



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

IAC Annual Report General Instructions

Annex IV of the Convention text states that each Contracting Party shall submit an Annual Report each year. To complete this Annual Report, Focal Points should consult with appropriate stakeholders involved in sea turtle issues. If you have any questions regarding this Annual Report, please contact the Secretariat *Pro Tempore* at secretario@iacseaturtle.org

The submission deadline for this Annual Report is **June 30th, 2020**.

Part I (General Information)

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

a._ Focal Point

Institution	Subsecretaria de Pesca y Acuicultura
Name	Lezlie Camila Bustos Molina
Submission Date	06/05/2020

b._ Agency or Institution responsible for preparing this report

Name of Agency or Institution	Subsecretaria de Pesca y Acuicultura
Name of the person preparing this report	Lezlie Camila Bustos Molina
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Inter-American Convention for the Protection and Conservation of Sea Turtles **Chile** **Annual Report 2020**

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

Name	Agency or Institution	E-mail
Walter Sielfeld	Universidad Arturo Prat	walter.sielfeld.kowald@g
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Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

Part II (Policy and Management)

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

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

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

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

	YES/NO/ In Progress	Comments
Does your country have a national action plan in accordance with Article XVIII?	Developing	The Technical Scientific Working Group for the Conservation of Sea Turtles is preparing the National Action Plan for the Conservation and Protection of Sea Turtles in Chile
Does your country have policies and programs at local and regional scales in accordance with Article XVIII?	Yes	Within the framework of the objectives of the Program for Monitoring Highly Migratory Resources Fisheries (SRAM in Spanish), involves biological monitoring of sea turtles in the fleets of highly migratory resources, activities to reduce incidental captures of sea turtles, and release actions.
Does your country have monitoring programs in accordance with Article IX?	In progress	Discard and by-catch law: Programs with the objectives of evaluating and reducing discard and by-catch through discard reduction plans and electronic monitoring (EMS). EMS will be implemented in the industrial fleet nationwide next year.



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

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

Describe any national regulations, international agreements, and other legal instruments related to sea turtles and/or relevant activities that were adopted during the preceding year (April 30th, 2019 – June 30th, 2020). Please provide a literature reference and attach the digital file for the legislation and its corresponding number. The laws adopting the international legislation should be included when they exist.

National Legislation		
Type and name of the legal instrument (No.)	Description (Range of application)	Sanctions(s) Imposed
Discard and bycatch reduction plans	<p>Within the framework of the implementation of the Discard Reduction Plans, protocols for the release of sea turtles in fleets using purse seine, trawl, longline and gillnet fishing gear are being prepared. Likewise, codes of good practices are developed to reduce the interaction of sea turtles with the fleet's fishing gear.</p> <p>Discard Reduction Plans are implemented throughout the national territory, depending on the fishery unit of the target species.</p>	Sanctions established in the General Law on Fisheries and Aquaculture, Article 40 letter C, 111 letter A, 111 letter B and 113.
International Instruments		
Treaty, Convention, Agreements, Memorandum of Understanding		Year signed and/or ratified

Note: *If this is the first time a country is submitting this information, please include all pertinent national legislation and international instruments currently in force. For countries that have previously submitted a complete Annual Report, please provide information for any changes that have occurred since the most recent previously submitted Report.*



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

c. _ Actions for compliance with national and international legislation

c.1 IAC Resolutions

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

Resolution CIT-COP7-2015-R2: Conservation of the Eastern Pacific Leatherback Turtle (*Dermochelys coriacea*)

ACCORDING TO RESOLUTION CIT-COP7-2015-R2, REPORT WHETHER YOUR COUNTRY:

RESOLUTION DOES NOT APPLY				
IS COMPLIANT WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	DOES NOT APPLY
1a) Have you created conservation plans and long-term programs that can reverse the critical situation of the leatherback turtle in the Eastern Pacific?	X		Protocols for the release of turtles incidentally caught in fishing gear were implemented within the Highly Migratory Resources Fishery Monitoring Program (SRAM) and the Scientific Observer Program. These programs are funded by the Chilean State and are part of the permanent strategic projects, maintaining national coverage of the entire industrial fleet and part of the artisanal fleet. The leading institution is Fisheries and Aquaculture Undersecretariat, and the institution implementing is the Fisheries Development Institute (IFOP).	
1b) Are you implementing these conservation plans and monitoring programs?	X		The releasing protocols prepared are applied by the observers on board the fishing vessels.	
2. Have you taken conservation measures to eliminate poaching of leatherback turtles?				X
3. If your country has Eastern Pacific leatherback turtle nesting beaches: Have you taken conservation measures to protect the nesting sites and their associated habitats?				X
4. Has your country adopted fishing techniques that reduce incidental capture and mortality of leatherbacks?	X		Work is underway to establish the mandatory return of sea turtles to the ocean during fishing operations	

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



Inter-American Convention for the Protection and Conservation of Sea Turtles **Chile** **Annual Report 2020**

