávez.- Administrador del Refugio de Vida Silvestre Manglares Estuario Río Muisne.
- Blgo. Demetrio Alvarado.- Administrador de la Reserva Marina El Pelado.
- Blgo. Carlos Cruz.- Guardaparque del Refugio de Vida Silvestre Isla Corazón y Fragatas.
- Vet. Rubén Alemán.- Guardaparque del Parque Nacional Machalilla.
- Sr. Ander Gracia.- Técnico del Refugio de Vida Silvestre Manglares Estuario Río Muisne.
- Ing. Tatiana Córdova.- Administradora del Refugio de Vida Silvestre Islas Corazón y Fragatas.
- Blgo. Yolanda Bazurto.- Guardaparque del Área Nacional de Recreación Playas de Villamil.
- Dr. Daniel Alava.- Guardaparque del Refugio de Vida Silvestre Isla Corazón y Fragatas.
- Ángel Lorenzo López Reyes.- Guardaparque - Refugio de Vida Silvestre y Marino Costera Pacoche.
- Ing. Iliana Solórzano.- Administrador de Áreas Protegidas - Refugio de Vida Silvestre Marino Costero Pacoche.
- Oscar Daniel Carreño Maldonado.- Especialista en Patrimonio Natural 3-UPN Ministerio del Ambiente Santa Elena.
- Freddy Juan Salinas Rodríguez.- Guardaparque REMACOPSE.
- José Alejandro Murillo Giler.- Guardaparque REMACOPSE.
- Daniel Alejandro Garcés Mendoza.- Guardaparque Refugio de Vida Silvestre Manglares Estuario Río Muisne.
- Ignacio Alfredo Calderón Intriago.- Guardaparque Área Nacional de Recreación Playas Villamil.
- Esther Sulay Palomino Becerra.- Responsable del Refugio de Vida Silvestre Manglares Estuario Río Esmeraldas.
- Blgo Luis Reyes.- Guardaparque REMAPE.
- Lcdo. Jorge David Ortiz.- Especialista de Áreas Protegidas. Dirección Provincial del Ambiente Santa Elena.
- Alex Pilay.- Guardaparque REMAPE.

- Blga. Roxana De los Santos.- Guardaparque REMAPE.
- Blga. Katherine Rendón.- Guardaparque REMAPE.
- Sr. Tito Rivadeneira.- Guardaparque REMAPE.
- Blgo. Claudio Tomalá.- Técnico del Área Protegida REMAPE.
- Blga. Jodie Darquea.- Administradora de REMAPE
- Sr. Julio Mendieta.- Salvavidas de la playa Crucita-GAD Portoviejo.
- Fernanda Verónica Chipe del Pezo.- Guardaparque REMAPE.
- Srta. Cyntia Mizobe.
- Sr. Carlos Delgado.
- Sr. Narciso Mendieta.
- Sra. Kerly Briones.- Voluntaria MAE-GAD Portoviejo - Crucita.
- Sr. Galo Menéndez Chávez.
- Mario Hurtado
- Sr. Javier Suárez Yagual

Siglas.

MAE: Ministerio del Ambiente del Ecuador.

DP: Dirección Provincial.

GAD: Gobierno Autónomo Descentralizado.

OPO: Océano Pacífico Oriental.

INOCAR: Instituto Oceanográfico de la Armada.

DPNG: Dirección Parque Nacional Galápagos.

CIT: Convención Interamericana para la protección y conservación de las Tortugas Marinas.

REMAPE: Reserva Marina el Pelado.

REMACOPSE: Reserva de Producción de Fauna Marino Costera Puntilla de Santa Elena.

DPASE: Dirección Provincial Ambiente Santa Elena.

CPPS: Comisión Permanente del Pacífico Sur.

RVSMC: Refugio de Vida Silvestre Marino Costera.

RVSMERE: Refugio de Vida Silvestre Manglares Estuario Río Esmeraldas.

DPAE: Dirección Provincial Ambiente Esmeraldas.

SGMC: Subsecretaría de Gestión Marina Costera.



Convención Interamericana para la Protección y Conservación de las Tortugas Marinas

Síntesis de la presencia de la tortuga Laúd (*Dermochelys coriacea*) en la costa ecuatoriana.

CIT-CC15-2018-Tec.15

Preparado por:
**Eduardo Espinoza, Johanna Moreira, Lissette Ramírez
y Roddy Macías**

Ministerio del Ambiente-Ecuador

CIT Secretaría *Pro Tempore* • Virginia, USA

El presente informe tiene por objeto proporcionar a los países miembros de la CIT una síntesis de los eventos de la ocurrencia de la tortuga Laúd (*Dermochelys coriacea*) la información aquí reportada se la ha obtenido de diferentes fuentes desde bibliografía publicada (la cual ha sido referenciada) hasta comunicación personal de algunos de los que han contribuido en este informe. Este informe fue iniciado en 2016 por E. Espinoza, y J. Moreira; sin embargo, se actualizó recientemente con datos en cooperación de los otros autores.

1. Introducción:

La tortuga Laúd (*Dermochelys coriacea*) del OPO es una de las especies más amenazadas de los chelonidos que habitan en este planeta (Wallace 2011), se encuentran en la lista Roja de la Unión Mundial para la conservación de la Naturaleza (UICN por sus siglas en Inglés) se encuentra catalogada en Peligro Crítico de extinción para la subpoblación del Pacífico Oriental (OPO) (UICN 2000). Los principales criterios para incluir esta especie en dicha categoría ha sido la declinación de sus poblaciones, causado principalmente por amenazas tales como la pesca incidental, desarrollo costero, captura dirigida, contaminación, Cambio Climático (Wallace y Saba 2009).

Esta especie presenta un alto nivel de vulnerabilidad ecológica, principalmente por sus características reproductivas, en estado natural presenta un bajo porcentaje de eclosión a diferencia de otras tortugas marinas (López M., 2016), además de una baja tasa de reproducción haciéndola susceptible a una extinción poblacional ya que sus niveles de recuperación natural son muy bajos.

En Ecuador la presencia de esta especie cuenta con muy pocos registros en el. Se la ha observado en interacción con pesquerías, varamientos y muy escasos eventos de anidación, esto último con muy pocos reportes confirmados. Salas (1981) informó sobre la presencia de una posible hembra anidadora en Atacames (provincia de Esmeraldas) en enero de 1980; Vallejo y Campos (2000) plantearon una posibilidad de anidación en el Parque Nacional Machalilla; y Hurtado (2001) reporta evidencia de huellas de *D. coriacea* en Cabo Pasado. Zárate (2006) reporta que *D. coriacea* es un visitante ocasional de Galápagos y que no anida en el archipiélago. Baquero et al. (2008) han confirmado anidación de *D. coriacea* en Ecuador.

Existe información histórica de la presencia de esta especie, para los años 80th Mario Hurtado y otros investigadores como Dereck Green reportaron anidación para la costa ecuatoriana, en una sinopsis de los eventos ocurridos durante un Taller sobre el estado de la conservación de las tortugas marinas en Ecuador que se realizó en el año 2001 como parte del plan de acción regional para la conservación de las tortugas marinas para el Pacífico Sudeste preparado para CPPS se reportan al menos 6 eventos de anidación en diferentes épocas para los años 70 y 80 (Hurtado M. com.pers.). Así mismo el Biólogo Galo Menéndez reportó que en 1983 haber encontrado neonatos de Laúd en la playa de Puerto Cabuyal, luego de tomar datos biométricos los liberó en la playa, imágenes de estos eventos quedaron registrados en fotos siendo estos los primeros registros con evidencias de la anidación exitosa de esta especie en aquellas décadas.

Hay varios reportes de anidación; sin embargo, muy pocos han sido confirmados, en diciembre de 2013 se registró una anidación de esta especie en la playa de San Lorenzo (MAE, 2014) posteriormente hubo otros reportes en Puerto Cabuyal, Santa Marianita, Crucita (Manabí) y Las Palmas (Esmeraldas). Por otro lado, existen reportes históricos de

varamientos en sitios como: Crucita, San Clemente, Pedernales, Briseño, Las Tunas, Puerto López (Manabí) y Valdivia, La Diablica (en Santa Elena). La interacción de las pesquerías con esta especie ha sido registrada por observadores pesqueros en el caso de Galápagos y por pescadores en el Ecuador continental (MAE, 2014).

Este informe pretende consolidar y sintetizar la información recabada de la presencia de esta especie en la costa ecuatoriana, la misma que ha estado dispersa en diversos reportes, publicaciones y aun en comunicaciones personales que nunca fueron publicadas. El principal objetivo de este documento es que sirva de línea base de la ocurrencia de esta especie en la Costa del Ecuador continental hasta la fecha en la que se emite este reporte.

