INTER-AMERICAN CONVENTION FOR THE PROTECTION AND CONSERVATION OF SEA TURTLES

IAC – ANNUAL REPORT 2022

URUGUAY

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 at secretario@iacseaturtle.org

The submission deadline for this Annual Report is April 30th, 2022.

Translation by Luz Helena Rodriguez – IAC Secretariat

Part I – General Information

Country

Name of the country reporting
››› Uruguay

Official Note

If required, please attach here the relevant administrative authority **official note** endorsing the annual report submission.
Are you attaching an official note?
Please select only one option
☐Yes
☒ No

1) Focal Point

1.1 Name
››› Dr. Jaime Coronel (Punto Focal técnico)

1.2 Institution
››› Dirección Nacional de Recursos Acuáticos - Ministerio de Ganadería Agricultura y Pesca (MGAP)

1.3 Submission Date
››› June 13, 2022.

2) Agency or Institution responsible for preparing this report

2.1 Name of the person preparing this
››› MSc. Cecilia Lezama

2.2 Name of Agency or Institution
››› Dirección Nacional de Recursos Acuáticos - Ministerio de Ganadería Agricultura y Pesca (MGAP)

2.3 Address
››› Constituyente 1497 Montevideo, Uruguay

2.4 Telephone
››› 598 24004689 interno 149

2.5 E-mail
››› clezama@mgap.gub.uy

3) Others who participated in the preparation of this report

3.1 Others who participated in the preparation of this report

Name	Agency or Institution	E-mail
Dra. Gabriela Vélez-Rubio	Asociación Civil Karumbé/ CURE-UDELAR	gabriela.velezrubio@gmail.com

Part II – Policy and Management

1) General description of activities

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. The Party shall report on the action plans, management plan or other types of instruments.

Please select the options that best apply for your country and provide the link to the corresponding document if available online. If it is in progress add the date is expected to be finalized in the corresponding section.

1.1 The country has a national strategy/plan for the conservation of sea turtles in accordance with Article XVIII.

Please upload the file or attach the links to the corresponding documents using the blue box icons beneath each question
Please select only one option

☐Yes
☒No
☐In Progress

Species Management Plan

Only applicable to countries that have developed individual management plans for each species.

1.1.1 The country has a **specific strategy/plan** for the conservation of:

Please upload the file or attach the link to the corresponding document using icons below.
☐*Lepidochelys olivacea*
☐*Lepidochelys kempii*
☐*Dermochelys coriacea*
☐*Eretmochelys imbricata*
☐*Caretta caretta*
☐*Chelonia mydas*

1.2 Does your country have policies and programs at local and regional scales in accordance with Article XVIII?

Please attach the list of policies and programs and other information relevant to their adoption or implementation.
Please select only one option
☒Yes
☐No
☐In Progress

1.3 Does your country have monitoring programs in accordance with Article IX?

Please attach the list of programs and other information relevant to their adoption or implementation.
Please select only one option

☐Yes
☒No
☐In Progress

2) 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 (**30 April 2021** – **30 April 2022**).
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.
First time a country is submitting this information: please include all pertinent national legislation and international instruments currently in force.
Countries that have previously submitted this information; please provide information for any changes that have occurred since your country's last report submission (2021).

National Legislation

Type and name of the legal instrument (No.)	Description (Range of application)	Sanctions Imposed
Decree 145/2020	Modifies some articles of 115/2018	

International Instruments

Treaty, Convention, Agreements, Memorandum of Understanding	Year signed and/or ratified

3) Actions to comply with National and International Mandate

List actions that are being carried out to comply with national and international mandates.