Resolution CIT-COP8-2017-R2: Conservation of the Hawksbill Turtle (*Eretmochelys imbricata*)

ACCORDING TO RESOLUTION CIT-COP8-2017-R2, REPORT WHETHER YOUR COUNTRY:

RESOLUTION DOES NOT APPLY				X
IS COMPLIANT WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	DOES NOT APPLY
1. Are you strengthening monitoring of the illegal use and trade of hawksbill turtles and their products				
2. Are you enforcing pertinent hawksbill legislation?				
3. Are activities being carried out to stop the illegal trade of hawksbill products?				
4. Indicate if your country is strengthening the protection of important nesting and foraging habitats by declaring protected areas and regulating anthropogenic activities that adversely impact these habitats				
a) Protection of nesting habitats				
b) Protection of feeding habitats				

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



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

Resolution CIT-COP7-2015-R3: Resolution on the Conservation of the Loggerhead Sea Turtle (*Caretta caretta*)

ACCORDING TO RESOLUTION CIT-COP7-2015-R3, REPORT WHETHER YOUR COUNTRY:

RESOLUTION DOES NOT APPLY				
IS COMPLIANT WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	DOES NOT APPLY
1. Has your country created national action plans and/or monitoring programs to promote loggerhead sea turtle conservation?			-Highly migratory species monitoring programs -Discard and bycatch program in the main national fisheries -Onboard observers programs in main national fisheries	
2. State if there are plans or recovery programs, or bilateral or regional cooperation.	X		These are action plans within the framework of discard reduction programs	
3. Are these action plans or monitoring programs being implemented?	X		It depends on what has been established for each fishery regarding each fishing gear	
4. Is there protection of the species at a state or federal level?	X		National extractive ban on reptiles, birds, and marine mammals established through Exempt Decree No. 225 of 1995 for hydrobiological resources that did not have a specific protection regulation. This measures apply to the following sea turtle species: -Loggerhead turtle -Hawksbill turtle -Green turtle -Olive ridley turtle -Leatherback turtle	
5. If your country has loggerhead turtle nesting beaches:				
5a. Has your country taken conservation actions to protect nesting beaches and their associated habitats?				X
5b. Are there laws on turtle-friendly lighting in areas impacted by coastal development?				X
5c. Is there a long-term (minimum 10 years) standardized data available for population trend studies?				X
6. Is there exploitation or direct harvest of loggerhead turtles in your country?				

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



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

Resolution CIT-COP9-2019-R2: Conservation of the Northwest Atlantic Leatherback

ACCORDING TO RESOLUTION CIT-COP9-2019-R2, REPORT WHETHER YOUR COUNTRY: Does not apply to
Chile

IS COMPLIANT WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	
Note: Question 1 must be answered by all IAC Parties, please skip the other questions if the Resolution is not applicable in your country.				
1. Has reached out to Canada, Guyana, French Guiana, Trinidad & Tobago, and/or Suriname to inform these nations about the critical situation of the population and priority actions for the conservation of leatherbacks in the NW Atlantic?				
IS COMPLIANT WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	DOES NOT APPLY
2. Has implemented techniques to reduce leatherback bycatch and mortality in fisheries, following the UN-FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations?				
3. Have fishery observer programs that comply with the minimum standards for scientific observer coverage that have been established by pertinent Regional Fishery Management Organizations?				
4. Has implemented laws and regulations related to Northwest Atlantic leatherback conservation, particularly related to fisheries bycatch and marine protected areas?				
5. If your country has Northwest Atlantic (NWA) leatherback turtle nesting beaches:				
5.1. Has your country implemented conservation measures for the protection of the NWA leatherback nesting beaches and associated habitats?				
5.2. Does your country have a monitoring and tagging program at the NWA leatherback nesting beaches?				
6. Is your country collecting data on interactions of the NWA leatherback with fishing fleets? Report data of interactions of the species with industrial longline vessels in Annex 3 of this report.				

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



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

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

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

In the column for “species” please use: Cm (*Chelonia mydas*), Lo (*Lepidochelys olivacea*), Dc (*Dermochelys coriacea*), Cc (*Caretta caretta*), Lk (*Lepidochelys kempii*), Ei (*Eretmochelys imbricata*)

IS COMPLYING WITH THE FOLLOWING:	YES	NO	DESCRIBE ACTION (*)	SPECIES	DOES NOT APPLY
Adopted the “Guidelines to Reduce Sea Turtle Mortality induced by fisheries operations”, of the United Nations Food and Agriculture Organization (FAO), including:					
A. Research and monitoring of the adverse impact of fisheries on sea turtles					
i) Collect information by fishery	X		Research Programs Target species discarding and its accompanying fauna: It obtains information on the quantification of bycatch in the artisanal and industrial fleet at the national level. Monitoring program for highly migratory resources, with an ecosystem approach: it obtains information to determine the origin of the sea turtles that interact with highly migratory fisheries, through genetic analysis, identification of mitigation measures, levels of turtle bycatch, biological monitoring.		
ii) Observer programs	X		The Fisheries Development Institute (IFOP) onboard observers program		
iii) Research on sea turtle/fishery interactions	X		Monitoring Program for the Highly Migratory Resources fishery (SRAM) funded by the Chilean State. It is part of the permanent strategic projects, and maintains a national coverage of the entire industrial fleet and part of the artisanal fleet. In this context, efforts are made through this Monitoring program, to mitigate the main threats causing sea turtle incidental capture and mortality, and to increase knowledge of sea turtle populations, to adopt protection measures and appropriate management actions for their conservation.		
iv) Information on non-Party vessels		X			
v) Cooperation with non-Party states to obtain information		X			