2. Área de los eventos:

Ecuador, es un País que se encuentra situado al noroeste de Sudamérica, en la costa de Pacífico y sobre la línea ecuatorial; geográficamente se divide en cuatro regiones: Litoral o Costa, Interandina o Sierra, Oriental o Amazónica e Insular o Galápagos. Es considerado un país continental con más de 1200 Km de costas, sin contar con el Archipiélago de Galápagos e islas continentales (INOCAR, 2012).

La región Costa o Litoral se extiende desde el río Mataje al norte hasta el río Zarumilla al sur; en esta región encontramos cordilleras costeras: Mache Chindul, Jama, Chongón Colonche, Balzar, Convento y Cojimíes (Andrea L. Varela,. 2018).

El clima de Ecuador está definido principalmente por su posición geográfica en dos estaciones, sin embargo factores como la influencia del mar, corriente fría de Humboldt y de la corriente cálida de Panamá, orientación perpendicular de los Andes a los vientos Alisios dan como resultado una gama de sub-climas, microclimas y topoclimas (INOCAR, 2012). De acuerdo a la distribución de la precipitación encontramos una temporada seca y otra húmeda; para la costa la estación de lluvia (invierno), la encontramos en los meses de diciembre y abril (Hernández y Zambrano, 2007); la estación seca (verano) corresponde a los meses restantes (Rossel et al. 1998).

En la franja costera del Ecuador continental se distribuyen un total de 110 playas a lo largo de la costa. Como resultado de la ubicación geográfica y su topografía, la zona marina y costera del Ecuador continental presenta una gran diversidad biológica, a nivel de ecosistemas, comunidades y especies.

El Plan Nacional para la conservación de las tortugas marinas para el Ecuador reporta la presencia de anidación de laúd en algunos sitios costeros, como el de Salas (1981) reporta la presencia de una posible hembra anidadora en Atacames (provincia de Esmeraldas) en enero de 1980; Vallejo y Campos (2000) sugirieron una posibilidad de anidación de Laúd en el Parque Nacional Machalilla. Otros autores reportan registros de anidación de esta especie en el 2000 en Tonchigue (Herrera y Coello 2009), en Same Provincia de

Esmeraldas para el 2008 (Baquero et al., 2008 a), y en la Provincia de Manabí en Cabo San Lorenzo durante 2007 (Herrera y Flores 2009).

La franja costera ecuatoriana sería una de las zonas más sureñas donde se ha registrado anidación para esta especie, de allí la importancia de conocer y registrar la presencia de esta especie en la costa ecuatoriana.

A continuación, se reporta la presencia de esta especie en la franja costera en tres categorías de eventos: varamiento, anidación y pesca incidental. Esto a partir de los datos que se pudieron obtener y que estaban disponibles a la fecha de este informe.

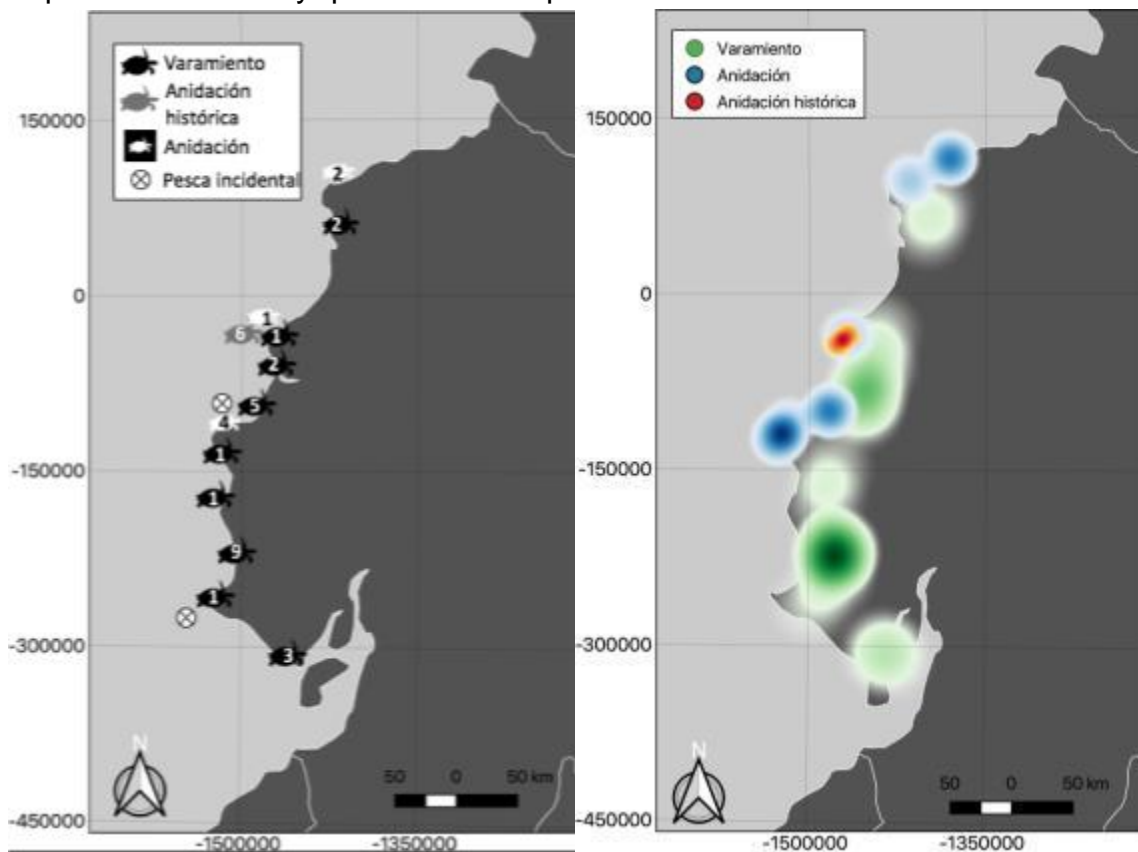


Figura 1. a) Mapa de la distribución y número de eventos reportados de la presencia de la Laúd en la costa ecuatoriana b) Mapa de calor que muestra los sitios de mayor presencia de los eventos reportados (elaborado por: Sofía Miguel Romero DPNG).

Los mapas de los eventos reportados en el presente informe muestran la ocurrencia de esta especie en varios años reportados, lo cual no se lo podría tomar como un índice de abundancia, sin embargo con la sistematización de esta información y en el mapa de calor desarrollado con los datos obtenidos, se puede inferir que la mayor concentración de los varamientos se reportan para la zona de Santa Elena y Manabí, por otro lado la anidación (Histórica y Actual)

3. Varamientos

Se entiende por varamiento al evento donde una tortuga marina viva o muerta, se ve imposibilitada de regresar al mar por sus propios medios, aparece en la costa o cerca de la misma, afectada por causas naturales o antrópicas. Se conoce que estos eventos inusuales pueden representar un cambio en la estructura de las poblaciones en diferentes sentidos (Albareda D. 2015), por lo cual es importante entender las causas de los varamientos para establecer medidas de mitigación ante estos eventos.

Los varamientos pueden ser clasificados en simples y masivos, en función del número de individuos involucrados. Por otro lado, los varamientos masivos involucran más de dos ejemplares que varan en un mismo rango de tiempo y espacio.

Los eventos reportados en este informe detallan varamientos simples ya que en su mayoría solo se encontró un individuo por evento; así mismo, casi todos los varamientos aquí sistematizados provienen de diversas fuentes, en su mayoría son avistamientos esporádicos encontrados por casualidad sin que sea parte de un monitoreo continuo secuencial. Los datos obtenidos corresponden desde el 2011 hasta agosto del 2018 para esta especie.

En general se han reportado varamientos de laúd a lo largo de toda la costa ecuatoriana, sin embargo, la provincia con mayor ocurrencia de estos eventos es Santa Elena con un 42 % de ocurrencia, seguido por Manabí con 38% (tabla 1).

Tabla 1: Varamientos de laúd en el Ecuador continental

Provincia	Número de Eventos	Porcentaje
Esmeraldas	2	8%
Guayas	3	12%
Manabí	10	38%
Santa Elena	11	42%

2011 San Clemente

El 29 de junio del 2011 se reporta el varamiento de un individuo en la playa de San Clemente del cantón Sucre en la provincia de Manabí; durante la revisión externa de la tortuga no se encontró rastros de algún golpe o herida que pudiera haber causado su muerte, sin embargo, se pudo evidenciar que la aleta posterior izquierda se encontraba

atado a una línea de nylon. Se procedió a tomar medidas morfométricas: largo curvo 131 cm (Imagen 1 y 2).