(Ex: inspections, confiscations, sanctions, etc.)
›››

4) Efforts to increase IAC membership

4.1 Has your country encouraged non-member states to join the IAC?
Please select only one option
☐Yes (list countries below)
☒No

4.2 Has your country reached out to Canada, Guyana, French Guiana, Trinidad and 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?
Please select only one option
☐Yes (list countries below)
☒No

5) Exceptions under the Convention

5.1 Implementation and monitoring of exceptions established in the Convention

Describe the progress in the implementation of the exception correspondent to the current year (800 words) according to the current resolutions on exceptions.

Resolutions on Exceptions

CIT-COP5-2011-R2 (PDF) CIT-COP6-2013-R1 (PDF) CIT-COP7-2015-R1 (PDF)
›››

5.2 Has your country presented a 5-year report on the implementation of the Exception Resolution?

Resolution CIT-COP6-2013-R1 Exception Guatemala and Panama (2013-2020). Resolution CIT-COP7-2015-R1 Exception Costa Rica (2015-2020).
Attach the five-year report.
☐Yes
☐No

5.3. Does your country have a management plan for the exception?

If yes, attach the exception management plan
☐Yes
☐No
☐In progress

5.4 Submission of new exceptions

Should your country present a new exception, please describe in the box below a brief description in accordance with article IV, item 3(a,b,d) and Annex IV of the text of the Convention, using the procedure established by the IAC COP and attach the full report as requested in Resolution CIT-COP5-2011-R2.

›››

Part III - Compliance with IAC Resolutions

1) Sea Turtle Species Presence

1.1 Sea Turtle Species Present in the Country

Check the box if the species listed is present in the oceanographic basins of your country as established in Article III of the text of the Convention.

	Atlantic Ocean	Pacific Ocean	Caribbean Sea
Lepidochelys olivacea	☒	☐	☐
Lepidochelys kempii	☐	☐	☐
Dermochelys coriacea	☒	☐	☐
Eretmochelys imbricata	☒	☐	☐
Caretta caretta	☒	☐	☐
Chelonia mydas	☒	☐	☐

Additional Notes

Include other information, if required

›››

2) IAC Resolutions

2.1 The following resolutions apply to this country

☐Eastern Pacific Leatherback Turtle Resolution
☒Hawksbill Resolution
☒Loggerhead Resolution
☐Northwest Atlantic Leatherback Resolution
☒Fisheries Resolution

Resolution CIT-COP8-2017-R2 - Hawksbill Turtle (*Eretmochelys imbricata*)

1. Is your country strengthening monitoring of the illegal use and trade of hawksbill turtles and their products?

Please select only one option
☐Yes
☐No
☒Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Uruguay is not within the distribution range of the species.
Reference: Estrades A, Vélez-Rubio, Caraccio MN, Fallabrino A. 2013. Exploring southern waters: The presence of Hawksbill turtles in Uruguay. In: Tucker, T., Belskis, L., Panagopoulou, A., Rees, A., Frick, M., Williams, K., LeRoux, R., and Stewart, K. compilers. 2013. Proceedings of the Thirty-Third Annual Symposium on Sea Turtle Biology and Conservation. NOAA

2. Is your country enforcing pertinent hawksbill legislation?

Please select only one option
☐Yes
☐No
☒Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

3. Are activities being carried out in your country to stop the illegal trade of hawksbill products?

Please select only one option
☐Yes
☐No
☒Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

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

4a. Protection of nesting habitats

Please select only one option
☐Yes
☐No
☒Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

4b. Protection of feeding habitats

Please select only one option
☒Yes
☐No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Uruguay is at the limit of this species distribution range in the Atlantic, therefore its occurrence is occasional. However, there are various coastal-marine protected areas in the National System of Protected Areas (SNAP) that provide protection to feeding and/or development habitats for the species of sea turtles found in our waters.