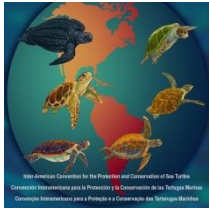
Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

B. Mitigation measures for the following fisheries:					
i) Long-line	X		Sea turtle handling and release protocols.		
ii) Gillnets			Sea turtle handling and release protocols		
iii) Trawling (e.g., 1. TEDs: specify legally approved TEDs, their dimensions, material, and target species for that fishery, 2. time-area closures: specify a geographical area, time of closure and target species for that fishery, 3. tow times and/or 4. other measures)		X			
iv) Other fishing gear (indicate which one(s))					
v) Fisher training programs about best practices for safe handling and release of incidentally-caught sea turtles			-Training crew members and scientific observers in the use of handling, resuscitation and release techniques to maximize the survival of captured turtles (workshops) -Manage the means to apply the techniques (having the necessary releasing tools, obtaining funds for training activities and preparation of teaching material and outreach) -Develop procedures or instructions to apply the techniques (manuals) -Disseminate and raise awareness among fishermen in the community to promote safe release (dissemination campaigns, awareness, involvement)		
C. Socio-economic considerations					
i) Support socio-economic activities that help mitigate adverse impacts of fisheries on sea turtles	X		Through the National Institute for Sustainable Development for artisanal fishing INDESPA and Regional Governments		

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



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

c.2 National and International Mandates

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

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

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



Inter-American Convention for the Protection and Conservation of Sea Turtles **Chile** **Annual Report 2020**

Part III (Research information)

a. _ Threats

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

Species	Threat(s)		Actions
Lo	<input checked="" type="checkbox"/> Coastal development <input checked="" type="checkbox"/> Incidental capture <input type="checkbox"/> Direct use	<input checked="" type="checkbox"/> Contamination <input type="checkbox"/> Pathogens <input checked="" type="checkbox"/> Climate change	Program for the rescue, rehabilitation and reintroduction of sea turtles Bycatch quantification programs Mandatory return protocols in fishing operations.
Lk	<input type="checkbox"/> Coastal development <input checked="" type="checkbox"/> Incidental capture <input type="checkbox"/> Direct use	<input type="checkbox"/> Contamination <input type="checkbox"/> Pathogens <input type="checkbox"/> Climate change	
Dc	<input type="checkbox"/> Coastal development <input checked="" type="checkbox"/> Incidental capture <input type="checkbox"/> Direct use	<input type="checkbox"/> Contamination <input type="checkbox"/> Pathogens <input type="checkbox"/> Climate change	
Ei	<input type="checkbox"/> Coastal development <input type="checkbox"/> Incidental capture <input type="checkbox"/> Direct use	<input checked="" type="checkbox"/> Contamination <input type="checkbox"/> Pathogens <input type="checkbox"/> Climate change	
Cm	<input type="checkbox"/> Coastal development <input checked="" type="checkbox"/> Incidental capture <input type="checkbox"/> Direct use	<input type="checkbox"/> Contamination <input type="checkbox"/> Pathogens <input type="checkbox"/> Climate change	Program for the rescue, rehabilitation and reintroduction of sea turtles Bycatch quantification programs Mandatory return protocols in fishing operations
Cc	<input type="checkbox"/> Coastal development <input type="checkbox"/> Incidental capture <input type="checkbox"/> Direct use	<input type="checkbox"/> Contamination <input type="checkbox"/> Pathogens <input type="checkbox"/> Climate change	



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

b. Research

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

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

Research	Specie (s) (Lo, Lk, Cm, Ei, Cc, Dc)
<i>Tagging</i>	<i>Cm</i>
<i>Migration</i>	<i>Cm</i>
<i>Habitat monitoring</i>	<i>Cm</i>
<i>Fisheries interactions</i>	<i>Lo, Cm, Cc, Dc</i>
<i>Genetics</i>	<i>Cm</i>

1. FISHERIES MONITORING, PROJECT MONITORING OF HIGHLY MIGRATORY RESOURCES, FISHERIES DEVELOPMENT INSTITUTE (IFOP in Spanish).

It carries out the biological and fishing monitoring of the highly migratory resources fisheries as part of the national program to collect information on the main national fisheries (Barría et al., 2014, 2015).