Imagen 1 y 2: Varamiento San Clemente (Foto Cristian Lam)

2013 San Vicente

El 17 de noviembre del 2013 pescadores de la comunidad reportan una tortuga Laúd varada en la playa del Sector Punta Napo del cantón San Vicente en la provincia de Manabí; lamentablemente al llegar al lugar los pescadores ya se habían llevado el animal, sin poder obtener datos del individuo ni poder determinar las causas de su varamiento. Solo se confirmó este evento por la evidencia fotográfica presentada por uno de los pescadores (Imagen 3)



Imagen 3: Varamiento de tortuga laúd en Punta Napo (MAE Manabí)

2013 Puerto López

En el 2013 en Puerto López, el personal del Parque Nacional Machalilla atiende el reporte de un varamiento de laúd; este evento es reportado en el Informe País del 2014 Ecuador para la CIT (Convención Interamericana para la protección y conservación de las Tortugas Marinas) en esta nota se sugiere que la posible causa de muerte estuvo relacionada con artes de pesca, este evento no cuenta con evidencias fotográficas.

2014 Puerto Cabuyal

En la comunidad costera conocida como Puerto Cabuyal perteneciente al cantón San Vicente de la provincia de Manabí se reportó el varamiento de una laúd el 30 de octubre del 2014. No se obtuvieron datos morfo-métricos de este individuo ya que no estuvieron presentes en el varamiento los técnicos del MAE, solo se obtuvieron versiones de los pescadores de la comunidad, quienes manifestaron que no presentaba ninguna muestra de herida externa, golpe o enredo que causara su muerte. No se tomaron medidas de la tortuga encontrada, solo la foto como evidencia (Imagen 4).



Imagen 4: Varamiento en Puerto Cabuyal (Foto: Carlos Delgado)

2014 Crucita

En octubre del 2014 Johanna Moreira de la Dirección Provincial de Manabí del MAE recibe un reporte del salvavidas de la playa de Crucita, el Sr. Julio Mendieta, quien menciona haber visto una foto de un amigo que encontró una tortuga Laúd varada. No se obtuvo ningún dato del individuo ni las posibles causas de varamiento, únicamente se confirmó el evento mediante la evidencia fotográfica (Imagen 5).



Imagen 5: Tortuga varada en playa de Crucita (Foto: Narciso Mendieta)

2014 Valdivia

El 4 de abril del 2014 en la playa de Valdivia de la provincia de Santa Elena el Sr. Javier Suárez Yagual durante un recorrido en la playa como parte de su proyecto de tesis, reporta un individuo de laúd varado en la playa. En el estudio no se determina las posibles causas de varamiento; sin embargo, se tomaron datos del individuo el cual medía 121cm. de largo curvo y 77 cm. ancho curvo (Imagen 6).

2014 Libertador Bolívar

Otro evento de varamiento es reportado por la misma persona en el 2014 en la playa Libertador Bolívar de la provincia de Santa Elena, al igual que el individuo anterior no se pudo determinar la causa de varamiento, únicamente se obtuvo las medidas de la tortuga: 114cm de largo curvo y 70 cm de ancho curvo caparazón.



Imagen 6: Tortuga varada en playa de Valdivia (Foto: Javier Suárez Yagual)

2014 Valdivia

El 29 de septiembre del 2014 durante los recorridos de monitoreo diurno del área protegida, personal de la Reserva Marina el Pelado (REMAPE) encontraron en la playa de Valdivia perteneciente a la provincia de Santa Elena un varamiento de laúd. El individuo se lo encontró con cortes limpios en la región ventral, notándose la extracción del área del plastrón; la cabeza y caparazón se encontraron intactos, dando la apariencia que fue faenada para extraer sus órganos ventrales. De las medidas morfo-métricas que se tomaron se obtuvo un largo curvo 125cm. y ancho curvo 92 cm (Imagen 7).



Imagen 7: Laúd varada en Valdivia (Foto Alex Pilay)

2014 Playa Bruja

El 18 de septiembre del 2014 en el sector conocido como Playa Bruja de la provincia de Santa Elena, guardaparques del área protegida REMAPE encontraron un varamiento de laúd. El individuo encontrado presentaba signos externos de las posibles causas de mortalidad: fracturas en la cabeza, huecos profundos en el cuello. Se tomaron las medidas morfo-métricas: 108 cm. largo curvo y 72 cm. ancho curvo (Imagen 8).



Imagen 8: Laúd varada en Playa Bruja (Foto Alex Pilay)

2015 El Palmar

El 27 de julio del 2015 en el sitio el Palmar de la provincia de Santa Elena, el Guardaparque David Ortiz funcionario de la REMAPE, encuentra un individuo de laúd que le fue reportado a orillas de la playa, no se muestran señales que ayuden a determinar las causas de su muerte y proceden a enterrar al individuo (Imagen 9).



Imagen 9: Laúd varada en el Sitio El Palmar (Foto David Ortiz)

2015 El Palmar

En la misma provincia de Santa Elena en el sitio denominado el Palmar el 26 de agosto del 2015 la guardaparque Verónica Chipe de la REMAPE reporta otro individuo de tortuga laúd varado a orillas de la playa, el organismo se lo encontró en avanzado estado de descomposición por lo que no se pudo tomar más información de las causas del varamiento (Imagen 10).



Imagen 10: Tortuga laúd varada en El Palmar (Foto Verónica Chipe)

2015 El Palmar

El 27 de agosto del 2015 en la provincia Santa Elena, el guardaparque Alex Pilay de la REMAPE recibe una denuncia ciudadana de un varamiento de laúd en la playa El Palmar.

De este evento no se obtuvieron datos morfométricos, ni registros que puedan mostrar las causas del varamiento, debido a que parte del animal estaba siendo faenado por pescadores del sector. Cuando el personal del Ministerio del Ambiente llegó al sitio pudo recuperar parte de la carcasa con lo que se identificó la especie.

2015 Diablica

El 27 de Diciembre del 2015 en el sector conocido como “Diablica” de la provincia de Santa Elena los guardaparques Freddy Salinas y Alejandro Murillo de la Reserva Marino Costera Provincia de Santa Elena REMACOPSE, encontraron un individuo de Laúd varado en la playa, el mismo que se encontraba en un avanzado estado de descomposición, a pesar de eso se determinó que era de sexo hembra medía: largo curvo 122 cm y ancho curvo: 116cm (Reporta Beatriz Ladines REMACOPSE), no se pudo determinar la causa del varamiento debido a su avanzado estado de descomposición.

2015 San Pedro

En la misma provincia de Santa Elena el 15 de febrero del 2015 en la comuna de San Pedro se reporta el varamiento de una laúd en un área perteneciente a la Reserva Marina El Pelado, dicho reporte fue elaborado por personal de la Unidad de Patrimonio Natural de DPASE-MAE. El individuo presentaba un golpe severo en la parte frontal de su cráneo, lo que pudo haber sido la causa de su muerte (Imagen 11).



Imagen 11: Varamiento San Pedro (Foto DPASE-MAE)

2016 San Vicente

El 20 de septiembre del 2016, técnicos del Refugio de Vida Silvestre Islas Corazón y Fragatas reciben la denuncia ciudadana de la presencia de una tortuga flotando en el mar, cerca al sector del puente Alcatraz del cantón San Vicente provincia de Manabí. El individuo se encontraba en estado de descomposición grado II; sin embargo, se evidenció la

presencia de una fractura en el cráneo producido por un golpe con un objeto contundente. Se tomaron datos del individuo, el mismo que medía: 116 cm. de largo curvo y 68 cm. ancho curvo (Imagen 12 y 13).



Imagen 12 y 13: Varamiento de laúd en el sector Alcatraz (Foto Daniel Álava)

2016 San Vicente

El 27 de julio del 2016, personal del Refugio de Vida Silvestre Islas Corazón y Fragatas, dentro de los recorridos de control de vida silvestre que se realizan constantemente, encuentran un individuo de laúd varado en la playa de Canoa del cantón San Vicente - Manabí. La tortuga se encontraba en completo estado de descomposición y no se pudo determinar las causas de su muerte. Se tomaron medidas morfométricas obteniendo un largo curvo 108 cm y ancho curvo de 73 cm (Imagen 14).