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

1. Has your country created national action plans and/or monitoring programs to promote loggerhead sea turtle conservation?
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

2. State if there are plans or recovery programs, or bilateral or regional cooperation in your country.
Please select only one option
☐Yes
☐No
☒Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

3. Are these action plans or monitoring programs being implemented?
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
›››

4. Is there protection of the loggerhead turtle at a state or federal level?
Please select only one option
☒Yes
☐No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› - At the national level, the following regulation directly or indirectly protects these species and/or its habitats:
- Decree No. 144 of 1998 - Maintains the prohibition of capture, retention and transportation, commercialization, transformation and processing of the four species of sea turtles found in the country up to that date.
- Law No. 17,283 of 2000 - Protection of the environment
- Law No. 17,234 of 2000- Creates the National System of Protected Areas (Modified by Law No. 17,930 of 2005).
- Law No. 19,175 of 2013 - Establishes the legal regime for Fisheries and Aquaculture in order to ensure the conservation, research, sustainable development and responsible use of hydrobiological resources and the ecosystems that contain them (Regulated by Decree No.115/2018).

5. Has your country taken conservation actions to protect nesting beaches and their associated habitats?
Please select only one option
☐Yes
☐No
☒There are no nesting beaches in the country

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
›››

6. Are there laws on turtle-friendly lighting in areas impacted by coastal development?

Please select only one option

☐Yes

☐No

☒There are no nesting beaches in the country

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.

›››

7. Is there long-term (minimum 10 years) standardized data available for population trend studies?

Please select only one option

☐Yes

☐No

☒ There are no nesting beaches in the country

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.

›››

8. Is there exploitation or direct harvest of loggerhead turtles in your country?

Please select only one option

☐Yes

☒No

☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.

›››

Resolution CIT-COP3-2006-R2 – Reduce impacts of fisheries on sea turtles
Relating to if your country has 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

1. Does your country collect information by fishery?
Please select only one option
☒Yes
☐No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› There is a National Observers Program onboard the industrial fishing fleet, at the National Directorate of Aquatic Resources (DINARA) that collects relevant information on the fishery as well as on sea turtle and other species bycatch.

2. Does your country have observer programs?
Please select only one option
☒Yes
☐No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› The National Directorate of Aquatic Resources (DINARA) has a National Program of onboard Observers for Industrial Fisheries, which collects information sea turtles, sea birds and marine mammal bycatch.

3. Does your country do research on sea turtle/fishery interactions?
Please select only one option
☒Yes
☐No
☐Does not apply

Please list the most relevant actions of the year (500 words)
List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Within the framework of DINARA´s National Program of onboard Observers, information is collected regarding sea turtles, birds and marine mammals bycatch in different commercial fisheries.
- Within the framework of the Uruguayan Sea Turtle Stranding and Rescue Network (created by the Karumbé Civil Association in 1999), the presence of signs of interaction with turtle fisheries is verified, when possible, on sea turtles stranded on the coast (alive or dead).

4. Does your country have information on non-Party vessels and interactions with sea turtles?
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

5. Does your country cooperate with non-party states to obtain information on interactions with sea turtles?
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

B. Mitigation measures

6. Does your country implement mitigation measures in long-line fisheries?

If the answer is **NO** please justify
Please select only one option
☐Yes
☐No
☒Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Currently there is no pelagic longline fleet in Uruguay

7. Does your country implement mitigation measures in gillnets fisheries?

If the answer is **NO** please justify
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Gillnets are used by Artisanal Fisheries (small-scale coastal fishery, up to 10 GRT) and to date there is no observer program or mitigation measures implemented for this fisheries

8. Does your country implement mitigation measures in trawl fisheries (e.g. TEDs)?

If the answer is **NO** please justify
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

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; or attach any relevant documents
››› Does not apply

9. Does your country implement mitigation measure in other fishing gears?

If the answer is **NO** please justify
Please select only one option
☐Yes
☒No
☐Does not apply

If yes, please indicate which fishing gears
››› Does not apply

10. List the fisher training programs about best practices for safe handling and release of incidentally-caught sea turtles carried out by your country during the last year
››› No program with this approach has been implemented in recent years