The "Monitoring of Highly Migratory Resources (SRAM)" project general objective is to survey and analyze fishing biological information on the extractive activity of highly migratory resources, to obtain updated and timely information to support management and conservation measures in surface longline fisheries, in both the industrial and artisanal regime, in addition to the artisanal nets and longline fleet.

In this context, associated activities are developed to collect information on sea turtle incidental captures and to mitigate the impacts of fishing activities, such releasing sea turtles trapped in fishing gear.

The SRAM project collects the information using Scientific Observers, on board, supplemented with sampling in the various landing ports. Coverage is annual and involves effort data collection covering most of the fleet in the entire fishing area and all landing ports. The area of national fisheries for highly migratory resources ranges from 18° L.S. up



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

to 40° L.S. and between 72° L.W. and 120°L.W. The target species are swordfish (*Xiphias gladius*), shortfin mako (*Isurus oxyrinchus*), and deep-sea dorado (*Coryphaena hippurus*). Along with the above, information is obtained on the discarded species and actions are carried out to minimize and/or mitigate unwanted ecosystem effects of fishing activities.

In a complementary way, through the "Research Program on Discarding, Bycatch Fauna and Incidental Capture", training for Scientific Observers is provided, to instruct them in the recognition of sea turtle species, handling and resuscitation of trapped specimens in fishing gear and the procedures to release them. To this end, training courses have been carried out and brochures for the recognition of species and procedures for releasing specimens hooked or entangled in fishing lines have been published.

The former has produced a permanent staff of Scientific Observers, who have empowered themselves in their role, generating a paradigm shift among the crews, since they went from being unaware of the importance of sea turtles in the ecosystem to valuing them, and getting involved actively in the release of the animals.

2. RESEARCH PROGRAM ON TARGET SPECIES DISCARD AND BYCATCH

Research programs for target species and their discarded fauna, aimed at compiling technical information to draw up plans to reduce discarding, both of the target species and bycatch. These plans should at least include the quantification of discarding and incidental fishing, identification of causes and the way that this activity is carried out, and the means to record the information, considering the fishing biological information compiled by scientific observers on board, appointed by the Undersecretary of Fisheries and Aquaculture in accordance with Title VIII of the General Law on Fisheries and Aquaculture.

The programs are executed by the Fisheries Development Institute, and currently nine fisheries in the artisanal and industrial sector nationwide have developed a Discard Research Program with its corresponding Reduction Plan to minimize discard and bycatch.

3. RESEARCH IN THE DIFFERENT REGIONS OF CHILE

• ARICA AND PARINACOTA REGION and TARAPACÁ REGION

UNIVERSIDAD ARTURO PRAT- TORTUMAR CHILE

The working group of the Arturo Prat University TORTUMAR-Chile continues analyzing information from previous years (genetics, isotopes, telemetry, and rehabilitation) in the La Puntilla de Arica sector: with the results under review publications.



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

Information on the interaction of sea lions with green turtles in the Arica and Tarapacá Regions was collected. The results are under review for publication. In 2019, a program to record interactions and by-catch of turtles with artisanal fishing in the Tarapacá Region began.

Publications and manuscripts under review

Sielfeld, W. P. Salinas, D. Contreras, M. Tobar, J. Gallardo & C. Azocar. 2019. Population status of green turtles (*Chelonia mydas*) foraging in Arica Bay, Chile. *Pacific Science*. volumen 73.

Submitted for review:

Contreras D., W. Sielfeld, P. Salinas, R. Berrio, T. Valenzuela, M. Astudillo y K. Pizarro. Depredación de tortugas marinas (*Chelonia mydas*) por el lobo marino sudamericano (*Otaria byronia*) y su relación con varamientos de tortugas marinas en el norte de Chile (-18.46°; -70.32°) entre los años 2013 y 2019.

Manuscript in final stage:

Sielfeld, W., P. Salinas & D. Contreras. Condición de las tortugas verdes (*Chelonia mydas*) que concurren al área de alimentación de La Puntilla, Arica, Norte de Chile.

Manuscript in preparation:

Salinas-Cisternas P., Contreras D y Sielfeld W. Migraciones y movimientos locales de tortugas negras (*Chelonia mydas*) en el norte de Chile

NATIONAL FISHERIES AND AQUACULTURE SERVICE OF CHILE

The National Fisheries and Aquaculture Service carried out the investigation on the causes of death in a green turtle (*Chelonia mydas*) mass mortality in Arica and Parinacota, through the histopathological study of the lesions in conjunction with NOAA.

Publications

First report of fibropapillomatosis in an olive ridley turtle *Lepidochelys olivacea* from the southeastern Pacific. Rocio AlvarezVaras, Diana Maria Cardenas, Mauricio Ulloa Encina. *Diseases of Aquatic Organisms* 135 (1), 2019.