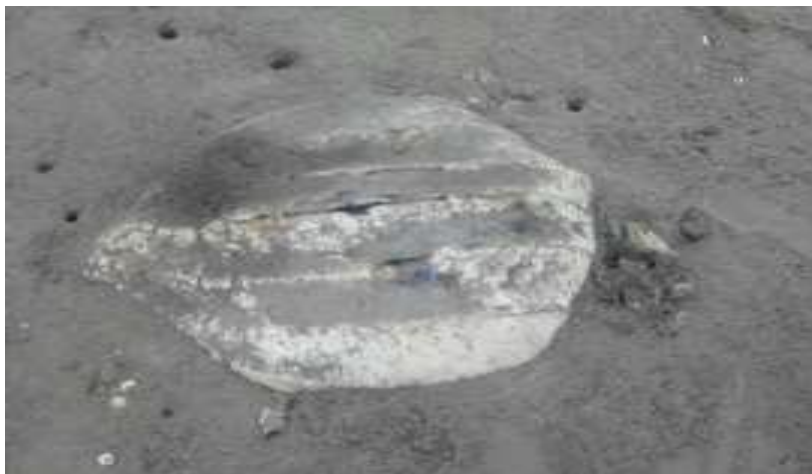


Imagen 14: Laúd en estado de descomposición en la playa de Canoa (Foto Daniel Álava)

2017 San Pablo

El 31 de enero del 2017 el personal técnico del Ministerio del Ambiente de Santa Elena reporta un individuo de laúd varado en la playa San Pablo. Se desconoce las causas que provocaron el varamiento, ya que el individuo no tenía ninguna señal externa luego se procede a la disposición final (Imagen 15 y 16).



Imagen 15 y 16: Laúd varada en San Pablo (Foto Oscar Carreño)

2017 Valdivia

En la playa de Valdivia de la provincia de Santa Elena, técnicos de la REMAPE atienden un varamiento el 25 de junio del 2017; el individuo se encontraba en estado de descomposición; sin embargo, se notó que tenía un cabo atado a la aleta trasera derecha del individuo, lo cual supondría que es resultado de la interacción con pesca (Imagen 17 y 18).



Imagen 17 y 18: Laúd varada en Valdivia (Foto Alex Pilay-Santa Elena-MAE)

2017 Villamil

El 6 de julio del 2017, guardaparques del Área Nacional de recreación Playas Villamil reportan el varamiento de tortuga laúd en el Km 5,5 vía a Data. El individuo fue encontrado en avanzado estado de descomposición, lo cual dificultó determinar las causas de su muerte. A pesar de aquello se pudo tomar las medidas morfo-métricas: 130 cm de largo curvo y 100 cm de ancho curvo. Mediante evidencia fotográfica se puede inferir que tuvo un severo golpe en la cabeza (Imagen 19).



Imagen 19: Laúd varada en Playas Villamil (Foto Gabriel Santos-MAE)

2017 Villamil

El 30 de agosto del 2017, guardaparques del Área Nacional de recreación Playas Villamil de la provincia del Guayas, reciben una denuncia de un servidor turístico sobre una tortuga varada en la playa. La misma que se la encontró en avanzado estado de descomposición, lo cual no permitió determinar la posible causa de muerte, únicamente se tomaron las medidas del individuo: 150 cm largo curvo del caparazón y 126 cm de ancho curvo de caparazón.

2017 Puerto Cayo

El 29 de octubre del 2017 personal del Parque Nacional Machalilla recibe la denuncia de una tortuga laúd varado en la playa de Puerto Cayo en la provincia de Manabí. De este individuo no se obtuvieron datos morfo-métricos.

2017 Crucita

El 12 de diciembre del 2017 durante los recorridos de control por la playa de Crucita que realizaba el Sr. Julio Mendieta; salvavidas del Gobierno Autónomo Descentralizado Portoviejo, quien encontró una tortuga en descomposición, sin aletas y sin cabeza; a pesar de aquello, por las características del caparazón con sus quillas distintivas y contextura del caparazón se pudo determinar que se trataba de una laúd (Imagen 20).



Imagen 20: Individuo de laúd encontrado en Crucita (Foto Julio Mendieta)

2017 Portete

El 31 de diciembre del 2017 durante un monitoreo diario que realizaba el Guardaparque Daniel Garcés en la playa de Portete del cantón Muisne de la provincia de Esmeraldas, encontró una tortuga laúd varada en la playa. Este individuo no presentaba aletas ni cabeza y se encontraba en estado avanzado de descomposición. Se tomaron las medidas que corresponden a: 122 cm de largo curvo y 87 cm de ancho curvo (Imagen 21)



Imagen 21: Laúd varada en la playa de Portete (Foto Daniel Garcés)

2018 Muisne

El 29 de marzo del 2018, personal del Refugio de Vida Silvestre Manglares Estuario del Río Muisne y Cojimíes de la provincia de Esmeraldas, reciben una denuncia del varamiento una tortuga laúd flotando en el estuario. Se encontró el individuo en avanzado estado de descomposición; a pesar de su estado se pudo reconocer que se trataba de una hembra adulta de aproximadamente 150 cm. de largo. Se presume que la causa de la muerte pudo haber estado vinculada a algunos factores antrópicos ya que presentaba un desprendimiento en la parte frontal de la cabeza (Imagen 22).



Imagen 22: Tortuga laúd descompuesta en el estuario del río Muisne (Foto Ander Gracia G.)

2018 Villamil

El 13 abril del 2018, durante los monitoreos diurnos realizados por el personal del Área Nacional de Recreación Playas Villamil, el guardaparque Alfredo Calderón encontró un individuo de laúd varado, el cual se encontraba en estado de descomposición. Se tomaron las medidas de largo curvo del caparazón 117 cm y ancho curvo del caparazón 86 cm (Imagen 23).



Imagen 23: Varamiento en Playas Villamil (Foto Yolanda Bazurto)

2018 San Clemente

El 18 de julio del 2018 en el sector Pajonal de la playa de San Clemente del cantón Sucre provincia de Manabí, durante un recorrido en bicicleta la voluntaria Kerly Briones encontró una laúd varada a orillas de la playa, en la zona intermareal. El individuo se encontraba en avanzado estado de descomposición, las causas de su muerte son desconocidas porque no se encontraron rastros externos de algún tipo de golpe o cortes (Imagen 24).



Imagen 24: Varamiento San Clemente (Foto Kerly Briones)

4. PESCA INCIDENTAL

La pesca incidental ha sido catalogada como una de las principales amenazas para la mayoría de las poblaciones de tortugas marinas, en el caso de la Laúd ha sido de las principales causantes del detrimento de sus poblaciones, por lo cual medir el efecto o incidencia de esta amenaza es un factor clave para establecer medidas de conservación de la especie. En pesquería se define a la captura incidental como la cantidad de individuos de una especie que no son parte de la especie objetivo, generalmente está constituida por peces, pero también se registran macro-invertebrados, tortugas, aves y mamíferos marinos.

El Plan de Acción Regional para revertir el declive de la tortuga laúd del pacífico oriental hace referencia a las principales causas del deterioro de las poblaciones de esta especie, mostrando claramente que la pesca incidental ha sido uno de los principales causantes de este declive de acuerdo con Wallace y Saba 2009.

A continuación, se detallan los eventos de pesca incidental reportados para esta especie en el Ecuador continental:

2015 Crucita

El 6 enero del 2015, la Srta. Liliana Rendón funcionaria de la, hasta ese entonces, Secretaría Técnica del Mar, solicita a funcionarios de la Dirección Provincial de Manabí del MAE apoyo para la búsqueda de un transmisor satelital en la parroquia Crucita, lo que fue reportado por personal de Prodelphinus (ONG Peruana) quienes instalaron este dispositivo en una tortuga laúd hembra adulta (llamada Nataly) en el mes de septiembre del 2014 en zonas de alimentación de Perú y emitiendo su última señal en esta playa. Luego de realizar una búsqueda se encuentra el dispositivo en una caleta pesquera, según versiones del pescador que retiró el dispositivo, éste fue encontrado en una tortuga que flotaba muerta en alta mar (Imagen 25 y 26).