C. Socio-economic considerations

11. Does your country support socio-economic activities that help mitigate adverse impacts of fisheries on sea turtles?
Please select only one option
☐Yes
☒No
☐Does not apply

Please list the most relevant actions of the year (500 words)

List the activities, workshops, research, publications, or any other relevant material related to your response. Attach supporting documents, if required.
››› Does not apply

Part IV – Research Information

Indicate threats (Coastal development, incidental capture, direct use, contamination, pathogens, and climate change) by species

1) Threats

1.1 Indicate threats

Indicate threats **(Coastal development, incidental capture, direct use, contamination, pathogens, and climate change)** by species

Lo = *Lepidochelys olivacea*
Lk = *Lepidochelys kempii*
Dc = *Dermochelys coriacea*
Ei = *Eretmochelys imbricate*
Cc = *Caretta caretta*
Cm = *Chelonia mydas*.

	Lo	***Lk***	***Dc***	***Ei***	***Cc***	***Cm***
Direct Use	☐	☐	☐	☐	☐	☒
Incidental Capture	☐	☐	☒	☐	☒	☒
Coastal development	☐	☐	☒	☐	☒	☒
Pathogens	☐	☐	☐	☐	☐	☒
Contamination	☒	☐	☒	☐	☒	☒
Climate Change	☐	☐	☒	☐	☒	☒

2) Indicate the mitigation actions that apply for each species

2.1 Habitat loss mitigation actions (i.e. coastal development, pollution, climate change)

	Lo	***Lk***	***Dc***	***Ei***	***Cc***	***Cm***
Establishment of Marine Protected Areas	☒	☐	☒	☒	☒	☒
Lighting regulations in place	☐	☐	☐	☐	☐	☐
Permits required for construction near nesting sites	☐	☐	☐	☐	☐	☐
Permits required for scientific research on feeding/nesting grounds	☒	☐	☒	☒	☒	☒
Permits required for recreational activities near nesting sites	☐	☐	☐	☐	☐	☐
Beach Cleanups	☐	☐	☒	☐	☒	☒
Predator's removal/control	☐	☐	☐	☐	☐	☐
Use of sea turtle friendly lighting	☐	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐	☐

2.2. Bycatch mitigation actions (i.e. Incidental Capture)

	Lo	*Lk*	*Dc*	*Ei*	*Cc*	*Cm*
Sea Turtle Excluder Devices (TED)	☐	☐	☐	☐	☐	☐
Time/space closures	☐	☐	☐	☐	☐	☐
Research on new fishing gear technology	☐	☐	☐	☐	☐	☐
Vessel monitoring using VMS	☒	☐	☒	☒	☒	☒
Marking of fishing gear in commercial vessels	☐	☐	☐	☐	☐	☐
Fishers trained on sea turtle safe handling and release	☒	☐	☒	☐	☒	☒
Observers program	☐	☐	☐	☐	☐	☐
Use of circle hooks	☐	☐	☐	☐	☐	☐
Nets are banned	☐	☐	☐	☐	☐	☐
Trawling is banned	☐	☐	☐	☐	☐	☐
Nets illumination	☐	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐	☐

2.2 Direct use mitigation actions

	Lo	**Lk**	**Dc**	**Ei**	**Cc**	**Cm**
None	☐	☐	☐	☐	☐	☐
Nests relocation	☐	☐	☐	☐	☐	☐
Night Patrols	☐	☐	☐	☐	☐	☐
Day Patrols	☐	☐	☐	☐	☐	☐
Flipper Tagging	☒	☐	☒	☒	☒	☒
Satellite Tracking	☐	☐	☐	☐	☐	☐
Poaching regulations in place	☐	☐	☐	☐	☐	☐
Environmental education for local communities	☒	☐	☒	☒	☒	☒
Seizure of sea turtle products	☒	☐	☒	☒	☒	☒
Livelihood alternatives for local communities	☒	☐	☒	☒	☒	☒
Permits required for scientific research	☐	☐	☐	☐	☐	☐
Exception management plan (if applies)	☐	☐	☐	☐	☐	☐

3) Research

3.1 Types of research

Please fill out the following table on the types of research being carried out in the country related to each species.