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

- **COQUIMBO REGION**

ONG QARAPARA

The NGO Qarapara carried out research through a Global Greengrant fund: “Understanding and valuing the existence of sea turtles in Chile”. Monitoring of sea turtles in Bahía Chasco, sampling tissue for stable isotopes, genetics, cloacal sample to verify the presence of bacteria, measurements, epibiotic load.

- **VALPARAISO REGION – EASTER ISLAND PROVINCE**

UNIVERSITY OF CHILE – FACULTY OF SCIENCES

The University of Chile has carried out the following investigations: **Proyecto IDEA WILD** “Ecology and community-based conservation of the green sea turtle (*Chelonia mydas*) in Easter Island/Rapa Nui”. 2019-2020.

Doctoral thesis “Genetic-population structure and morphological variation of *Chelonia mydas* in the Pacific and Western Atlantic Ocean”. Doctoral Program in Ecology and Evolutionary Biology, Faculty of Sciences, Universidad de Chile.

Publications

Álvarez-Varas, R., Cárdenas, C., Cucalón, R., Del Río, J., Cifuentes, F., Ulloa, M., Briceño, C. & Cárdenas, W.B. 2019. First report of fibropapillomatosis in an olive ridley turtle *Lepidochelys olivacea* from the southeastern Pacific. Diseases of Aquatic Organisms 135: 43- 48. <https://www.int-res.com/abstracts/dao/v135/n1/p43-48/>

Álvarez-Varas, R., Véliz, D., Vélez-Rubio, G., Fallabrino, A., Zárate, P., Heidemeyer, M., Godoy, D. & Benítez, H. 2019. Identifying genetic lineages through shape: an example in a cosmopolitan marine turtle species using geometric morphometrics. PLOS ONE 14(10), e0223587. <https://doi.org/10.1371/journal.pone.0223587>

Álvarez-Varas, R., Barrios-Garrido, H., Skamiotis-Gómez, I. & Petitpas, R. Cultural role of sea turtles on Rapa Nui (Easter Island): Spatial and temporal contrast in the Pacific island region. Island Studies Journal 15(1) May 2020. Ahead of print. <https://www.islandstudies.ca/node/529>

Petit, I.J., González, C.F., Gusmao, J.B, Álvarez-Varas, R. & Hinojosa, I. Resting dynamics and diel activity of the green turtle (*Chelonia mydas*) in Rapa Nui, Chile. Chelonian



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

Conservation and Biology. En prensa.

Álvarez-Varas, R., Heidemeyer, M., Riginos, C. Benítez, H.A., Reséndiz, E., Lara-Uc, M., Godoy D.A., Muñoz-Pérez, J.P., Alarcón-Ruales, D.E., Vélez-Rubio, G.M., Fallabrino, A., Piovano, S., Alfaro-Shigueto, J., Ortiz-Alvarez, C., Mangel, J.C., Esquerré, D., Zárate, P., Medrano, C., León Miranda, F., Guerrero, F., Vianna J.A., & Véliz, D. Integrating morphological and genetic data at different spatial scales in a cosmopolitan marine turtle species: challenges for management and conservation. *Zoological Journal of the Linnean Society*. Aceptado.

c. Other activities

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

ARTURO PRAT UNIVERSITY - TORTUMAR CHILE

During 2019 second half and January 2020, efforts were made in the city of Arica together with the GORE XV Region and the industrial and the academic sector, to set up a sea turtle and sea turtle rehabilitation center in the city of Arica.

This activity is currently in *status quo* due to Covid 19. As a result of the efforts from previous years 2017 and 2019, it is expected that the decree that establishes the protection of the feeding area in La Puntilla, as a Marine Reserve gets presidential signature as the last step for its declaration.

In the Tarapacá Region, a sea turtle exhibition was held within the framework of COP 25, a massive activity with more than 5,000 visitors.

ONG QARAPARA TORTUGAS MARINAS DE CHILE

During this period, different environmental education activities have been carried out in to increase the dissemination and empowerment regarding the presence of sea turtles in Chile. For this, QARAPARA has participated in various environmental education fairs in different parts of our country, and in talks framed in symposiums or cycles. The target audience in these instances has been open, with people from different gender, ethnic groups, ages and others.

On the other hand, two beach clean-up activities and biodiversity sighting were carried out with the local community of Atacama.



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

Dissemination:

- **El Mercurio Newspaper - Life, Science and Technology.** Five of the seven species of sea turtles in the world come to feed in Chile.