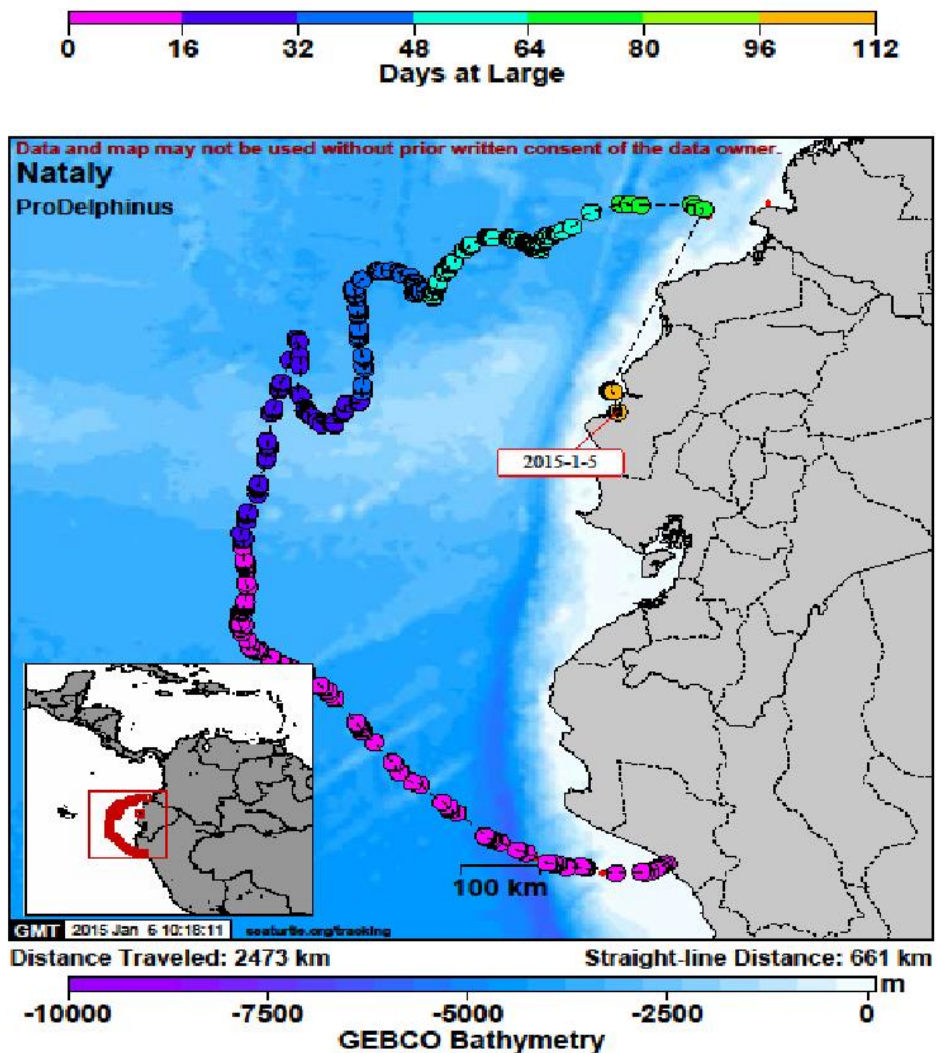


Imagen 25 y 26: Marca satelital y Recorrido realizado por la tortuga (Nataly) y sitio donde se encontró el dispositivo recuperado (Foto: Liliana Rendon Mapa: fuente Prodelphinus)

2011 Santa Rosa

El Instituto Nacional de Pesca en su Boletín especial Año 2 N° 3 del 2011 respecto a la Incidencia de tiburones, rayas, aves, tortugas y mamíferos marinos en la pesquería artesanal con enmalle de superficie en la caleta pesquera de santa rosa provincia de santa Elena; informa de la presencia de dos individuos de laúd que fueron parte de la captura incidental en noviembre del 2009 y octubre del 2010 en la actividad pesquera con palangre de media agua anzuelos tipo J y sus capturas las realizan principalmente en aguas internacionales. Este documento detalla la interacción de tortugas marinas en la pesquería de Peces Pelágicos Grandes con redes de enmalle de superficie (Coello, D. Herrera, M., Calle, M., Castro, R. y C. Medina. 2011).

En el 2018 Johanna Alfaro reporta en su publicación “*Untangling the impacts of nets in the southeastern Pacific: Rapid assessment of marine turtle bycatch to set conservation priorities in small-scale fisheries*” reporta los resultados de su estudio que mediante entrevistas dirigida a Pescadores de pesca artesanal o de pequeña escala de redes de enmalle obtenido de un total 765 encuestas de 43 puertos pesqueros artesanales en tres países Ecuador, Perú y Chile; datos que se tomaron entre el 2010 y 2011, los principales resultados muestran que el porcentaje de incidencia de la captura incidental es mayor en Perú obteniendo un rango de mortalidad de 32.5% para Ecuador, 50.8% en Perú y 3.2% para Chile.

5. ANIDACIÓN

Aunque las tortugas marinas se han adaptado a la vida marina, ellas dependen de la tierra para completar una de las etapas más críticas de su ciclo de vida, su reproducción. Anidan en playas tropicales y subtropicales, ya que éstas poseen las características adecuadas para el desarrollo de sus huevos (CIT 2012).

La población de hembras anidadoras para el Pacífico Este tropical ha disminuido drásticamente en las últimas décadas, según reporta Sarti 1996 mediante censo aéreo a lo largo de toda la costa mexicana menos de mil tortugas habrían anidado para la temporada de 1995-1996, calculando un declive del 22,7% en comparación con 1984. Esta evidencia de la disminución en la anidación de esta especie ha causado que la CIT establezca dentro de sus resoluciones, una especial atención al caso de las Laúd es así que la Convención Interamericana para la Protección y Conservación de Tortugas Marinas (CIT) adoptó una Resolución sobre la Conservación de las Tortugas Baula (*Dermochelys coriacea*) (CIT-COP2-2004-R1) la cual provee a los países de bases fuertes para trabajar sobre las acciones que ayudarán en la recuperación de esta especie. Entre las estrategias identificadas por el grupo de trabajo del comité científico de la CIT para la recuperación de esta especie está el proteger las playas de anidación y aumentar la producción de crías de estos sitios.

De aquí se desprende la importancia de identificar los sitios de anidación históricos y actuales, aunque para esta especie se considera que Ecuador es un país con un bajo índice de anidación, todos los esfuerzos que se puedan desarrollar para proteger las playas de anidación de esta especie son loables.

Los eventos reportados en este informe denotan que la anidación es aislada y esporádica para la costa ecuatoriana; se han tomado en cuenta los datos obtenidos por fuentes bibliográficas, comunicaciones personales y reportes del Ministerio del Ambiente (MAE) para identificar estos potenciales sitios de anidación. Los resultados de esta síntesis de

información muestran a la provincia de Manabí como el sitio con mayor número de eventos de anidación reportados para esta especie (Imagen 27).

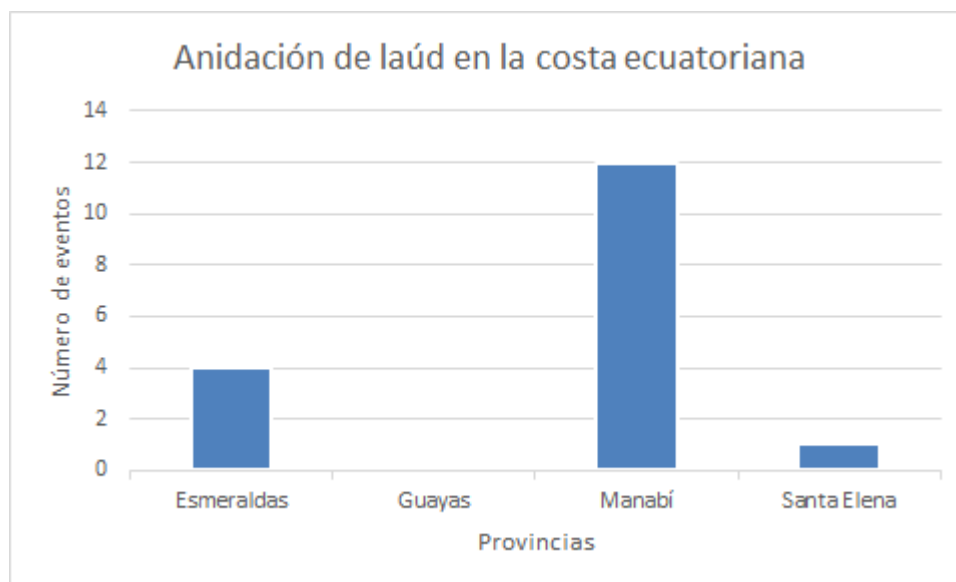


Imagen 27: Anidación de laúd en la costa ecuatoriana

5.1. Anidación Histórica de Laúd

Mario Hurtado, uno de los primeros investigadores de tortugas marinas en el Ecuador, reporta por comunicación personal para este informe que existen registros de anidación de laúd, la cual fue mostrada en la síntesis para el “Taller de trabajo para definir las líneas de acción prioritarias de un programa para la conservación de las tortugas marinas” en abril del 2001, organizado por la CPPS para el desarrollo del Plan de Acción para la Protección del Medio Marino y Áreas Costeras del Pacífico Sudeste. Esta información se incluye a continuación en la medida de la disponibilidad de los datos referenciada por Hurtado.

Hurtado menciona que en este taller se reporta una anidación confirmada para el año 1981, la cual recuerda, fue identificada después de divisar huellas de laúd en un sobrevuelo realizado por el área. Para confirmar la presencia de esta especie se dirigen a la playa y establecen un campamento, se encuentra una Laúd anidando y se toman los datos de la misma además se marca al individuo. Se reportan 5 anidaciones más de diversas fuentes, ya que no se tiene confirmación, solo se reporta como avistamientos sin una confirmación de estos individuos.