	Lo	*Lk*	*Dc*	*Ei*	*Cc*	*Cm*
Tagging	☒	☐	☒	☒	☒	☒
Migration	☒	☐	☒	☒	☒	☒
Genetics	☐	☐	☒	☐	☒	☒
Habitat monitoring	☐	☐	☐	☐	☐	☒
Fisheries interactions	☐	☐	☒	☐	☒	☒
Disease	☐	☐	☐	☐	☒	☒

3.2 Describe scientific research

In addition to the above, please 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.

To report each project, please use the following structure:

1) Name of the project
2) Objective
3) E-mail of the organization/responsible
4) Summary (5 lines)
5) Annex Number (Use the blue buttons to attach photos and/or the full report, if available)

Describe the file with the same Annex number referenced in the text.
››› **STUDY ON THE GREEN TURTLE (*Chelonia mydas*) POPULATION IN THE ATLANTIC COAST OF URUGUAY** Objective: To understand the population structure of the green turtle aggregation, identify the areas of greatest use, understand their diet and associated environmental changes. In addition, it intends to understand the health status and the incidence of threats that impact the species at a regional and global level.
Responsible: Gabriela Vélez-Rubio (NGO Karumbé and CURE-Udelar). Email: karumbemail@gmail.com
Abstract: The Atlantic coast of Uruguay is an area of aggregation of different populations of green turtle juveniles, used by the turtles either seasonal or annually. For juvenile sea turtles it is difficult to establish a specific population size since they make use of large areas of distribution and mortality at this stage is very high both due to biological reasons and to human threats. Karumbé´s research in the study area have shown a 12% recapture rate of individuals, indicating that this is an area where turtles show high site fidelity. Given the high seasonal migration and the fidelity of the site, the mark-recapture works are of special interest to know the movements of the turtles.
EVALUATION OF SEA TURTLE AGGREGATIONS IN URUGUAYAN WATERS THROUGH THE ANALYSIS OF THE STRANDINGS.
Objective: Determine the abundance and spatio-temporal patterns of sea turtles, as well as the threats that affect them.
Responsible: Gabriela Vélez-Rubio (NGO Karumbé and CURE-Udelar). Email: karumbemail@gmail.com
Abstract: Annually, the number of sea turtles found on the coasts or captured by fishing boats in the waters of the Río de la Plata and the Atlantic Ocean amounts to approximately 300 individuals. Although most of the strandings reported correspond to dead specimens, a significant number of live turtles are also found on the beaches, with varying degrees of compromised health status. Thanks to Karumbé Civil Association work, beginning in 1999, and the Marine Turtle Rescue and Stranding Network of Uruguay (RRVTMU), threats to sea turtle physical integrity became evident along with the need for long-term monitoring of the sea turtle aggregations in our waters.
POPULATION GENETICS OF THE SEVEN-KEELED TURTLE (*Dermochelys coriacea*) IN THE WATERS OF THE RIO DE LA PLATA
Responsible: Gabriela Vélez-Rubio and Laura Prosdocimi (NGO Karumbé). Email: karumbemail@gmail.com
Objective: To know the origin of seven-keeled turtle individuals found stranded on the Uruguayan coast through the use of mitochondrial and nuclear sequences.
Abstract: In the present work, mtDNA, ncDNA sequences and morphometric data obtained from strandings of seven-keeled turtles are analyzed in order to improve knowledge about migratory patterns and characterize the aggregation of this species in the waters of the Río de la Plata (Uruguay and Argentina).
EFFECT OF THE INTERACTION OF SEA TURTLES WITH SOLID WASTE IN URUGUAYAN WATERS
Responsible: Daniel Gonzalez (NGO Karumbé and James Cook University, Australia). Doctoral Thesis in its fourth year of completion. Email: karumbemail@gmail.com
Objective: Analyze the effects of plastic pollution on the health of the green turtle and study the distribution patterns of plastic debris in Uruguayan waters. In addition, the results will allow evaluating the risk of plastic ingestion for this