- **El Mercurio Newspaper - Life, Science and Technology. Buoy syndrome?:** The presence of sea turtles on the Atacama beaches worries environmentalists. <https://www.emol.com/noticias/Nacional/2019/09/24/962015/Tortugas-marinas-Chanaral-sindrome-boyantes.html>

Newspaper La Tercera - Trends. The actors of environmental philanthropy. <https://laboratorio.latercera.com/los-actores-de-la-filantropia-ambiental/>

UNIVERSITY OF CHILE – FACULTY OF SCIENCES

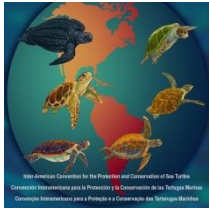
- **Moe Varua Rapa Nui Magazine:** "Monitoring of Sea Turtles in Rapa Nui". Number 132, Pages 6-9.. <https://moevarua.com/monitoreo-de-tortugas-marinas-en-rapa-nui/>

- **Newspaper El Mercurio-Life-Science and Technology.** "At least three species of turtles are found in the waters of Rapa Nui." <http://www.economiaynegocios.cl/noticias/noticias.asp?id=545822>

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Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

NATIONAL FISHERIES AND AQUACULTURE SERVICE OF CHILE

- Attention to stranding of sea turtles in Chile, transferring of stranded specimens to rehabilitation centers and release of rehabilitated specimens.
- Educational talks on marine fauna in schools and permanent training of Service officials in to upkeep and protect marine fauna



Inter-American Convention for the Protection and Conservation of Sea Turtles **Chile** **Annual Report 2020**

Part IV: Annexes

Table 1: Species Present

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

Species	Pacific	Atlantic	Caribbean Sea
Lo			
Lk			
Dc			
Ei			
Cm			
Cc			



Inter-American Convention for the Protection and Conservation of Sea Turtles

Chile

Annual Report 2020

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

- a. *This table is intended to report information on index nesting sites or beaches for each species. For beaches that have multiple species nesting, enter that beach under the list for the primary nesting species. When entering information on nesting site or beaches, information is to be entered for each species independently. Indicate the names of index nesting sites. On a separate sheet of paper, indicate the selection criteria used for identifying the index beach, for example, because it hosts a significant proportion of the overall nesting population within a region or other defined unit or genetic importance. Please use the index sites that your country has selected included in the document circulated with this report as Table 4. Also available on the [IAC website](#).*
- b. **Nesting season:** *Indicate the starting and finishing date of the nesting season.*
- c. **Monitoring period:** *Indicate the starting and finishing date of monitoring efforts.*
- d. **Survey frequency:** *Indicate the frequency with which the surveys are done (daily, weekly, bi-weekly, monthly, among others).*
- e. **Geographic location:** *Specify latitude and longitude in decimal degrees.*
- f. **Extension of beach monitored:** *Provide the total length (in Kilometers) of the nesting beach.*
- g. **Declared protection area:** *Indicate (yes or no) if the area is declared as some type of protected area.*
- h. **Annual nesting abundance:** *Provide information on the total number of females and/or clutches or nests deposited at the nesting site or beach in real numbers. Provide the exact count of females based on tagged or uniquely identified individuals. If the exact number of clutches is unknown provide a total number of nests.*
- i. **Information from tagging program:** *Indicate if there have been any tagging activities at the nesting beach by using the letters of the type of tagging being done: flipper tagging (FT), passive integrated transponder (PIT) tagging, and satellite telemetry (ST) programs. If possible, on a separate sheet or as attached reference provide greater detail about the type of tagging efforts conducted. Also, provide satellite telemetry maps or flipper tag recovery information if available.*
- j. **Tissue sampling:** *Indicate if there has been tissue sampling conducted at this site. This includes skin, blood, and other body tissues. On a separate sheet, or as attached references describe these tissue sampling programs in greater detail. For example, were samples collected for genetic, contaminant, and/or stable isotope studies?*
- k. *Indicate what organization or entity is providing the data.*
- l. *When inserting new rows, please copy and paste the drop-down menus when applicable.*

Inter-American Convention for the Protection and Conservation of Sea Turtles

Country

Annual Report 2020

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

Table 3: IAC Form to report interactions of sea turtles with industrial longline fisheries

a. This form is intended to report the annual summary of the number of sea turtle incidentally caught by industrial longline vessels (>20 m) during fishing operations in 2019.

b. Countries without this type of fishery will mark with X the “does not apply” box.

c. Target Species: Indicate the target species (scientific and common name) of the industrial longline fisheries during the last year. Indicate if the catch was using shallow or deep sets.

Fleet Information (Examples are provided in blue in the form)

d. Period covered: Starting and end date of the fishing operations of the year

e. Area fished: Indicate the area coordinates where shallow set and deep sets fishing operations were carried out during the last year.

f. No. of vessels that fished: Indicate the total number of vessels in the fleet in each case (deep set and shallow set), the number of vessels with observers on board, and the corresponding percentage of vessels with observers (% observed)

g. No. of trips: Indicate the total number of trips in each case (deep set and shallow set), the number of trips with observers on board, and the corresponding percentage of trips with observers onboard (% observed)

h. No. of effective fishing days: Indicate the total number of fishing days in each case (deep set and shallow set) when fishing took place, the number of fishing days with observers on board, and the corresponding percentage of fishing days with observers onboard (% observed)

i. No. of sets: Indicate the total annual number of sets in each case (deep set and shallow set), the annual number of sets with observers on board, and the corresponding annual percentage of sets with observers onboard (% observed)

j. No. of hooks (in thousands): Indicate the total annual number of hooks in each case (deep set and shallow set), the annual number of hooks with observers on board, and the corresponding annual percentage of hooks with observers onboard (% observed). It refers to the number of hooks per basket (HPB) or the number of hooks between floats (HBF). If the number is unknown include an approximate number of hooks/sets, using an asterisk (*) to indicate that it is an approximation.