1981 Atacames Esmeraldas

Salas en 1981 reporta en un boletín para el Departamento de Zoología de la Universidad de Toronto que en enero 16 de 1980 alrededor de las 21h00 en la Playa de Atacames en la provincia de Esmeraldas fue encontrada una tortuga laúd amarrada a un palo cerca de la playa, según las versiones de los comuneros el animal llegó a la playa para anidar y ellos

la capturaron para comérsela. El individuo medía 150 cm. de largo y fue devuelta al mar, no se existen evidencias comprobadas de la anidación de este individuo.

1983 Puerto Cabuyal

En enero de 1983 el biólogo Galo Menéndez reporta que en Puerto Cabuyal provincia de Manabí, alrededor de las 6 am el encuentro de neonatos de laúd en playa, los cuales son trasladados hasta el campamento que realizó debajo de una casa abandonada (Imagen 28). Los neonatos fueron pesados y medidos para su posterior liberación (Imagen 29).

En la foto el sr René Mosquera, un servidor y el Sr. Carlos Rodríguez (ya fallecido).



Imagen 28: Campamento Puerto Cabuyal- 1983 (Fuente: Galo Menéndez)



Imagen 29: Neonatos de Puerto Cabuyal- 1983 (Fuente:Galo Menéndez)

2000 Tonchigue

En el 2011 el Instituto Nacional de Pesca a través de un boletín especial pública el documento de *“línea base de conocimiento sobre el estado actual de las tortugas marinas en el Ecuador”*, en este informe los autores Dialhy Coello y Marco Herrera del Instituto Nacional de Pesca reportan la anidación de una laúd en la playa Tonchigue en la provincia de Esmeraldas en el año 2000 (Imagen 30).



Imagen 30: Tortuga Laúd, comunidad de Tonchigue-Esmeraldas 2000 (Fuente: Marco Herrera)

2013 San Lorenzo

El 20 de diciembre del 2013 en la playa de San Lorenzo en la provincia de Manabí se reporta la anidación de una laúd. De este evento se obtuvo únicamente el ancho de huella: 170cm.

Se realizó la exhumación de la nidada el 15 de diciembre del 2014, se retiraron un total de 120 huevos de los cuales 87 eran viables y 33 falsos huevos (solo albúmina). Se revisó el contenido de los huevos viables y no presentaban desarrollo embrionario en ninguna de las etapas.

2015 Santa Marianita.

El 12 de enero de 2015 personas de la urbanización Playa Alta cerca de la comunidad de Santa Marianita aproximadamente a 22 Kilómetros de la Ciudad de Manta-Manabí, reportan al personal del RVSMC Pacoche la subida de una tortuga en el sector de la playa. Pasado los setenta días se realizó la exhumación del nido, iniciando la revisión de cada uno de los huevos y se verificó que la fecundación no fue exitosa y los huevos no llegaron a una fase embrionaria.



Imagen 31: Huellas de la subida de la Laúd en playa frente a Urbanización Playa alta en Santa Marianita (Foto: RVSMC Pacoche).

2015 Puerto Cabuyal:

Con fecha 1 de febrero del 2015 la Sra. Magaly Intriago comunera de Puerto Cabuyal en la provincia de Manabí, observa en la playa una tortuga laúd iniciando el proceso de desove; se tomó la medida de la huella: 165 cm (Imagen 31), adicionalmente se reubica y protege la nidada. A los sesenta días se inicia el monitoreo de la temperatura, colocando un termómetro a la misma profundidad del nido con la finalidad de registrar la temperatura del mismo, obteniendo como la mínima registrada 31.5°C y la máxima registrada 33.8°C (Imagen 32).

Así mismo una vez cumplida los setenta días de incubación se realiza la exhumación iniciando con la revisión de uno a uno de los huevos, obteniendo como resultados: 70 huevos viables y 11 falsos huevos (solo albúmina).



Imagen 31: Identificación del rastro por miembros de la comunidad de Puerto. Cabuyal.

Una vez cumplido los setenta días, el día jueves 09 de abril a las 22h00 se realiza la exhumación del nido, con las indicaciones consultadas a uno de los expertos del comité científico de la convención para la conservación de las tortugas Marinas (Laura Sarti de México).

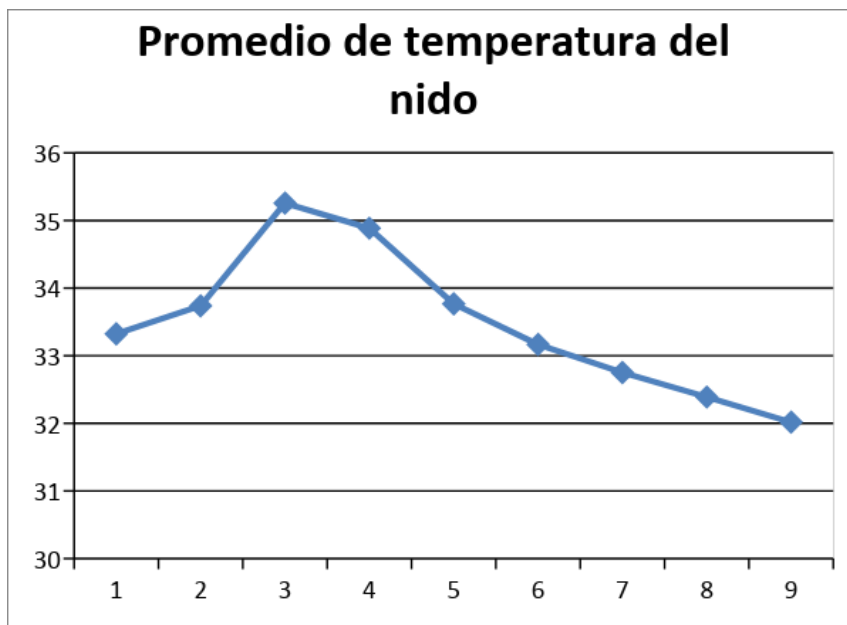


Imagen 32: Temperatura promedio del nido de Puerto Cabuyal.

Como parte de trabajo realizado se controló la temperatura desde el día 01 al 09 de abril colocando un termómetro a la misma profundidad del nido con la finalidad de registrar la temperatura del mismo, obteniendo como la mínima registrada 31.5°C y la máxima registrada 33.8°C.

2017 Crucita

El primer evento reportado de llegada de una tortuga laúd a la playa de Crucita, cantón Portoviejo, en la provincia de Manabí fue el 9 de diciembre del 2017, no existen registros morfométricos de esta hembra anidadora, sin embargo, existen evidencias fotográficas (Imagen 33) captada por personas particulares que estuvieron durante el proceso de anidación; la ubicación de la nidada con relación a la línea de marea mostró que se encontraba en un lugar adecuado, por lo cual no se reubicó el nido.

Un segundo evento se reporta vía telefónica el mismo día de la llegada de la tortuga a la playa (20 de diciembre), de este individuo se obtuvieron datos morfométricos (Tabla No 2), no se encontró señales que haya sido marcada, ni marca de identificación, ni presencia de ectoparásitos; sin embargo se encontró heridas leves en las aletas delanteras, causadas posiblemente por algún arte de pesca y se retiró de la boca un fragmento de cuerda que colgaba en un extremo de la mandíbula inferior (Imagen 34). Esta nidada por encontrarse en zona de riesgo de inundación por aguaje fue reubicada. De este individuo se logró tomar una muestra de tejido de 1 cm. que se preservó para realizar el análisis genético y determinar a qué población pertenece. Los datos registrados de estos dos eventos se detallan a continuación:

Tabla No. 2: Descripción morfométrico de las hembras anidadoras y sus nidadas.

Fecha desove	LCC	Huella	Huevos viables	Huevos solo albúmina	Nidos con cámara previo de la ovoposición
09-12-2107	-	160 cm	63	50	-
20-12-2017	135 cm	165 cm	64	51	2

La exhumación de la primera nidada se realizó al cumplir los 71 días (17 de febrero) de incubación; se retiraron un total 113 huevos, de los cuales 63 eran viables y 50 falsos huevos (sólo albúmina). Se revisó el contenido de los huevos viables encontrándose que no presentaban desarrollo embrionario en ninguna de las etapas, los análisis realizados con estereoscopio de los huevos viables confirmaron que no hubo fecundación en ninguno.

La segunda nidada se exhumó a los 65 días (23 de febrero), al igual que la exhumación anterior se revisó el contenido de los huevos viables siguiendo el mismo protocolo, sin encontrar rastros de fecundación ni desarrollo embrionario; igualmente esto fue confirmado posteriormente con la revisión con el estereoscopio

No se encontró en ninguna de las nidadas signos de depredación o algún efecto natural o antrópico que hayan sido los causantes de la inviabilidad en los huevos; por otro lado, durante la revisión de los mismos al olfato no mostraron indicio de descomposición.



Imagen 33: Tortuga anidando en la playa de Crucita (Foto anónima).