population related to the levels of exposure to plastic.
Abstract: This study intends to analyze and evaluate the effects of contamination by anthropogenic waste (mainly plastic) on the health of green turtles, based on a wide and robust range of samples collected by the NGO Karumbé over a period of 10 years. The quantification of these impacts continues to be a high priority for research both in the field of marine pollution by anthropogenic waste, and in the conservation of sea turtles.

INDIVIDUAL IDENTIFICATION USING MORPHOLOGICAL CHARACTERISTICS OF JUVENILE GREEN TURTLE IN URUGUAY

Responsible: Candela Buteler (NGO Karumbé and National University of Córdoba, Argentina). Email: karumbemail@gmail.com
Objective: To test morphological characters to propose non-invasive identification techniques in juveniles of *Chelonia mydas*.
Abstract: Mark-recapture methods are widely used in studies that seek to estimate population parameters (abundance, survival rates, etc.) and collect data on demography, migration, and life history of sea turtles. An alternative method to the application of artificial tags (a technique commonly used in sea turtles) to identify individuals is based on using their natural body markings. In addition, knowing the ratio of sexes and origin in a population has important ecological implications, especially in threatened species, such as the green turtle. The evaluation of morphological variables using the technique called morphometry could allow establishing differences between sexes and colonies of origin without the need for more delicate and expensive analyzes (analysis of hormones, mitochondrial DNA, etc.).

ENVIRONMENTAL POLUTION AND SANITARY STATUS OF THE AGGREGATION OF GREEN TURTLES FOUND IN THE "CERRO VERDE AND LA CORONILLA ISLANDS" COASTAL MARINE PROTECTED AREA AND ZONES OF INFLUENCE

Responsible: Florencia David (NGO Karumbé and Universidad de Rosario, Argentina). Doctoral thesis in its second year of completion. Email: karumbemail@gmail.com
Objective: Obtain information on the health status of *C. mydas* from oxidative stress indicators, such as antioxidant enzyme activity, lipid peroxidation and loss of DNA integrity.
Abstract: Changes in sea turtles ontogenetic diet and the different habitats they use throughout their life cycle, have an important role as indicators of environmental health. Although sea turtles face numerous anthropogenic threats, the effects of heavy metals, organochlorine compounds (OC) and polychlorinated biphenyls (PCBs) on their health, survival and reproduction are among the main research topics for their conservation. Blood samples are a reliable and non-lethal method to assess xenobiotic concentrations in sea turtles. Considering that the knowledge about the effects of exposure to pollutants on juvenile green turtles that inhabit Uruguayan waters is limited, this study aims to obtain information on the health status of juveniles of this species aggregating in the Protected Coastal Marine Area " Cerro Verde and La Coronilla Islands".

OPPORTUNISTIC BENTHIC EPIBIONTS ON JUVENILE GREEN TURTLE ON THE ATLANTIC COAST OF URUGUAY: COMPOSITION AND INDICATORS OF HABITAT USE