k. Predominant hook type/size: Using the [IATTC codes](#) indicate the most common hooks (> 50%) used throughout the year as a total, and in vessels with onboard observers in each case (deep sets and shallow sets).

l. Predominant bait type: Indicate the most common bait used throughout the year as a total, and in vessels with observers in each case (deep sets and shallow sets) using the following bait codes: SQ – squid (e.g. Cephalopods), M – mackerel (e.g. Scomber spp.), A – artificial lure (e.g. plastic jig), O-other, and specify.

Sea Turtles Species (Units expressed in the number of individuals observed)

m. Released alive: Total number of each sea turtle species released alive in each case (shallow and deep sets)

n. Released dead: Total number of individuals of each sea turtle species released dead in each case (shallow and deep sets)

o. Released condition unknown: Total number of each sea turtle species released under unknown conditions as the individual could not be brought onboard or close enough to verify the condition dead or alive.

p. Notes: Include additional information such as turtles caught that had tags (flipper tags or satellite transmitter), in each case (shallow and deep sets), if applicable.

Table 3: IAC Form to report interactions of sea turtles with industrial longline fisheries (vessels >20m)			
Member country	Country name	The form does not apply	
Target Species	e.g. Multiple		

FLEET INFORMATION (vessels >20m)						
	Shallow sets (<15 HPB/HBF ¹ or <100m max hook depth)			Deep sets (≥15 HPB/HBF or ≥100m max hook depth)		
	date range mm/dd/yyyy–mm/dd/yyyy			date range mm/dd/yyyy–mm/dd/yyyy		
Period covered	from (XXX)°W to (XXX)°W and from (XXX)°S/N to (XXX)°S/N			from (XXX)°W to (XXX)°W and from (XXX)°S/N to (XXX)°S/N		
Area fished	Total Fleet	Observed	% observed	Total Fleet	Observed	% observed
No. of vessels that fished	60	3	5	90	8	8.9
No. of trips	150	15	10	300	10	3.3
No. of effective fishing days	3700	238	6.4	800	22	2.8
No. of sets	4000	800	20	1000	25	2.5
No. of hooks (in thousands) ¹ <i>If unknown, approx. no. of hooks/set, using a *</i>	700	120	17	300	12	4
Predominant ² hook type/size (IATTC code)	C-40	J-02		C-33	C-33	
Predominant bait type ³	SQ	SQ		M	M	

SEA TURTLE SPECIES (vessels >20m)						
	No. of Individuals Observed					
	Shallow sets (<15 HPB/HBF ⁴ or <100m max hook depth)			Deep sets (≥15 HPB/HBF or ≥100m max hook depth)		
	Released Alive	Released Dead	Released Condition Unknown	Released Alive	Released Dead	Released Condition Unknown
Taxa - Sea turtles						
Leatherback (<i>Dermochelys coriacea</i>)						
Loggerhead (<i>Caretta caretta</i>)						
Green (<i>Chelonia mydas</i>)						
Olive ridley (<i>Lepidochelys olivacea</i>)						
Kemp's ridley (<i>Lepidochelys kempii</i>)						
Hawksbill (<i>Eretmochelys imbricata</i>)						
Notes (e.g. Tagged turtles, etc.)						

¹ Hooks per Basket / Hooks Between Float (HPB/HBF)

² "Predominant" indicates most common, e.g. >50%

³ Bait code: SQ – squid (e.g. Cephalopods), M – mackerel (e.g. Scomber spp.), A – artificial lure (e.g. plastic jig)

⁴ Hooks per Basket / Hooks Between Float (HPB/HBF)

Inter-American Convention for the Protection and Conservation of Sea Turtles

List of index sites for each sea turtle species for each IAC country within which sea turtle nesting occurs. Use the index beaches in this table to provide information for Table 2 index nesting sites.

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

Name of Beach	DC	CM	EI	CC	LO	LK	Responsible
Caribbean Netherlands (2)	(1)	(2)	(1)	(1)			
Klein Bonaire, Bonaire		X	X	X			Sea Turtle Conservation Bonaire
Zeelandia, St. Eustatius	X	X					St Eustatius Sea Turtle Conservation
Costa Rica /Pacific (9)	(1)	(5)			(4)		
Isla Murcielago		X					
Nancite*					X		
Naranjo		X			X		
Cabuyal		X					
Nombre de Jesús		X					
Punta Pargos		X					
Playa Grande	X						
Ostional*					X		
Hermosa					X		
Costa Rica/Atlantic (4)	(3)	(1)	(1)				
Tortuguero	X	X					
Pacuare Norte	X						
Mondonguillo	X						
Cahuitta			X				
Ecuador (9)		(6)	(1)		(5)		
San Lorenzo					X		MAE (Pacoche)
La Botada					X		MAE (Pacoche)
Playa Chocolatera		X			X		MAE (REMACOPSE)
Playa Tres Cruces		X			X		MAE(REMACOPSE)
PlayaMar Bravo		X			X		MAE(REMACOPSE)
Playita (Machalilla)			X				MAE (PNM/ Equilibrio
Quinta Playa (Galapagos)		X					MAE (DPNG)
Barahona (Galapagos)		X					MAE (DPNG)
Las Bachas (Galapagos)		X					MAE (DPNG)