Imagen 34: Hembra anidadora Crucita 20-12 (Foto Kerly Briones)

2017 Las Palmas

El 11 de diciembre del 2017 a las 20h20 mediante llamada telefónica uno de los guardias de seguridad del Malecón de la playa Las Palmas en la ciudad de Esmeraldas, provincia de Esmeraldas, informa a la Ing. Esther Palomino Administradora del RVSMERE, sobre el arribo de una tortuga marina, a las 20:45, se trataba de una tortuga Marina Laúd (Dermochelys coriacea) a la cual se la marcó con el Tag # S927, del nido se contabilizó un total de 138 huevos.



Imagen 35: Hembra anidadora Las Palmas (Foto MAE Esmeraldas).

Después de haber registrado la nidada, posteriormente se detecta que el nido estaría en zona de inundación y se procede a la reubicación del nido en una zona más segura con el asesoramiento técnico de personal de la REMACOPSE.



Imagen 36: Reubicación y protección de la nidada Las Palmas (Foto MAE Esmeraldas).

Se procedió con la reubicación del Nido #157 de la Tortuga Marina Laúd, de acuerdo a los lineamientos emitidos por la Blga. Beatriz Virginia Ladines Villamar, Administradora de la Reserva de Producción Faunística Marino Costera Puntilla de Santa Elena. Se contó con la participación de los equipos técnicos del RVSMERE, DPAE, SGMG, Debido a que no se contó con el termómetro, no fue posible iniciar el control de la temperatura.

6. Conclusiones y discusiones

La información de varamientos de tortuga laúd en Ecuador está disgregada en distintas fuentes de información, por este motivo los eventos reportados en este informe confirman la presencia de esta especie en el país, presentándose con mayor incidencia de estos eventos la provincia de Manabí y Santa Elena.

Según la bibliografía el Ecuador continental está considerado como un país de anidación dispersa para esta especie; sin embargo, el evento registrado en Puerto Cabuyal en 1983 muestra los primeros registros de una eclosión efectiva que confirman el sitio de anidación más sureño para esta especie en aguas del Pacífico Oriental; por otro lado, se han reportado en otros eventos de anidación detallados en este informe que a pesar de no haber existido fecundación de los huevos, ratifican que el País debe considerarse como sitio de anidación frecuente.

Por otro lado, también se muestra que el trabajo realizado en los últimos años por la Autoridad Ambiental para desarrollar e implementar el monitoreo de las tortugas marinas ha rendido sus frutos detectando los eventos de anidación y varamiento para esta especie con mayor frecuencia en los últimos años.

Al analizar los datos de sitios de anidación encontrados en este reporte, resulta interesante ver que la mayoría de los eventos registrados se ubican en playas que no están en ninguna categoría de protección del Sistema Nacional de Áreas Protegidas (SNAP); por un lado, al no ser áreas protegidas demanda que los esfuerzos de control y monitoreo sean mayores, pero por otro lado es necesario extender los programas de seguimiento en áreas, que aunque no pertenecen al SNAP han reportado continuamente la presencia de estas especies emblemáticas.

Estos espacios se convierten en una ventana de oportunidad para concienciar a la ciudadanía con programas de educación ambiental. Así mismo, la reacción de la opinión pública y diversas autoridades locales, han servido para tomar medidas para proteger, monitorear y evitar la alteración o daño de las nidadas, especialmente los reportados en el 2017.

El trabajo realizado para el registro e información reportados de estos eventos en el Ecuador continental, han dado una oportunidad para fortalecer e incrementar capacidades locales al personal de los gobiernos seccionales, voluntarios, universidades y turistas en general.

Finalmente, es necesario establecer medidas de ordenamiento territorial para proteger las playas de anidación de esta especie de tortugas marinas; así mismo, fomentar programas de investigación y conservación que ayuden a identificar las áreas de agregación de esta especie y las amenazas que estas enfrentan, en medida de proponer estrategias para la protección y conservación de esta especie que se encuentra en gran riesgo de extinción a nivel mundial.

7. BIBLIOGRAFÍA

Alfaro, J Mangel, J. Darquea, J. Donoso, M. Baquero, A. Doherty, P. Godley, B. 2018. Untangling the impacts of nets in the southeastern Pacific: Rapid assessment of marine turtle bycatch to set conservation priorities in small-scale fisheries. Fisheries Research. journal homepage: www.elsevier.com/locate/fishres.

Albareda, D. 2015. Informe sobre la caracterización de la información sobre varamientos de tortugas marinas en la región de la CIT. CIT-CC12-2015-Doc. 4.

Capella, J. y Flórez-González, L. 2010. Enmalles, varamientos y otros impactos en cetáceos. Manual para su reconocimiento y atención. Comisión Permanente del Pacífico Sur. Guayaquil, Ecuador. 24p.

Coello, D y Herrera, M. 2011. Boletín Especial (2011), Año 02 (2). Línea base de conocimiento sobre el estado actual de las tortugas marinas en el Ecuador.

Coello, D. Herrera, M. Calle, M., Castro, R. y Medina, C. 2011. Boletín especial. Año 2 N° 3. Incidencia de tiburones, rayas, aves, tortugas y mamíferos marinos en la pesquería artesanal con enmalle de superficie en la caleta pesquera de Santa Rosa- Provincia de Santa Elena.

Convención Interamericana para la Protección y Conservación de las Tortugas Marinas (CIT). 2015. Boletín Informativo No. 27. Secretaría *Pro Tempore* CIT, Virginia USA.

Convención Interamericana para la Protección y Conservación de las Tortugas Marina (CIT). 2011. Manual Sobre Técnicas de Manejo para la Conservación de las Tortugas Marinas en Playas de Anidación. CIT-CC8-2011-Tec.2. 58 pp.

Hurtado, M. 2001. Anidación de Tortugas Marinas en el Ecuador Continental, Memorias del Taller de trabajo para definir las líneas de acción prioritarias de un programa para la conservación de las tortugas marinas. Ecuador.

Informe preliminar Proyecto N. PC-35-12: Demografía, Rango de vida y Uso de hábitat, de la tortuga verde (*Chelonia mydas*) y la tortuga Carey (*Eretmochelys imbricata*) en las áreas de alimentación y descanso, cercanas a las sitios urbanos de la isla San Cristóbal.

Instituto Oceanográfico de la Armada (INOCAR). 2012. Información General de la República del Ecuador. https://www.inocar.mil.ec/docs/derrotero/derrotero_cap_I.

Ministerio del Ambiente del Ecuador 2014. Plan Nacional para la Conservación de las Tortugas Marinas. Guayaquil, Ecuador.

Ministerio del Ambiente del Ecuador 2018. Protocolo de Respuesta a Varamientos de Especies Marinas (Cetáceos, Pinnípedos, Tortugas Marinas, Tiburones Ballena y Mantarrayas). Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ Ecuador. Quito: Ministerio del Ambiente.

Mignucci-Giannoni AA, Pinto-Rodríguez B, Montoya-Ospina RA, Jiménez-Marrero NM Rodríguez-López MA, Williams EH, Odell DK. 1999. Cetacean strandings in Puerto Rico and the Virgin Islands. *Journal of Cetacean Research and Management* 1(2):191-198.

Moreira, J. 2018 Reporte de la anidación de la tortuga Laúd en la playa de Crucita Manabí- Ecuador Informe Técnico No. 035-JM-VS-PN-DPAM-MAE. Ministerio del Ambiente.

Salas, S. 1981. Marine Turtle Newsletter No. 19. Departments of Zoology - University of Toronto.

Seminoff, JA. 2004. Global Status Assessment: green turtle (*Chelonia mydas*). Marine Turtle Specialist Group review, 71 pp.

Seminoff, JA. Zárate, P. Coyne, M. Foley, Parker, DG. Lyon, D. y Dutton, P. 2008. Post-nesting migrations of Galapagos green turtles *Chelonia mydas* in relation to oceanographic conditions: integrating satellite telemetry with remotely sensed ocean data. Vol. 4: 57–72.

Suárez, F. 2015. Evaluación de los varamientos de tortugas marinas, en las playas de la parroquia Manglaralto (San Pedro-Olón) provincia de Santa Cruz durante los meses de febrero 2014 - mayo 2015.

Varela, L. A. Geografía y clima del Ecuador. BLOWEB. Pontificia Universidad Católica del Ecuador. Disponible en <<https://bioweb.bio/geoclima/>>Consulta: 31 de enero 2018.

Wallace, BP. Saba, VS. 2009. Environmental and anthropogenic impacts on intra-specific variation in leatherback turtles: opportunities for targeted research and conservation *Endangered Species Research*, 7: 1-11.