Responsible: Marina Reyes (NGO Karumbe and University of Buenos Aires). Email: karumbemail@gmail.com
Objective: To analyze the composition and structure of the opportunistic epibionts of juvenile green turtles (Chelonia mydas) and to estimate the habitat use during their brumation by comparing it with benthic assemblages of rocky substrates from the Atlantic coast of Uruguay.
Abstract: On the Uruguayan coast there are large seasonal variations in sea surface temperature, which is why most of the juvenile green turtles migrate to the coastal waters of southern Brazil or to oceanic waters where the temperature is higher during winter. Even so, a small proportion of the juvenile aggregation may remain in Uruguayan coastal waters during that season. These individuals that do not migrate, faced with a gradual drop in temperature, can develop a behavior of winter torpor or "brumation" to tolerate low temperatures by remaining on the seabed for long periods of time. In this framework, the hypothesis of this work is that green turtle individuals during the cold months constitute an available substrate for benthic organisms, reflecting the benthic assemblage of the rocky substrate of the Atlantic coast of Uruguay. The study of the assemblage in these zones (species composition, monthly recruitment and growth rates of mussels) will allow deducing the habitat use of the turtles during this period of the year.

APPLICATION OF UNMANNED AERIAL SYSTEMS (DRONES) FOR THE ASSESSMENT OF GREEN TURTLE POPULATIONS IN COASTAL MARINE PROTECTED AREAS IN URUGUAY

Responsible: Natalia Teryda (Ph.D Student, School of Natural Resources and Environment, University of Florida) and Gabriela Vélez (NGO Karumbé)
Objective: Estimation of greent turtles density Cerro Verde and La Coronilla Islands Marine Coastal Area, in the Department of Rocha, Uruguay during different seasons of the year, and to assess possible changes in the cover of marine algae associated with invasive species, sand deposition, among other stressors.
Abstract: Throughout their wide distribution range, thousands of stranded turtles affected by direct threats have been reported annually in the South-West Atlantic Ocean (SWAO), indicating strong anthropogenic pressures. Since juvenile green turtles have high fidelity to feeding grounds in SWAO, this project will use unmanned aerial systems (UAS or drones) to analyze the ecological role of green turtles in these coastal habitats and assess how their distribution patterns are affected by habitat variability. For this project, a UAS will be used to carry out aerial censuses to estimate the density of green turtles in the Cerro Verde and La Coronilla Islands Marine Coastal Area, in the Department of Rocha, Uruguay during different seasons of the year, and to evaluate possible changes in marine algal cover associated with invasive species, sand deposition, among other stressors.
https://www.boydlyonseaturtlefund.org/natalia-teryda

URUGUAY UNDERWATER, PILOT EXPERIENCE TO VALUE A MARINE-COASTAL AREA THROUGH RECREATIONAL DIVING

Responsible: Juan Manuel Ordoqui (Young Explorers- NATGEO) and Gabriela Vélez (NGO Karumbé)
Main objective: The main objective of the project is to carry out an exploratory study of a potential coastal-marine protected area located in Playa Verde, department of Maldonado, Uruguay. Abstract: The site selected for this study has

relevant and priority biodiversity for conservation, where macroalgae, invertebrates, bony and cartilaginous fish, sea turtles, marine mammals, among others, are found. At the same time, it is an area with a high presence of anthropic activities carried out by local communities, artisanal fishermen and seasonal residents. Through activities such as diving and the use of underwater cameras, promoting scientific and recreational diving (tools little exploited in our country), there will be work on the behavioral aspects of green turtle individuals as well as a survey on phytoflora and marine and coastal species of fauna. When disseminating the results, environmental education will be used as a tool to promote the importance of conserving these priority species, based on meetings with schools and training centers, with the community and local fishermen. This project is expected to start a solid database to contribute as a baseline for a future application of this area as a new coastal-marine protected area to the National System of Protected Areas in Uruguay.

Bibliographic Citations (Period 2021):

1. Barreto J, Miller P, Teixeira JB, Baptistotte C, Fallabrino A, Marcondes A, Estrades A, Laporta M, Thomé JC (2021) Loggerhead turtle captured in the Río de la Plata is found 10 years later nesting in Espírito Santo, Brazil. Marine Turtle Newsletter 162: 4-5.
2. González-Paredes, D., Ariel, E., David, M. F., Ferrando, V., Marsh, H., & Hamann, M. (2021). Gastrointestinal transit times in juvenile green turtles: An approach for assessing digestive motility disorders. Journal of Experimental Marine Biology and Ecology, 544, 151616

4) Other activities

In the case of projects, please include the name of the project, organizations involved, a five lines summary, current status, and contact person.