Name of Beach	DC	CM	EI	CC	LO	LK	Responsible
Guatemala (2)	(1)				(2)		
Hawaii	X				X		ARCAS
La Barrona					X		
Honduras/Atlantic (3)	(1)		(2)				
Pumkin Hill, Utila			X				
Plaplaya	X						
Cayos Cochinos			X				
Honduras/Pacific (2)					(2)		
Punta Ratón					X		
El Venado					X		
México/Atlantic (12)		(11)	(4)	(8)		(7)	
Rancho Nuevo, Tamps		X		X		X	CONANP
Barra del Tordo, Tamps		X		X		X	CONANP
Altamira, Tamps		X		X		X	CONANP
Mirama, Tamps						X	CONANP
Lechuguillas, Ver		X	X			X	CONANP
Isla Aguada-Xicalango-Victoria, Camp		X	X			X	CONANP
Chenkán, Camp		X	X			X	CONANP
Las Coloradas/Rio Lagartos, Yuc		X	X	X			CONANP
Xcabel, Q.Roo		X		X			Reserve Estatal
Chemuyil, Q. Roo		X		X			
Xel Ha, Q. Roo		X		X			
Puerto Aventuras, Q. Roo		X		X			
México/Pacific (13)	(6)	(5)			(9)		
El Verde, Sin	X				X		CONANP
Platanitos, Nay					X		CONANP
Nuevo Vallarta, Nay					X		CONANP
Mismaloya, Jal					X		CONANP
Chalacatepec, Jal					X		CONANP
El Chupadero, Col							CONANP

Name of Beach	DC	CM	EI	CC	LO	LK	Responsible
Mexiquillo, Mich	X	X			X		CONANP
Tierra Colorada, Gro	X	X			X		CONANP
Cahuitán, Oax	X						CONANP
Escobilla, Oax*	X				X		CONANP
Barra de la Cruz, Oax	X	X			X		CONANP
Maruata, Mich		X					Univ. Michoacana SNH
Colola, Mich		X					Univ. Michoacana SNH
Panamá/Atlantic (3)	(2)	(1)	(3)	(1)			
Cayos Zapatillas (B. del Toro)			X				
Playa Chiriqui (B. del Toro)	X	X	X	X			
Playa Armita o Pito (GunaYala)	X		X				
Panamá/Pacific (2)		(2)			(2)		
RVS Isla Cañas		X			X		
Playa La Marinera		X			X		
United States/Atlantic (7)	(5)	(4)	(3)	(4)		(1)	
Culebra Island, Puerto Rico	X						
Vieques Island, Puerto Rico	X	X	X				
Mona Island, Puerto Rico			X				
Buck Island Reef National Monument, U.S. Virgin	X	X					
Sandy Point NWR, U.S. Virgin Islands	X	X	X				
Florida Index Beaches	X	X		X			
Georgia Index Beaches				X			
North Carolina Index Beaches				X			
South Carolina Index Beaches				X			
Texas (South Padre Island)						X	
United States/Pacific (2)		(1)	(1)				
French Frigate Shoals (HI)		X					
Hawaii			X				

Name of Beach	DC	CM	EI	CC	LO	LK	Responsible
Venezuela (11)	(6)	(4)	(6)	(6)			
Querepare (Edo. Sucre)	X			X			CICTMAR
Cipara (Edo. Sucre)	X			X			CICTMAR
Macuro (varias playas cercanas, Edo. Sucre)	X	X	X				ONDB-MPPA
El Agua - Parguito Beach (Edo. Nueva Esparta)	X						ONDB-MPPA
Parque Nacional Archipiélago Los Roques (varios cayos)			X	X			INPARQUES, Fundación Científica
La Sabana (Edo. Vargas)	X						ONDB-MPPA, Consejo de Pescadores
Parque Nacional Henri Pittier (Playas Cuyagua, Uricaro y otros)		X	X	X			INPARQUES, Fundación Ecodiversa, Lideres de la
Playas entre las bocas del Río Morón Y Río Yracuy			X	X			Palmichal S.C.
Parque Nacional Morrocoy (Cayo Borracho, Varadero y Playas Mayorquina)		X	X				CICTMAR, INPARQUES
Paraguana Peninsula	X		X	X			UNEFM (Universidad Nacional)
RFS Isla de Aves		X					ONDB-MPPA