Wallace BP, DiMatteo AD, Bolten AB, Chaloupka MY, Hutchinson BJ, Abreu-Grobois, FA, Mortimer JA, Seminoff JA, Amorocho D, Bjorndal KA, Bourjea J, Bowen BW, Briseño-Dueñas R, Casale P, Choudhury BC, Costa A, Dutton PH, Fallabrino A, Finkbeiner EM, Girard A, Girondot M, Hamann M, Hurley BJ, López-Mendilaharsu M, Marcovaldi MA, Musick JA, Nel R, Pilcher NJ, Troëng S, Witherington, B. Mast, RB. 2011. Global conservation priorities for marine turtles. *PLoS ONE* 6(9): e24510. doi:10.1371/journal.pone.0024510.

Zárate, P & Dutton, P. 2002. Tortuga verde. In: Reserva Marina de Galápagos. Línea base de la biodiversidad (Danulat E & GJ Edgar, eds). Fundación Charles Darwin/Servicio Parque Nacional Galápagos, Santa Cruz, Galápagos, Ecuador. pp 305 -323.

Zárate, P. 2009. Amenazas para las tortugas marinas que habitan el archipiélago de Galápagos. Presentado al Parque Nacional Galápagos. Ecuador, 50 pp.



Convención Interamericana para la Protección y Conservación de las Tortugas Marinas

La Convención Interamericana para la Protección y Conservación de las Tortugas Marinas (CIT) es un tratado intergubernamental que provee el marco legal para que los países en las Américas puedan realizar acciones en beneficio de las tortugas marinas. Está dirigido a la necesidad de implementar medidas armónicas entre las naciones, coordinar esfuerzos multilaterales de conservación y acciones de protección, además de supervisar la implementación de una agenda regional que ayudará a la recuperación de las 6 especies de tortugas marinas incluidas en el tratado.

Para mayor información visitar:

www.iacseaturtles.org

Secretaría *Pro Tempore* CIT

5275 Leesburg Pike, Falls Church, VA 22041-3803 U.S.A

Tel.: + (703) 358 -1828

E-mail: secretario@iacseaturtle.org
contact@iacseaturtle.org

Annex IX.

CIT-CC15-2018-Doc.8

Recommendations from the 15th Meeting of the IAC Scientific Committee on the Northwest Atlantic Leatherback Turtle (*Dermochelys coriacea*) population

The report “Northwest Atlantic Leatherback Turtle (*Dermochelys coriacea*) Status Assessment” (Northwest Atlantic Leatherback Working Group, 2018) was reviewed by the IAC Scientific Committee Working Group members Didiher Chacon (Costa Rica), Diego Albareda (Argentina), Paul Hoetjes and Julia Horrocks (Caribbean Netherlands). These comments preface the recommendations from the Northwest Atlantic (NWA) Leatherback Working Group (2018). The resulting document has been adopted by the 15th Meeting of the IAC Scientific Committee for presentation to the Consultative Committee of Experts and to the Conference of the Parties in 2019.

Review of Northwest Atlantic Leatherback Working Group (2018) ¹

The study is the result of a significant regional cooperation effort, initiated when several monitoring projects in the NWA Regional Management Unit (RMU) reported declining annual nest/female counts. It is based on the analysis of a comprehensive database that includes nesting leatherback sites in multiple areas of the NWA RMU (23 sites from 14 countries/territories; including 4 IAC Parties) and over three different time periods (1990-present; 1998-present; and 2008-present). The statistical analyses used are recommended and robust. The analysis of trends by stock (Florida; Guianas/Trinidad; N. Caribbean and W. Caribbean) and by site (n=23) over the longest and shortest time windows provides strength to the study.

Stock level trends were predominantly negative across the longest time period (1990-present) and all negative across the shortest time period (2008-present). Site level trends were more variable when analyzed over the longest time period, but were again predominantly declining over the shortest time period. The identification of those stocks and sites in more significant decline can be used to guide conservation efforts.

Foraging grounds used by these nesting leatherbacks include the North Atlantic and the Gulf of Mexico. It is therefore possible for multiple IAC Parties to be directly involved in implementing conservation measures, either on nesting beaches and/or on foraging grounds. Some of the recommendations are already being implemented by IAC Parties. It is also important to convey these recommendations to non-member states that play key roles in the ecology of NWA leatherbacks (Canada, Trinidad & Tobago, France [French Guiana], Guyana and Surinam).

The IAC Scientific Committee proposes to the Consultative Committee of Experts and to the Conference of the Parties, that they consider adopting the following recommendations by means of an extension to the existing resolution CIT-COP7-2015-R2 Resolution for the Conservation of

the Eastern Pacific Leatherback Turtle (*Dermochelys coriacea*) or by a new Resolution. These recommendations for priority conservation actions are reproduced from Northwest Atlantic Leatherback Working Group (2018; pp. 31-33).

Recommendations for priority conservation actions

Characterize and reduce anthropogenic threats

- Compile and compare bycatch data across gear types, regionally, to identify highest priority opportunities for bycatch reduction from a population impact perspective
- Enhance efforts to mitigate leatherback bycatch in fishing gear deployed offshore key nesting grounds (e.g., Guianas, Trinidad)
 - Enhance enforcement of existing regulations to reduce turtle bycatch, particularly in areas near nesting beaches
 - Increase patrols in closed areas, develop and implement other protected areas, especially important at key nesting grounds (e.g., Guianas, Trinidad)
 - Leverage resolutions and reporting requirements regarding leatherback bycatch through the Inter-American Convention on the Protection and Conservation of Sea Turtles (IAC)
- Enhance monitoring of fisheries activities, specifically observations and standardized reporting of turtle bycatch
 - Advocate for deployment of trained onboard observers when and where such programs could contribute valuable data on the number, distribution, and seasonality related to fishery interactions with leatherbacks
- Enhance efforts to mitigate leatherback bycatch in fixed fishing gear in continental shelf habitats, especially in foraging areas, migratory pathways, and offshore nesting beaches
 - Characterize distribution and density of fixed gear and turtles in shelf waters using aerial surveys and other methods.
 - Ensure continued work to monitor leatherback foraging populations and fisheries interactions in New England and Nova Scotia
- Use well-established programs to model new efforts offshore the Guianas
 - Explore opportunities to leverage efforts to reduce interactions between right whales and vertical lines that could also benefit leatherbacks in northern foraging areas.
 - Work to monitor fisheries interactions between leatherback migrating populations and tuna longline fisheries occurring off of the Guianas
 - Leverage entities like the International Commission for the Conservation of Atlantic Tunas (ICCAT) to encourage members operating in the Guianas to report leatherback bycatch

- Ensure continued work to eliminate illegal, unreported and unregulated fishing (IUU) (e.g., for French Guiana see IFREMER 2012)
 - Explore opportunities to leverage existing regulations, such as the European Union's IUU regulations, to promote monitoring and prevention of IUU fisheries
- Increase protection and monitoring on nesting beaches to protect more nests from egg harvest and to increase coverage and tagging of nesting females (e.g., Costa Rica, Panamá)
- Investigate potential magnitude and types of effects from fossil fuel exploration and extraction, as well as from oil spills
- Investigate potential magnitude and types of effects from ocean plastic and other toxic debris, as well as aberrant coastal infestations of (typically pelagic) *Sargassum* weed

Characterize and reduce habitat loss

- Characterize response by leatherbacks to beach erosion; i.e., if we confirm they are not nesting elsewhere, where do they go? What was their fate?
 - Engage resource managers to account for turtle nesting habitat viability when approving efforts to mine sand, fortify coastlines (e.g., beach armoring), and other coastal development activities
 - Advocate for retaining/enhancing resilience in coastal ecosystems, particularly as it relates to residential and tourism infrastructure development in an era of climate change and sea level rise
 - Verify that other parameters important for incubation are present on the nesting beaches in normal ranges of variability such as temperature, humidity, organic matter etc.

Investigate patterns in life history and demographic parameters

- Prioritize collaborative data collection and analysis of existing data
 - Design and execute capture-recapture data analysis to determine regional patterns in remigration intervals, clutch frequency, and survivorship
 - Tagging data exist but data from high volume nesting sites are generally maintained by site-level organizations – while data from smaller nesting sites (<100 gravid females/yr) tend to be archived with WIDECASST's Regional Marine Turtle Tagging Centre (University of the West Indies-Cave Hill, Barbados), so there is a need to promote broader sharing of tag return data and enhanced tagging across nesting sites (cf. Meylan 1999; Horrocks et al. 2011, 2016)
 - Design and execute analysis to determine patterns and drivers of hatchling production across the region
 - Hatchling success data exist for many sites, can be analyzed across months within nesting seasons and across years, in relation to handling and treatment of nests, temperature and other effects.
 - Make collection of *in situ* temperatures more widespread
 - Design and execute analysis of existing satellite tracking data to identify spatial and/or temporal shifts in post-nesting or foraging destination behavior.