4.1 Other activities

Include a 500-word summary of information on environmental education activities, programs to establish and manage protected areas, and cooperative activities with other Party countries.
Please attach any other relevant documents using the blue boxes below.
››› Environmental Education Program
Objectives: 1. Strengthen the environmental education program of the NGO Karumbé by updating the didactic material used in the workshops carried out within the framework of the program.
2. Update information and recreational activities with teachers of different educational levels
3. Carry out workshops using this material, generating knowledge regarding the coastal environment, biodiversity, threats, care and conservation practices.
4. Disseminate this material through workshops, educational centers and digitize it to be able to share it from the organization's website.
Abstract: Since 1999, the NGO Karumbé has been working on environmental education as a fundamental tool to encourage and promote a correct relationship between society and nature, taking into account values, experiences and knowledge to achieve sustainable development and improve this relationship between humans and nature. This project intends to update the teaching material that is used in the workshops within the framework of the environmental education program of the organization, in conjunction with teachers, non-university actors and UDELAR students, in order to update, create and adapt knowledge of three age ranges from initial, primary and secondary education (basic cycle), taking into account the different modalities in which it will be possible to work under the current health emergency.
Wildlife Rehabilitation Centers
Every year, the NGO Karumbé receives, through the Uruguayan Sea Turtle Rescue and Stranding Network (RRVTMU), an average of 50 sea turtles that require veterinary attention, which are referred to one of the following centers:
- Since 2005, the NGO has owned the Cerro Verde Scientific Base located on the Atlantic coast of Uruguay, which has a temporary "Rehabilitation Area" that is operational from November to April. In this center primary care is carried out and turtles with simple clinical cases are kept.
- In 2010, the "Sea Turtle Center - CTM" was opened, located in the Villa Dolores Zoo, in the city of Montevideo. The Center has a space for the rehabilitation of specimens of greater clinical complexity, dedicated to the recovery of sick and/or injured turtles, to the investigation of pathological processes and, for the education and awareness regarding the situation of turtles in Uruguay.
Objectives: The main objective of the Rehabilitation Centers of the NGO Karumbé is to broaden the knowledge on the health status of existing sea turtles on the coasts of Uruguay, to allow their correct management and conservation. Specifically, work is being done on: 1. Carrying out the necessary veterinary processes to release sea turtles into their natural environment. 2. Record and identify the main causes of sea turtle stranding. 3. Generate lines of research of interest for the state of health of sea turtles. 4. Deepen the development and improvement of clinical protocols and action in the Emergency Department. 5. Training of human resources. 6. Transfer of acquired knowledge.

Part V – Nesting Information

Index nesting sites or beaches for sea turtle conservation

Use the following drop down menu to select the index sites which you would like to report information for the latest season corresponding to the year of this report

Index Nesting Sites

Attach here other files relevant to this section, if required

Please describe the content of the attachment in the box below and use the blue button to attach the file.

›››

Part VI – Fisheries Information

If your country does not have data available to fill out the information on longline fisheries, please contact the IAC Secretariat secretario@iacseaturtle.org

Longline Fisheries (Vessels >20m)

Does your country have industrial longline fisheries with vessels over 20m?

Please select only one option

☐Yes

☒No

Longline Fisheries (Vessels <20m)

Does your country have longline fisheries with vessels less than 20m?

Please select only one option

☐Yes

☒No

Thank you!

Thank you, you have completed the IAC Online Report questionnaire.

We are very appreciative of the time you have taken to answer all of the questions. The PDF of this document will be published on the Annual Reports section of the IAC website http://www.iacseaturtle.org/informes-eng.htm